

THE ARCHITECTS' JOURNAL

FINE ARTS



standard contents

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

NEWS and COMMENT

Astragal's Notes and Topics

Letters

News

Diary

Criticism

TECHNICAL SECTION

Information Sheets

Information Centre

Current Technique

Working Details

Questions and Answers

Prices

The Industry

CURRENT BUILDING

Major Buildings described:

Details of Planning, Construction,

Finishes and Costs

Buildings in the News

Building Costs Analysed

Architectural Appointments

Wanted and Vacant

No. 3395]

[Vol. 130

THE ARCHITECTURAL PRESS

9, 11 and 13, Queen Anne's Gate, Westminster,
S.W.1. 'Phone: Whitehall 0611

Price 1s. 0d.

Registered as a Newspaper.

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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: J.H.Holden, College of Art, Cavendish Street, Manchester 15	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5533
ABT	Association of Building Technicians. 156, Waterloo Road, S.E.1.	Waterloo 5427
ACGB	Arts Council of Great Britain. 4, St. James's Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 5861
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portland Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BE	Building Exhibition. 11, Manchester Square, W.1.	Hunter 1951
BEDA	British Electrical Development Association, 2 Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Glasgow Central 2891
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Chancery 7772
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Langham 2785
BRS	Building Research Station. Bucknalls Lane, Watford.	Trafalgar 8855
BSA	Building Societies Association. 14, Park Street, W.1.	Garston 4040
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 0515
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Mayfair 9000
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Holborn 3411
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Bedford 67444
CDA	Copper Development Association. 55, South Audley Street, W.1.	Belgravia 6661
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Grosvenor 8811
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Trafalgar 8000
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 4280
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Sloane 9116
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Reading 72255
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Whitehall 0540
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	Regent 4448
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
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.	
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Langham 4341
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Monarch 8888
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 4321
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Belgravia 3081
IAAS	Incorporated Association of Architects and Surveyors, 29, Belgrave Square, S.W.1.	Whitehall 2881
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Belgravia 3755
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Grosvenor 6186
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Whitehall 4577
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Covent Garden 1871
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Abbey 5215
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square, S.W.1.	Sloane 8266
IIBDID	Incorporated Institute of British Decorators and Interior Designers, 37, Soho Square, W.1.	Sloane 1601/3158
		Gerrard 5056

FOR
GREATER STRENGTH
AND
LONGER LIFE
SPECIFY

NORVIC

PLASTIC COVERED

**CHAIN LINK
FENCING**

● **OUTLASTS GALVANIZED FENCING**

Norvic Plastic Covering protects from rust and corrosion.

● **RETAINS ITS GOOD LOOKS FOR YEARS**

Norvic Plastic Covering keeps its colour long after other fences have yielded to the atmosphere.

● **COSTS LESS IN THE LONG RUN**

The slight Increase in Initial cost is more than offset by longer life.



SPECIFICATION :

Roll length 25yd.
Mesh 1in., 1½in., 1¾in., 1½in., 2in.
Gauges 12½, 10½, 10 and 9½ overall with galvanized or bright steel core.
Width From 30in. up to 13ft. In 6in. stages.
Colour Standard Dark Green. Special colours to order.
Line wire Plastic covered.

BARNARDS

LIMITED

NORWICH Tel: 47321

London: Mansion House 8597 Birmingham: Midland 3555



**For good looks
For hard wear
For every stair***

Specify

Don

Stairtreads

* 19 nosing types in pure aluminium, plastic-filled in choice of 9 colours (also fabric-filled).

Please send me your illustrated catalogue giving details of nosings, colours & dimensions of Don Stairtreads — and names of depots and suppliers.

To Small & Parkes Ltd. (Stairtreads Dept.)
Hendham Vale Works, Manchester 9

Name

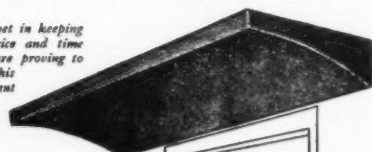
Address

(A.J.36)

SMALL & PARKES LTD.
HENDHAM VALE WORKS · MANCHESTER 9
London: 251 Kingston Road, London, S.W.19
CHerrywood 3806/7

Specify **ALUMINIUM CANOPIES**

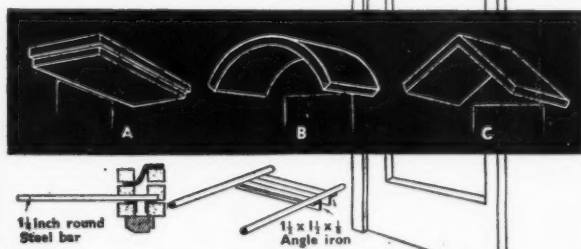
Ahead of modern design yet in keeping with the demands of price and time factors—these canopies are proving to be a success all over this country. Briefly the salient points are listed below.



Alicanopies

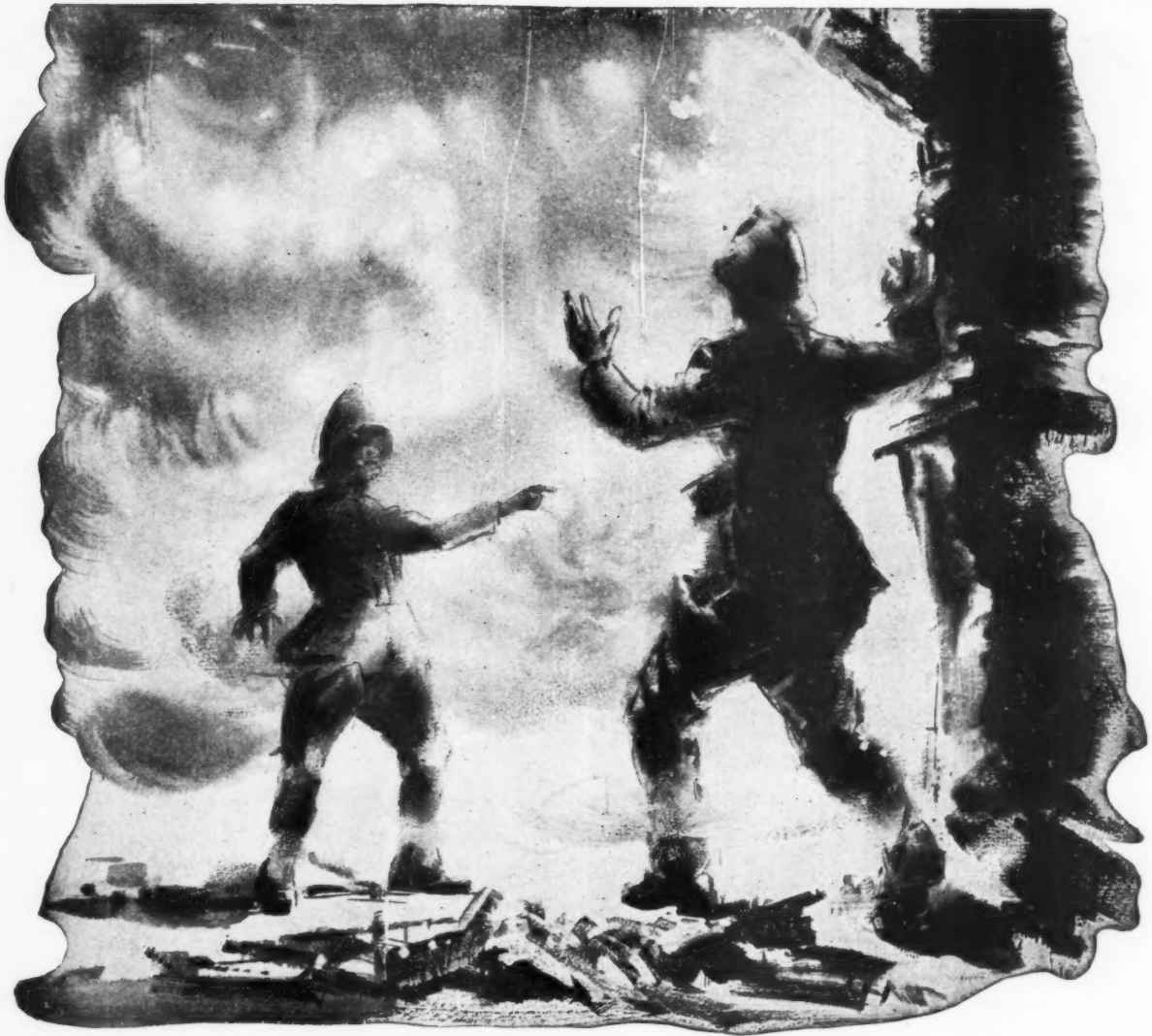
- (a) ECONOMICAL TO BUY AND TO FIT.
- (b) EASE AND SPEED OF FITTING.
- (c) LONGEVITY.
- (d) PRODUCED IN A VARIETY OF DESIGNS — ALL IN GOOD TASTE.
- (e) FINISHED IN CREAM ENAMEL.
- (f) ADD DIGNITY TO ANY NEW BUILDING, OR CAN BE USED TO MODERNIZE AN OLD BUILDING.

SEND FOR FOLDER ILLUSTRATING DESIGNS AND APPLICATION.



BAINBRIDGE BROS. (Engineers) LTD
FACIA WORKS, WOODHILL ROAD, BURY, LANCASHIRE

TELEPHONE: BURY 5034/5035



First find your fire . . .

Among the many leading organisations using Colt Dual Purpose Fire Ventilators are:

Jaguar Cars Ltd.
de Havilland Aircraft Co. Ltd.
G.E.C. Ltd.
B.I.P. Chemicals Ltd.
Rolls-Royce (Derby) Ltd.
Dowty Equipment Ltd.
Frigidaire (Division of General Motors) Ltd.
The Ministry of Supply

. . . and your power and light switches and your dangerous wires. But how—when a factory is filled with smoke and heat that can kill a man in one breath . . . ? Ask any Fire Chief. He will tell you: the rapid removal of smoke and heat is the key to fire fighting. It enables him to get at and put out the fire before it can spread—and with the least smoke and water damage. Colt Dual Purpose Fire Ventilators not only provide an automatic means of removing smoke and flames, but also give excellent day-to-day working conditions. Hence their widespread adoption by industry. For the full story of combined ventilation and fire protection write for the pamphlet "Some Aspects of Fire Prevention" by M. J. Reaney, to Dept: 25

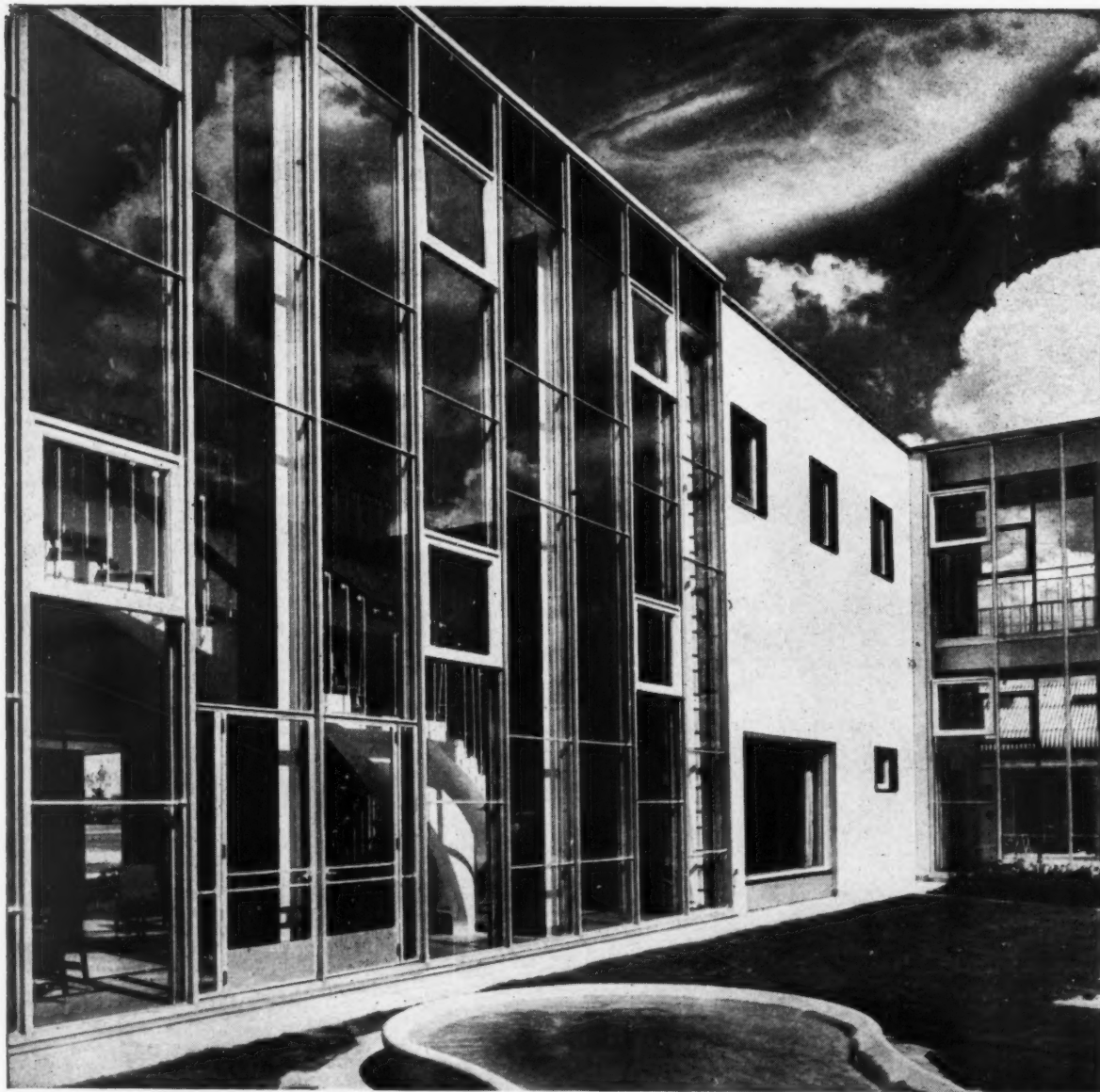


DUAL-PURPOSE VENTILATORS



Combined automatic fire protection — with day-to-day controlled ventilation

COLT VENTILATION LTD · SURBITON · SURREY Telephone: ELMbridge 0161 (10 lines)



J. Douglass Mathews & Partners, Chartered Architects
Contractors: - W. & C. French. Ltd.

planned light

This impressive use of aluminium and glass at the new Aspro-Nicholas factory (illustrated above) has provided us with another unique opportunity to demonstrate a sample of the variety of specialised structures which Luxfer Ltd manufacture for the purpose of admitting light to a building.

LUXFER



WAXLOW ROAD, HARLES DEN, LONDON N.W.10

Telephone: ELGAR 7292

Telegrams: LUXFER, HARLES, LONDON

Manufacturers of Metal Windows, Lantern Lights, Ferro-Concrete Pavement Lights, Bookstacks and Partitions

For all sealing problems consult

EVOMASTICS

LIMITED

Evomastics Ltd. produce a very wide range of specialised mastics which solve an infinite number of sealing problems. Whatever your problem, be it joint movement, galvanic corrosion, temperature, solvents or just plain weather, the technical resources of Evomastics are at your service to give you the right answer. The methods of application of mastics are also an important consideration to which Evomastics give close attention and you can be sure of a quick, clean and economical job when you work to their recommendations.

THIS SPACE IS RESERVED FOR YOU

My sealing problem is . . .

POST THIS COUPON FOR FREE SAMPLE

This coupon will bring you a sample of an EVOMASTIC sealing compound for you to examine

NAME

FIRM

ADDRESS

EVOMASTICS LTD., COMMON ROAD, STAFFORD. Tel: 2241 (5 lines)

H-W. 183



The paint job's

1



2

done with

NOVOTAN

Novotan is a three-ply laminate with a smooth matt ready-to-paint surface that does not need filling, sanding or priming. In addition to cutting painting costs, Novotan has hard outer surfaces that resist dents and abrasions, an increased strength

factor and many other advantages. Exceptional stability and warp free qualities, high sound and thermal insulation properties, fire resistance (spread of flame) and treated to resist insect and fungal attack, are just a few of the reasons why architects specify this trouble-free board.

Available with single or double faced 'built-on' surfaces in 9 ft. by 6 ft. by $\frac{1}{2}$ in. or $\frac{3}{4}$ in. or $1\frac{1}{2}$ in. panels.

WRITE TODAY FOR MORE INFORMATION ABOUT

NOVOTAN THREE-PLY LAMINATE

The better board for painting



NOVOBORD (U.K.) LTD.

REG'D.

1A The Parade, Haven Green, Ealing Broadway,
London, W.5. Telephone: Perivale 8833/4

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



Boardrooms
Warehouses
General Storage
Offices
Archives
Self-service displays
Wholesale Storage
Libraries
Schools . . .



in fact wherever a shelving plan is required

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



PREFABRICATED SHELVING

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

Easy to assemble and dismantle.
Shelves secured without
nuts and bolts.

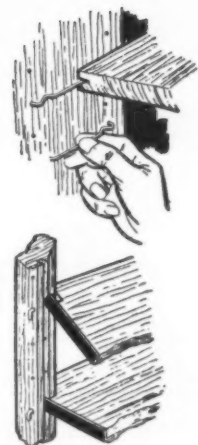
Fits any wall space to
within six inches.

Easily adapted to other positions
and shelf spaces.

No protrusions to damage goods.
Firm and rigid, and
capable of carrying heavy loads.

TECHNICAL DATA

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

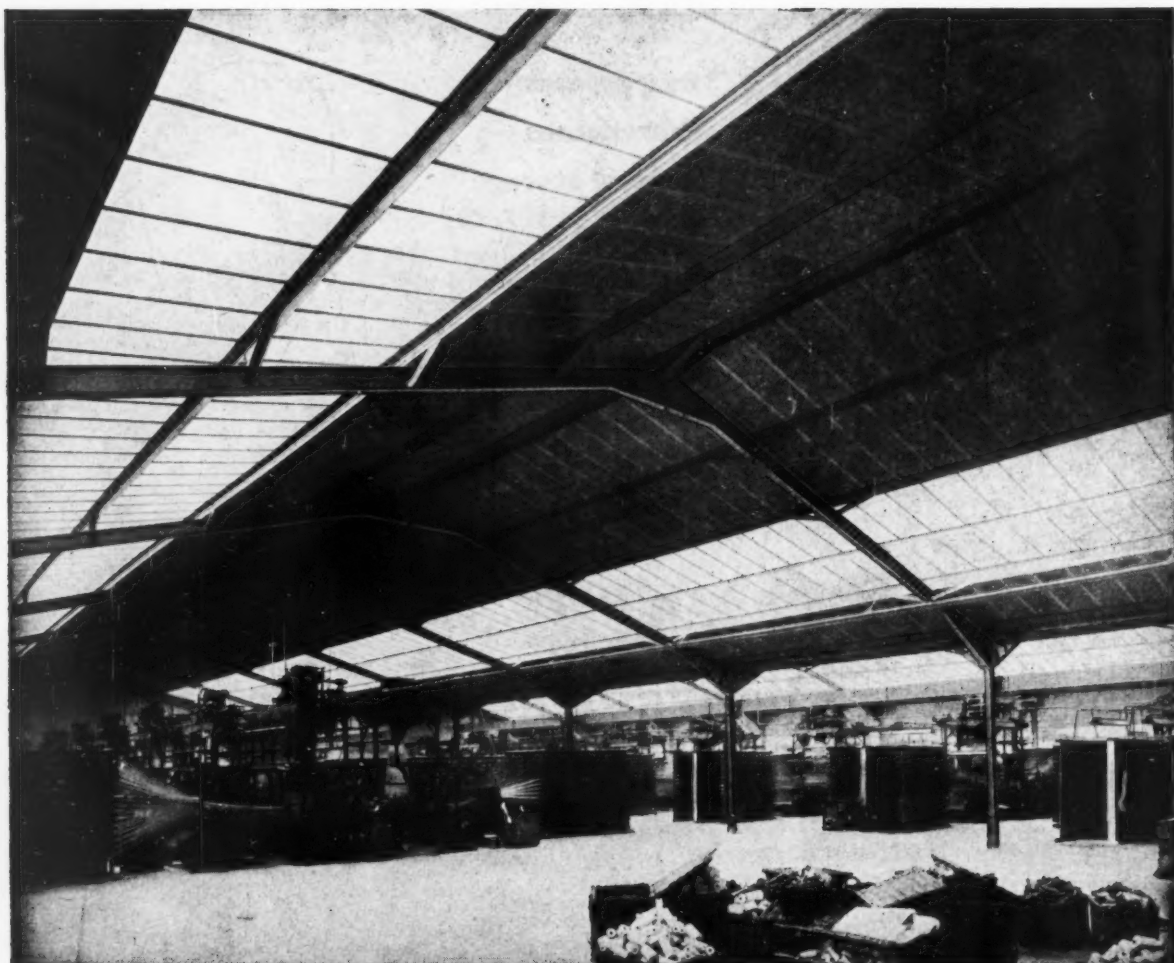


REMPLY LTD., OXGATE LANE, CRICKLEWOOD, LONDON, N.W.2. Telephone: GLadstone 8020.

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

FACTORY FOR FURTEX LTD., AT HACKENTHORPE, YORKSHIRE

Moir and Bateman, architects.



This is a typical Clearspan steel portal roof—light, clear and spacious. Yet Clearspan costs less than other forms of construction. As the subject of careful cost comparison in the "Architects' Journal", June 5th, Clearspan showed a saving of 3s. 4d. per square foot over its nearest rival, a total saving of £7,000.

CLEARSPAN—the most comprehensive and attractive range of buildings ever produced.

Spans up to 150'. Roof slopes 12°—17°—22°. Cranes 5 and 10 tons.

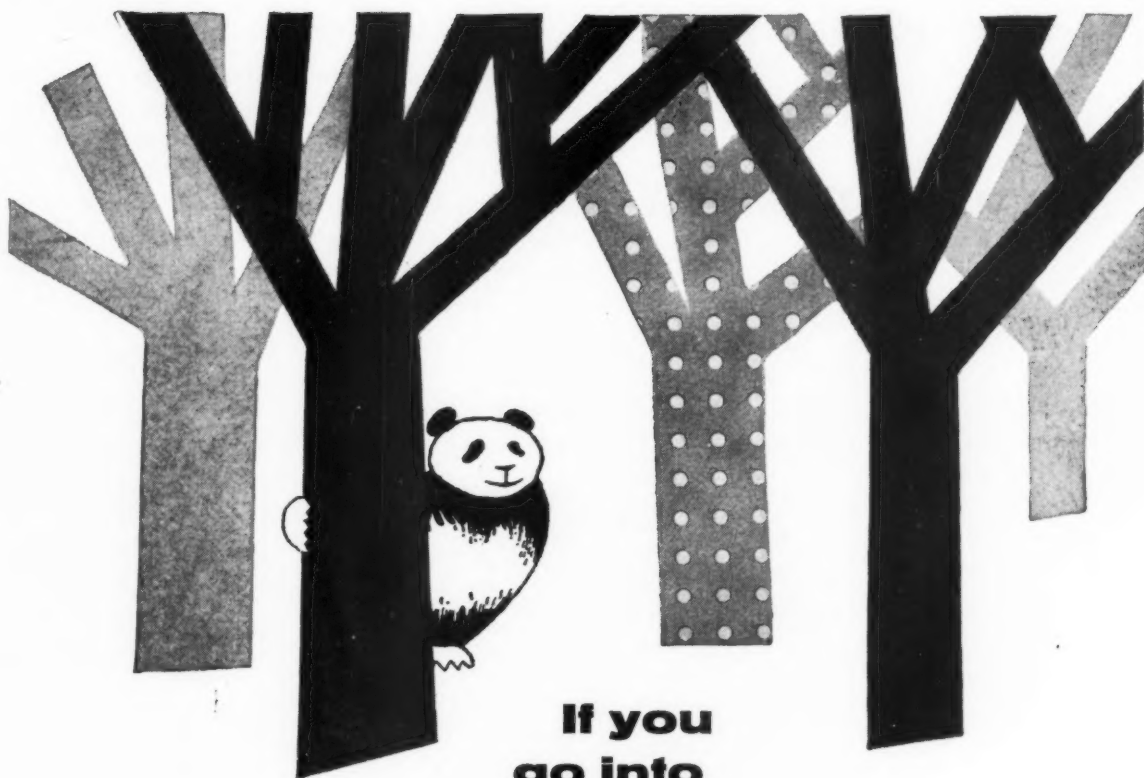
(Variations from Standard available to order.)

"CLEARSPAN" cut the cost by £7,000

Send for illustrated brochure

CONDER ENGINEERING CO LTD WINNALL WINCHESTER HANTS · TELEPHONE 5095
CONDER ENGINEERING CO (MIDLANDS) LTD PEEL HOUSE BURTON-ON-TRENT · TEL 5411

P2400



**If you
go into
the
woods
today**

... a surprise is waiting for you when you meet PANDA BOARD.
This extra tough new hardboard is manufactured by
SCHAUMAN—the producers of the largest range of wood-
based sheet materials in Europe. Though competitive in price
it is immensely tougher and more damp resistant
than required by British Standard. PANDA BOARD is light and works
like wood because it *is* wood. PANDA BOARD is available in
sizes cut from 4' x 18' and 5' 7" x 16' sheets with a hard
flat surface in attractive standard finish in $\frac{1}{8}$ " and $\frac{3}{16}$ " thicknesses,
and in ivory-faced finish in $\frac{1}{8}$ " thickness.

Look for this Trade Mark!



Write for literature and samples of plain and perforated PANDA BOARD
to sole agents for U.K. and Ireland:

PHARAOH'S PLYWOOD CO. LTD.

ADELAIDE HOUSE, LONDON BRIDGE, LONDON, E.C.4. Telephone: MANsion House 5351 (5 lines)

Manufactured by:

OY WILH. SCHAUMAN AB, JYVÄSKYLÄ, FINLAND

Producers of the largest range of wood-based sheet materials in Europe.

the right way to fasten wire netting

The right way to fasten wire netting is to clip it to wire strands. GKN make the proper fasteners and pliers for this. All you do is to place a fastener in the pliers, give one squeeze, and your netting is firmly secured. There is no quicker way of doing this job. This way, yards of netting can be fastened to wire strands in next to no time.



GKN | FASTENERS



in light or standard size



GUEST KEEN & NETTLEFOLDS (MIDLANDS) LTD. Box 24, Heath Street, Birmingham 18. Tel: Smethwick 1441. Telex 33-239
S/WF/3451



GLOLITE

Standard channel sections are spaced at regular intervals, maximum 3' 1 1/2" centres, with corrugated P.V.C. track-mounted along sides of sections. Infill panels incorporating tungsten fittings, etc. can be placed at regular or random intervals.



FLEXIGRID

A grid formation which provides maximum flexibility and freedom of design. Fluorescent units can be placed in any of the open grids on adjustable brackets and coloured infill panels, with or without tungsten spotlights, provide one of the means of obtaining flexibility in arrangement.



TRACELITE

Fluorescent fittings and square boxes, linked one to another by 1/2" anodised aluminium tubing and suspended from the structural ceiling by 1/2" rods. There are eight different positions on the fluorescent fittings from which the 1/2" tubing may be run, permitting an almost unlimited variation in design. The square boxes may house tungsten fittings, loud-speaker systems, etc. or left plain.

Courtney Pope ceilings have been evolved to permit Architects and Designers the maximum freedom in designing ceilings. A comprehensive Ceilings Catalogue will soon be available and we shall be pleased to send you a copy.



COURTNEY, POPE

THE LIGHTING SPECIALISTS

COURTNEY, POPE (ELECTRICAL) LTD.
AMHURST PARK WORKS · Tottenham London N.15
Telephone: STAmford Hill 1270 (fifteen lines)

BRANCHES
10 Chatham Street, Manchester 1. (Central 1837)
254a Corporation Street, Birmingham 4. (Central 5852)
17 Wellington Street, Leeds 1. (Leeds 3-4549)

Tiles made with DU PONT HYPALON®



are better in so many ways

Floor tiles made with Du Pont Hypalon* have proved on the job how suitable they are for hospitals, laboratories, commercial kitchens, banks. Places like these need attractive, resilient, non-slip floors which are easy to clean and polish... resist scuffing and scratching... defy cigarette burns.

Actual use tests show that flooring tiles made with Hypalon retain their original colour and resist staining by chemicals, foods and oils. After being subjected to pressure of stiletto heels and heavy library tables, Hypalon tiles recovered and left no marks. When ordering flooring tiles be sure and specify tiles made with Du Pont Hypalon. Contact your own supplier, or post coupon below for list of suppliers.

**Hypalon is the registered trademark of a Du Pont elastomer.*

Du Pont Company (United Kingdom) Ltd., 76, Jermyn Street, London, S.W.1



DU PONT HYPALON

BETTER THINGS FOR BETTER LIVING... THROUGH CHEMISTRY

Du Pont Company (United Kingdom) Ltd.
76, Jermyn Street, London, S.W.1, England.
Architects' Journal—5/60—GB (21 765 01).
Please send me
list of suppliers of Du Pont Hypalon floor tiles.

NAME _____
POSITION _____ COMPANY _____
ADDRESS _____
CITY _____ COUNTRY _____



**THE PERFECT
MORTAR MATERIAL
WHICH REQUIRES
NO
ADDITIVE**

WALCRETE

MASONRY CEMENT

Because the correct constituents are accurately proportioned and intimately mixed-in during manufacture you get the perfect mortar material with WALCRETE.

Walcrete, manufactured under rigid laboratory control, requires only the addition of sand and water to provide mortar of uniform character and consistency. And because it has the highest possible sand carrying capacity, Walcrete produces a cheaper mortar for bonding and pointing bricks or blocks and also for external rendering and internal plastering



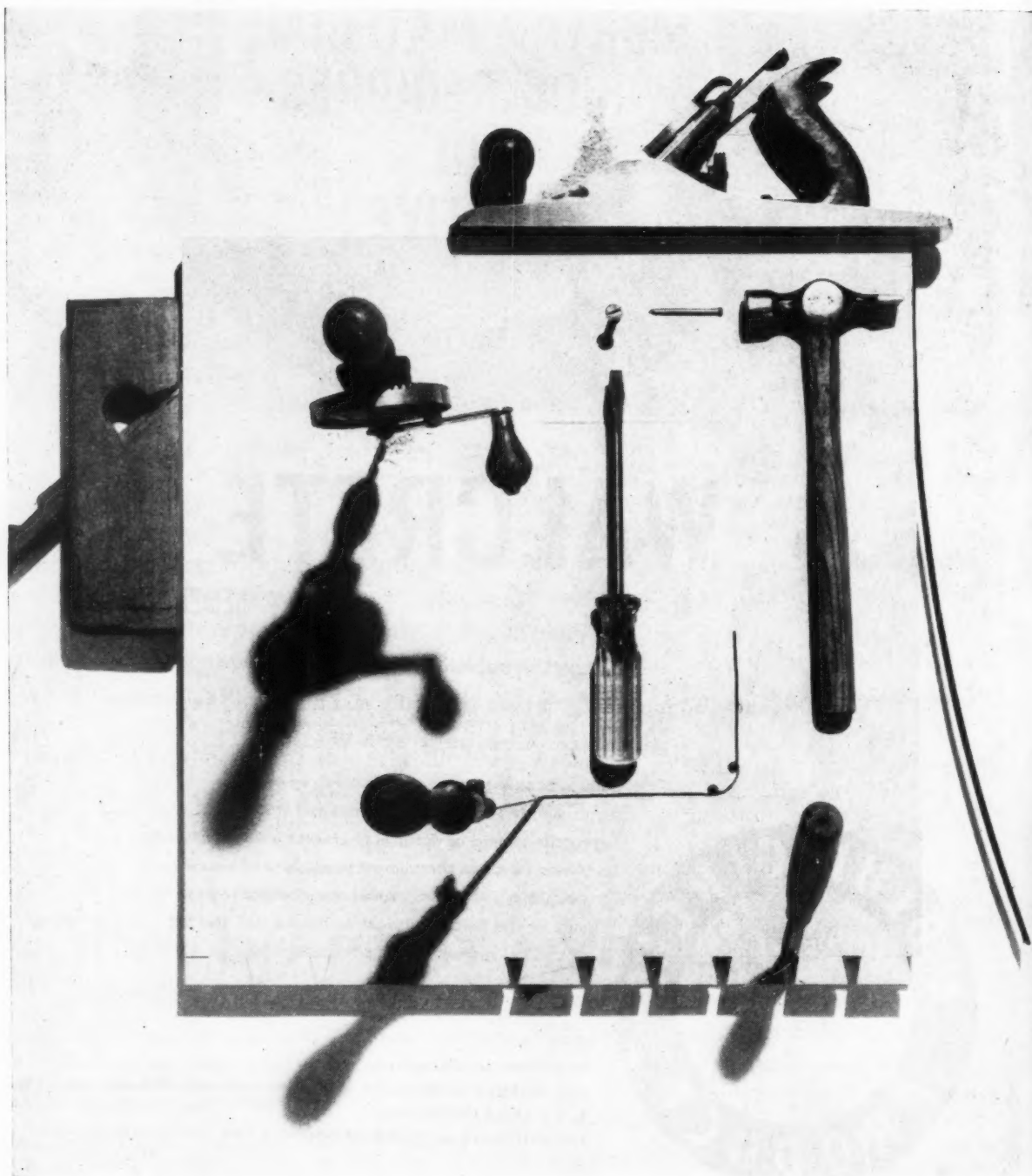
Write for further details and prices to:

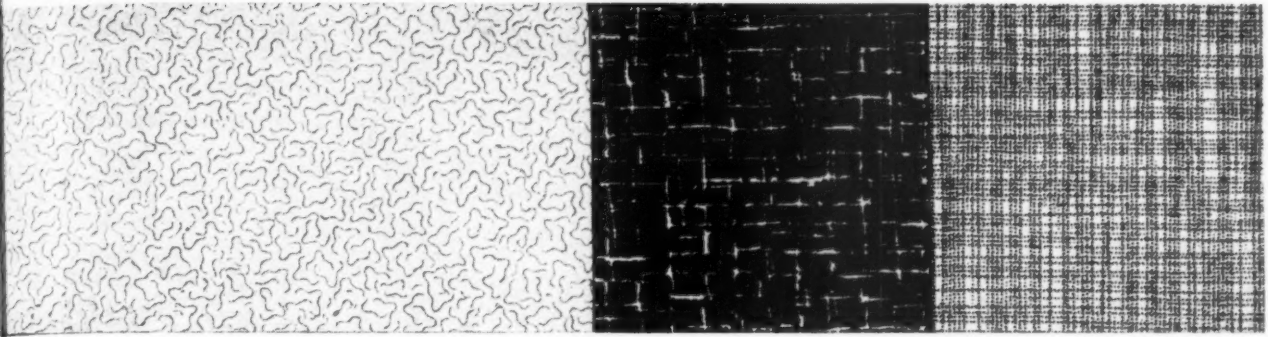
THE CEMENT MARKETING CO. LTD., Portland House, Tothill Street, London, S.W.1

G. & T. EARLE LIMITED, Hull.

THE SOUTH WALES PORTLAND CEMENT & LIME CO. LTD., Penarth, Glam.

Get to know Avtrev!





Melamine faced chip board

Groove it, drill it, saw it, plane it, nail it, screw it! Get to know Avtrev now!



Post this coupon today for the FREE, full colour brochure.

LONDON SALES OFFICE • BARTREV BOARD COMPANY LIMITED
5 ST. JAMES'S PLACE • LONDON • SW1

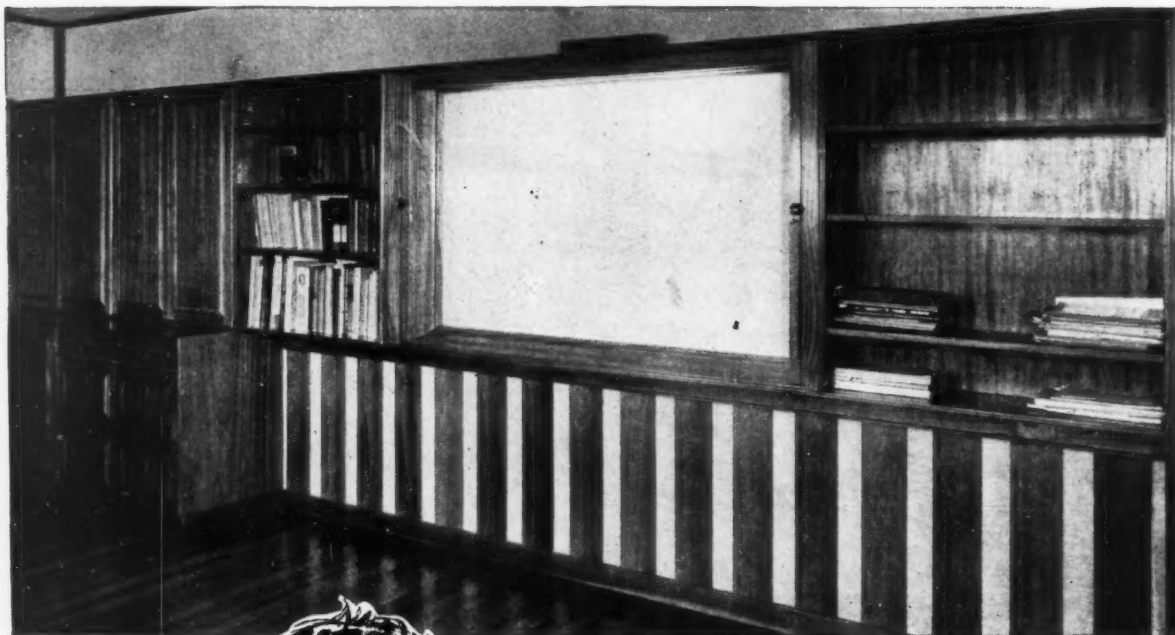
Please send me a free copy of the Avtrev brochure

NAME

ADDRESS

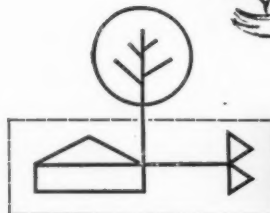
(BLOCK CAPITALS, PLEASE)

A.J.J.



JOINERY and CABINETWORK

Born and bred in the Timber Trade, we know and love the 'raw material' of Joinery, and we use it skilfully, economically and to the best advantage. Our doors and drawers fit sweetly—and stay that way. We understand grain, and the finest materials, matured and perfect, are lying handy in our Yards—alongside our Joinery Workshops. We know our work to be sound and careful—and we find our prices are competitive. A nice balance! May we serve you—to your designs? Or to ours—if desired?



BEVES & CO. (JOINERY) LTD.



Members of the BEVES GROUP of Companies

BEVES & COMPANY (JOINERY) LTD · BEVES & COMPANY (LONDON) LTD
BEVES & COMPANY (FLOORS) LTD · BEVES & COMPANY (STRUCTURES) LTD
BEVES & COMPANY LTD. Timber Importers

Head Office:—Kingston Wharf, Shoreham-by-Sea,
Sussex. Telephone: Southwick 2285.

London Office:—110, Cannon Street, E.C.4.
Telephone: Mincing Lane 9161.

CVS-34

*For extra
safeguard!*



A.S.C.M. MEMBERS :

GENERAL ELECTRIC CO. LTD.
Incorporating :
Oriental Tube Co. Ltd.
METALLIC SEAMLESS TUBE CO. LTD.
MONMORE TUBES LTD.

SIMPLEX ELECTRIC CO. LTD.
Incorporating :
Credenda Conduits Co. Ltd.
Simplex Conduits Ltd.
Stella Conduit Co. Ltd.
WALSALL CONDUITS LTD.

Associate Members
ELECTRICAL CONDUITS LTD.
HILDICK and HILDICK
THE STEEL TUBE & CONDUIT CO.
(Middlesbrough) LTD.

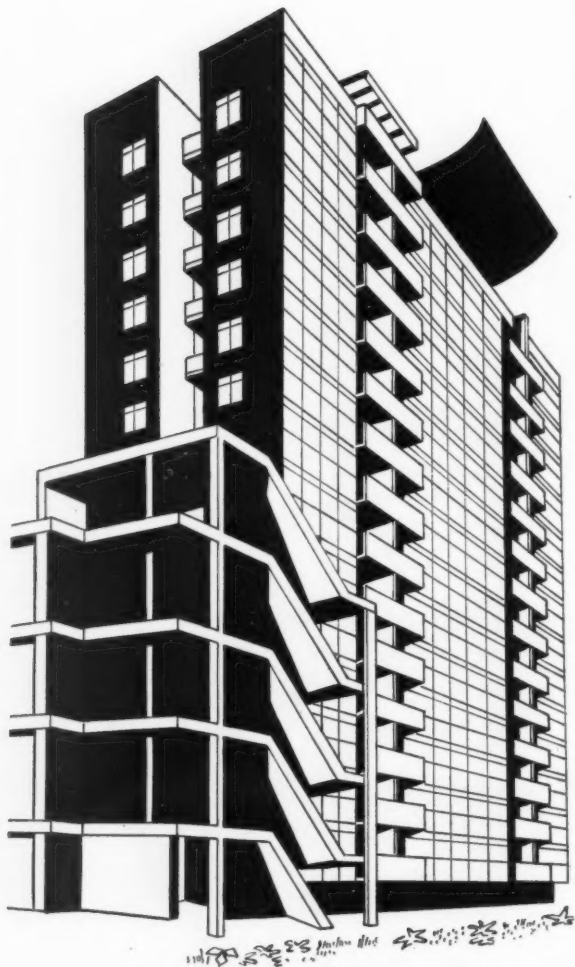
ASSOCIATION OF STEEL CONDUIT MANUFACTURERS • 96 HAGLEY ROAD • BIRMINGHAM 16

Ahead of schedule

The Quicktho 'Windowall' System, because it is a
complete and all-embracing system, enables a building
project to keep abreast, or even ahead of schedule.

'WINDOWALL' CURTAIN WALLING

The versatility of the Quicktho Windowall system simplifies walling design and allows flexibility in the positioning of windows and ventilators. Designed to allow for the insertion of infilling materials at any time. The system also provides generous erection tolerances. Quicktho Sliding Windows, Top-Hung Ventilators, Projecting Windows, etc. are supplied ready glazed for mounting in the aluminium structure. All Quicktho sections are high corrosion-resisting aluminium alloy extrusions.



Write or telephone our Technical Dept. for further details and new brochure Q0059.

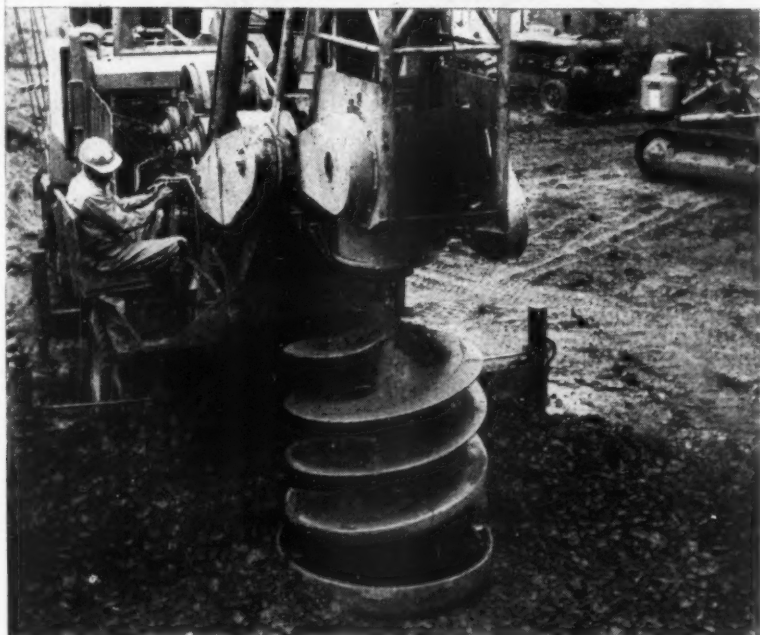
If you have a specific project in mind we shall be pleased to arrange for a member of our Technical Staff to call.

QUICKTHO

ENGINEERING LIMITED

5, GRAFTON STREET, LONDON W.1.
Telephone and Telegrams: Hyde Park 1806 (5 lines)

Underreamed boring
DOWN TO 110 FEET



with the
Mc KINNEY
Mobile Rig



A **LAING** COMPANY

If you would like further details, please write to:

McKINNEY FOUNDATIONS LIMITED

Manor Way, Boreham Wood, Hertfordshire.

Telephone: Elstree 2854



*Elegance and efficiency
in diffusers*

powell duffryn modulaire ltd
pd m

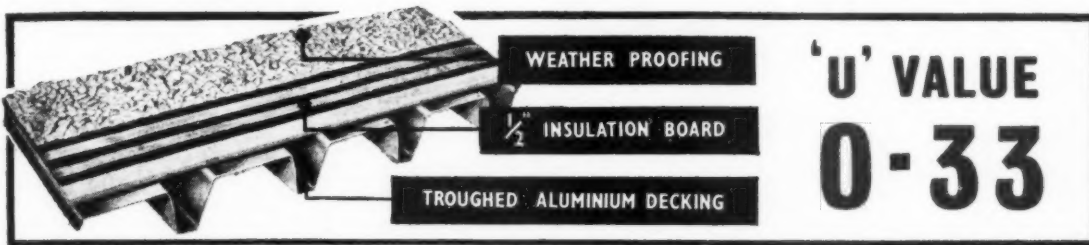
TUTTLE & BAILEY


Powell Duffryn House, Berkeley St., London, W.1. Tel. Grosvenor 5146

BITUMETAL

and

The Thermal Insulation (Industrial Building Regulations, 1958)



1 BITUMETAL Standard Specification provides a "U" value of 0.33 with a designed internal temperature of 65°F. and an assumed outside temperature of 30°F.

2 If a project presents problems, the necessary "U" value can be obtained by using additional insulation.

3 The high thermal insulation value of BITUMETAL means exceptional economy in fuel costs, and a standard temperature can be maintained throughout the year.

4 BRIGGS' Advisory Service is without equal in Europe. Qualified Specialists will design to any specification, and are at your service—without obligation—to solve your problems.

ADVANTAGES

- | | | |
|-------------|--------------------|------------------------------|
| ★ DUSTPROOF | ★ EASILY ERECTED | ★ CONDENSATION FREE |
| ★ RUSTPROOF | ★ MAINTENANCE FREE | ★ CEILING & ROOF DECK IN ONE |

Full details can be supplied by any of these offices :—

WILLIAM **BRIGGS** & SONS LIMITED

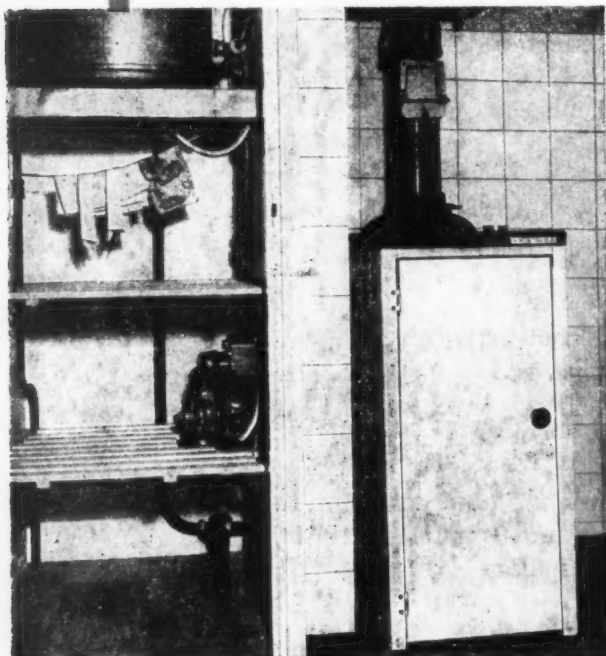
VAUXHALL GROVE, LONDON, S.W.8 REGD. OFFICE DUNDEE

AREA OFFICES : ABERDEEN . BELFAST . BRADFORD . BRISTOL . CARDIFF . DUBLIN
EDINBURGH . GLASGOW . LEICESTER . LIVERPOOL . NEWCASTLE . NORWICH

Modernise with

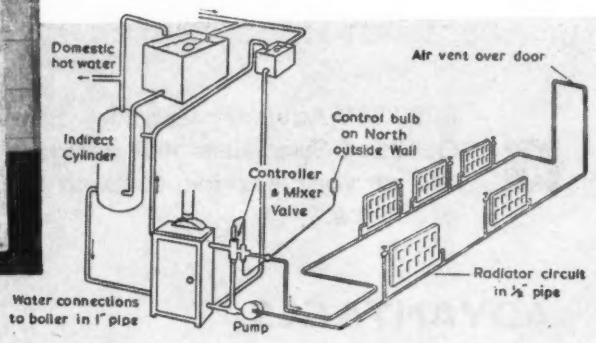
HARD COKE

for high efficiency Domestic Heat Services . . . with ECONOMY



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

The "small-bore" system of central heating with hot water supply, is much less costly to install than the conventional gravity system, particularly in existing houses. It can also be much cheaper to run, no heat being wasted in the roof space or under floors. Piping of $\frac{1}{2}$ " bore is used, with a circulating pump; this can provide better control of the heating than with gravity circulation. The small-bore system is admirably suited to medium-sized houses (1,000 to 1,500 sq ft) and for flats in converted houses. It makes central heating a practicable proposition for those who might otherwise not be able to afford it.



SEND FOR THE BOOKLET

'MODERNISE WITH HARD COKE'

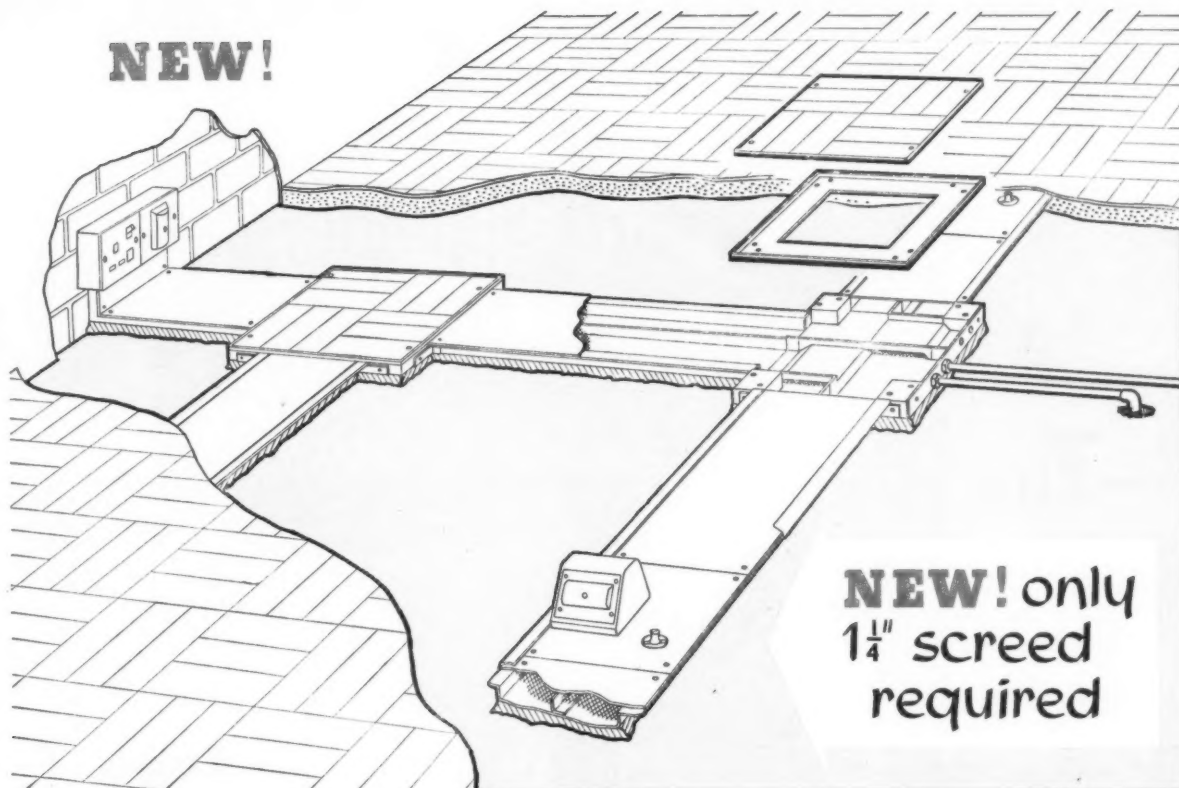
This booklet illustrates and describes a range of typical modern high-efficiency solid fuel appliances and gives full information on Hard Coke and its use. Free on application.

HARD COKE is the authorised smokeless fuel made by the British Coking Industry. It is 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 contains no stone or shale. It has outstanding advantages for:

- ★Heating Stoves ★Solid fuel Cookers ★Hot Water Boilers
- ★Central Heating Boilers ★Automatic Boilers

THE BRITISH COKING INDUSTRY ASSOCIATION, 74 GROSVENOR STREET, LONDON, W.1.

Telephone: MAYfair 9736



GREENWOOD-AIRVAC INTRODUCE A STANDARDISED FLOOR DUCT SYSTEM FLUSHFYT

for telephone and all electrical services

The new Greenwood-Airvac "Flushfyt" Floor Duct System provides a distribution system for all telephone and electrical services. With a small number of standardised units you can achieve the greatest possible flexibility in layout. For ease of installation the new G.A. "Flushfyt" System cannot be bettered.

★ Duct covers can be supplied fitted with $1\frac{1}{4}$ " diameter outlets or may be added at any future date.

★ Adjustable floor frame to accept final floor finish.

★ All services in one duct. Central division to segregate telephone from electrical services.

★ Skirting Terminal Boxes and Universal Pedestal Units for floor connection.

**Write for
full details
and new
"FLUSHFYT"
leaflet today!**



Greenwood Airvac Conduits Ltd 

Patentees, Designers and Manufacturers of Electrical Conduit Systems

CARLISLE HOUSE, 8 SOUTHAMPTON ROW, LONDON, W.C.1. CHAncery 9377 (3 lines) 'Grams: Aircon, Westcent, London

GC 71

I-C-I CHOSE

'Aristocrat' —the door of dignity and dependability

FOR THEIR NEW OFFICE BLOCK
AT BILLINGHAM, CO. DURHAM

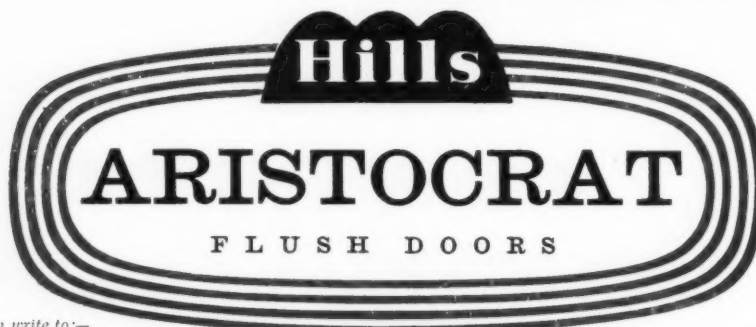
Main Contractors: John Laing & Sons Ltd.

Hundreds of Hills 'Aristocrat' flush doors lend additional harmony and grace to this attractively spacious building. These fine doors in a wide range of veneers and matching edge strips, with the exclusive Hills Kreibord core, add dignity to any major project. They are manufactured in the dimensions and veneers to your specification.

Your important project deserves Hills 'Aristocrat' flush doors.



*Photographs by courtesy
of I.C.I.*



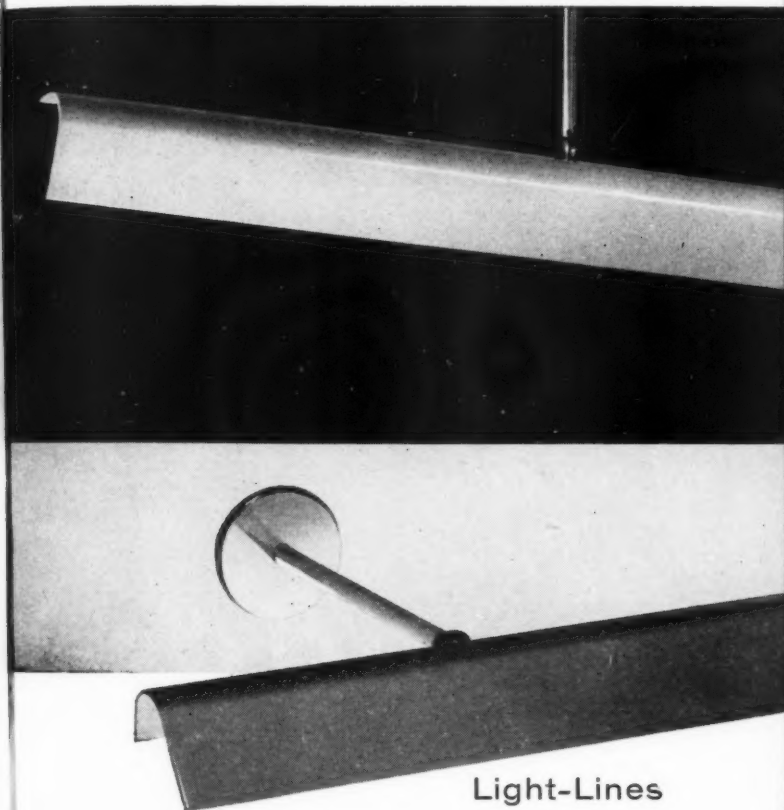
For more information write to:—

F. HILLS & SONS LIMITED NORTON ROAD STOCKTON-ON-TEES • Telephone: 67141
LONDON OFFICE: WINDSOR HOUSE KINGSWAY LONDON WC2 • Telephone: CHAncery 9251
Telex in operation at both offices

P4605

precision

Reflectors from 16"—11' 4" in un-broken lengths of $\frac{1}{8}$ " and only eight hairline joints per 100 feet—Alternative reflector fittings for fluorescent lamps—Pendant, wall bracket, table, bench, and knuckle joints providing adjustment of reflectors through



Light-Lines

A series by Merchant Adventurers Limited provides Architects and Engineers with an outstanding range of 150 precision extruded aluminum reflector fittings designed for efficient directional lighting. Current uses range from chalkboard illumination in schools to choir stall lighting in Cathedrals.



designed by Paul Boissevain, D.

A comprehensive leaflet giving full details of the series is available on request.

Merchant Adventurers

Head Office: Hampton Road Works, London SE18 3PL
London Showrooms: 43, Portico, London EC3A 3AT

IS

E

BURGELICS

suspended a

in Burgess I

all-metal ceilings

RIBTILE

ACoustical DIVISION, LINCOLN, LEAS



Canteen and office blocks

34,000 YARDS of cable in Joshua Tetley's new premises

The new premises of Joshua Tetley and Son Limited at Herries Road, Sheffield comprise stores, offices, transport garage, as well as bottling, ventilation and refrigeration plant.

Wiring installation was undertaken by

the Vector Electrical Company Limited of Sheffield, with 34,000 yards of BICC Cable. This included large quantities of P.V.C. Insulated Cable for general wiring, in addition to Mineral, Paper, and Rubber Insulated Cable for mains and plant wiring.



Cask and bottling stores loading bay

BICC

WIRING CABLES

for every type of installation

BRITISH INSULATED CALLENDER'S CABLES LIMITED 21 BLOOMSBURY STREET LONDON W

All-purpose efficiency with... **SWIFTPLAN demountable PARTITIONS**



... the partitioning service you've always wanted

The ultimate in flexibility—panels supplied in *any* width to suit your needs! But that is only one of the many reasons why the new SWIFTPLAN flush type partitioning will appeal to you as exactly what you've always wanted. *Quality*, for example,—a quality, fit and finish such as you would expect only by having skilled craftsmen working specially for you on your premises. *Perfect rigidity*, yet no fixing to any part of the permanent building—no plugging, no nailing, no damage of any sort! Quality finishes too—anything from painting to decorative veneers; suitable for any purpose, from the simplest accommodation to an executive suite. SWIFTPLAN offer you a complete partitioning service—design, construction, erection, alteration—to an entirely new standard of flexibility and efficiency. And at surprisingly reasonable cost.

Write now for full details.

• Complete Flexibility in Planning
• Positively No Damage to Buildings
• 95% Recovery Value
• Exceptional Insulation
• Quality Materials in Every Kind of Finish



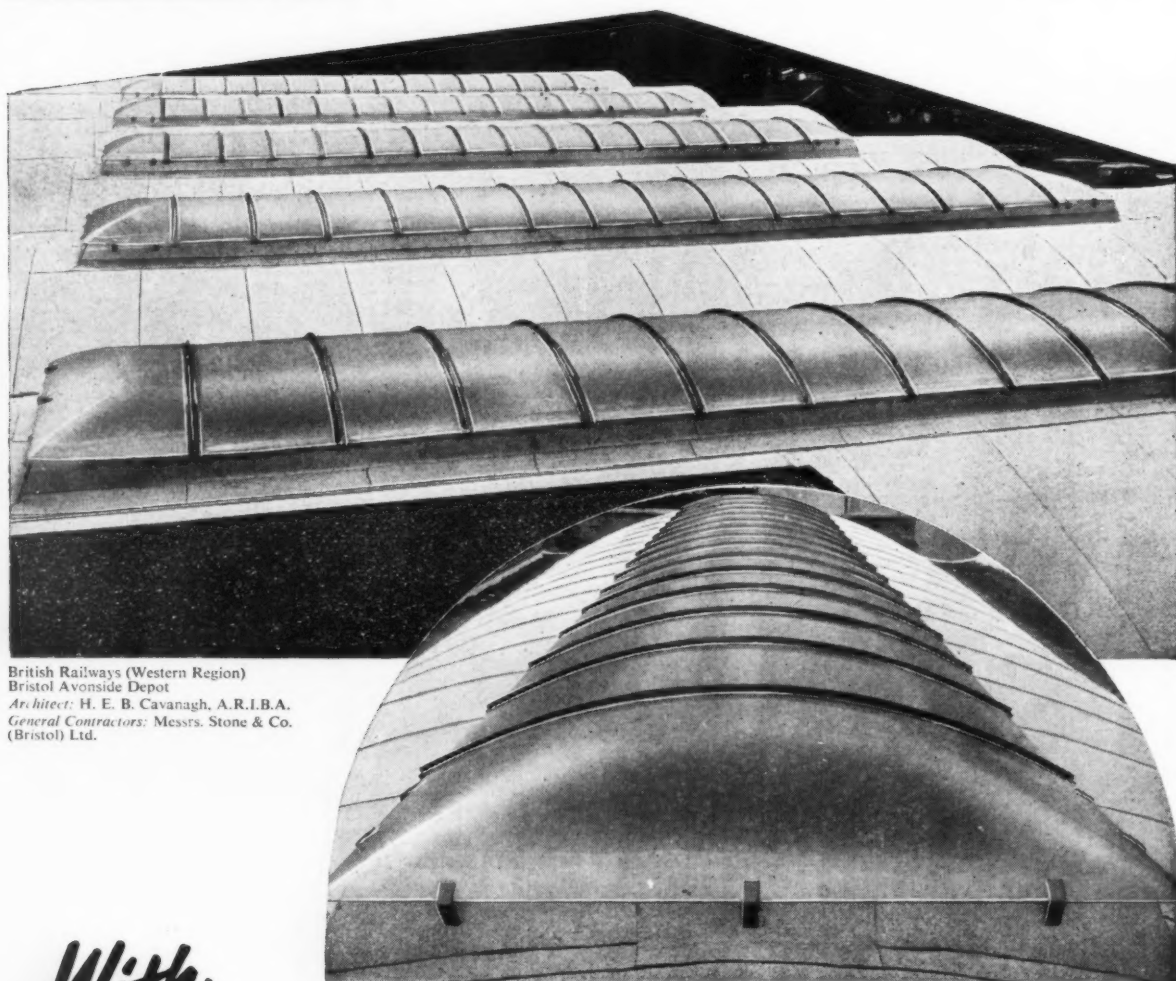
SWIFTPLAN

Regd. Trade Mark

39 VICTORIA STREET · LONDON · S.W.1 · TELEPHONE: ABBEY 4393



BARREL ROOF-LIGHTS



British Railways (Western Region)
Bristol Avonside Depot
Architect: H. E. B. Cavanagh, A.R.I.B.A.
General Contractors: Messrs. Stone & Co.
(Bristol) Ltd.

*With
half-dome
ends as an
alternative
to solid gables*

Half-dome ends not only make the roof-lights more pleasing in design, but also add appreciably to the amount of light transmitted. The maximum size of one-piece domes is unfortunately limited by several factors, and the Newdome Barrel Roof-light has been designed for use where it is desired to have natural roof-lighting outside these limits. They can be made of any length, and can be fitted to either flat roofs or on the ridges of pitched or barrel roofs. Made in seven standard widths from 3 ft. to 7 ft., with length unrestricted.

Members of the
Glass Benders' Association

Full details will gladly be supplied on application, and our technical representatives will be pleased to advise you, without obligation, on any matters relating to Newdome roof-lights.

G. & B. GARDNER & NEWTON LTD
17 GEORGE STREET • ST. HELENS • LANCASHIRE
Telegrams: Bender, St. Helens Telephone: St. Helens 3042
GLASS BENDERS FOR OVER A CENTURY

Rhodes

SASH HANGING

THERE FOR GOOD!

When you specify and install RHODES Sash-Hanging you know the fitments are 'there for good'... for a lifetime of efficient, trouble-free service, backed by a reputation that has stood for the best in sash-hanging equipment and window furniture for over 75 years.



Providing the only permanent system of sash-hanging—Rhodes' chains

- Eliminate future sash line maintenance costs
- Prevent damage to wood and paintwork
- Avoid risk of personal injury through breaking sash cords

Simple to fit, they ensure smooth and easy running sashes from the moment they are installed... the first cost is the last cost.

Ref. S.W.

No. 644/44

RHODES 644 SPECIFICATION

The 644 pulley has a solid brass faceplate and wheel, and a rotating automatically lubricated anti-friction steel sleeve-bearing on a fixed G.M. axle. The sash chains are made of rust-proofed Sheffield steel links, assembled with G.M. rivets.

For sashes up to 50 lb. specify No. 55 chain with the 11 in. pulley.

For sashes up to 70 lb. specify No. 44 chain with the 2 in. pulley.

For sashes up to 112 lb. specify No. 33b chain with the 24 in. pulley.

CLEAN, STRAIGHT, CAST IRON SASH WEIGHTS

Standard pattern square weights suitable for cord or chain supplied in the following measurements:—

3 - 9 lb.	— 11" x 11"
9½ - 13½ lb.	— 11" x 11"
14 - 20 lb.	— 11" x 11"
20½ - 27 lb.	— 11" x 11"

Makeweight collars

½ lb.	— 11" x 11"
1 lb.	— 11" x 11"

Specially cast lead or iron weights can also be supplied in square, rectangular or round sectional measurements to requirements.

Other fittings include Chain Window Pulls for easy opening and closing of top window sashes, the "Unocatch" and "Duocatch" Burglar-proof Sash fasteners, Sash furniture, "Stayput" Friction Stay for anything on hinges, Track for laterally sliding windows and doors. Chains for all purposes.

RHODES CHAINS LIMITED

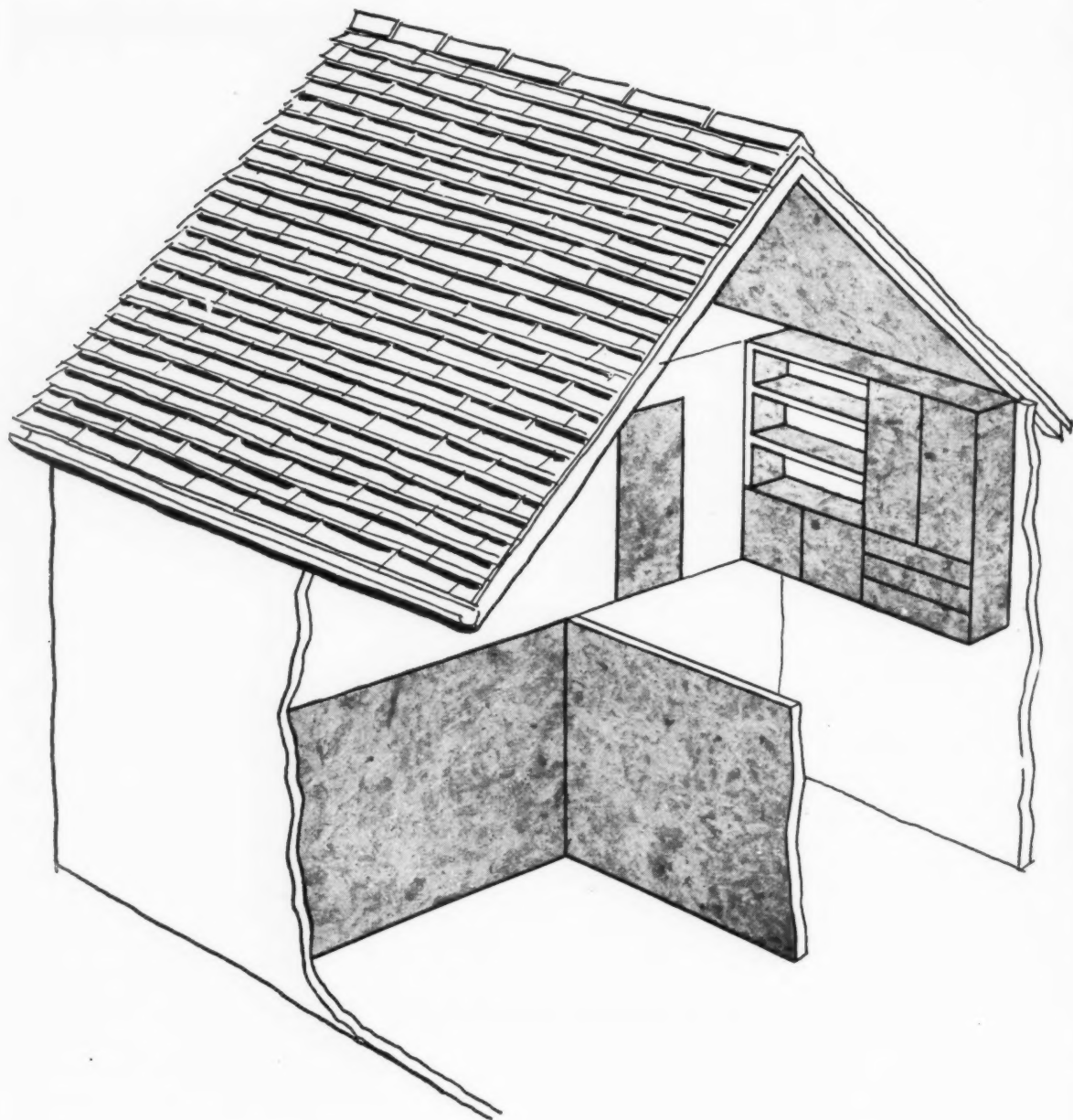
BEACON WORKS, BROOKSIDE AVENUE, RUSTINGTON, LITTLEHAMPTON, SUSSEX

Telephone: Rustington 1303-4 Telegrams: Aircon, Rustington

LONDON OFFICE: CARLISLE HOUSE, 8 SOUTHAMPTON ROW, W.C.1

Telephone: Chancery 9377 (3 lines) Telegrams: 'Rhodespaco,' Norphone, London





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

WEYROC

one of the world's great man-made materials

THE AIRSCREW COMPANY & JICWOOD LTD
WEYBRIDGE • SURREY
TELEPHONE: WEYBRIDGE 2242/7

WPS 85

WA

NOB
Lond



When you decide on linoleum, decide on

**NORTH
BRITISH
LINOLEUM**

Pattern shown: Geranium (62)

NORTH BRITISH LINOLEUM CO., LTD. CLEPINGTON ROAD, DUNDEE Telephone Dundee 85288

London Office: 11-12 Foster Lane, London EC2 Telephone MONarch 1933



At Johannesburg

*"Harefield" Rubber Flooring
laid at the offices of the
U A T French Air Lines
at Johannesburg, S.A.*

"Harefield" Rubber Flooring comes into its own when interior designs are in the modern style. Its beautiful colours, smart appearance and adaptability permit it to be fully integrated into any scheme. Thus the designer's theme can be carried out to perfection. In all parts of the world, the luxury and long-wearing qualities of "Harefield" Rubber Flooring are leading to its ever increasing use. May we send you further details and sample.

"Harefield"



RUBBER FLOORING

RUBBERWARE LIMITED

HEAD OFFICE AND CONTRACTS DIVISION • BELL WORKS • HAREFIELD • MIDDLESEX • Harefield 2123/5

CONTINUOUS **THE** **PATERNOSTER** **LIFT**

**the Paternoster
or continuous lift**

offers unique advantages

A paternoster is a series of lift cars travelling continuously on endless chains. It offers these unique advantages:—

- Continuous, simultaneous, two-way operation
- High handling capacity, 470 to 700 persons per hour
- Long life—low running and maintenance costs—freedom from breakdown
- No attendants required
- Always 'at the ready'

It has many others—but why not write for Publication 1005A? It contains much useful information.

J & E HALL LTD

Lift, Escalator & Refrigeration Engineers.
DARTFORD · KENT · Dartford 23456
London Office: 10 St. Swithins Lane, E.C.4.
Tel: MANSion House 9811

A MEMBER OF THE HALL-THERMOTANK GROUP



These premises for Brocklehurst Motors Ltd., of Chesterfield, clearly demonstrate that KARISCOL buildings are the ideal prefabricated structures where spacious, well-lit floor areas are required. Clear spans range from 30ft. to 100ft. and the portal frame design ensures the best possible use to be made of the building height without interference from conventional roof trusses. The KARISCOL patent joint at eaves and apex reduces site bolting to a minimum and therefore speeds erection and lessens cost. Buildings can be supplied in any multiple of 12ft. 6in. in length and alternative eaves heights are available for all spans. Extensions can be added easily to sides or ends, as required. Crane gantries can also be incorporated for overhead electric or hand operated cranes up to 5-ton capacity. For further information write to Lilleshall for literature, Ref. K.121.

choose Kariscol

LESS TIME LOWER COST BUILDINGS

THE LILLESBALL COMPANY LIMITED

St. George's, Oakengates, Shropshire

Telephone: Oakengates 120. Telegrams: Lilleshall Oakengates



Save stand-by battery space with the new **CHLORIDE** Stationary Cell

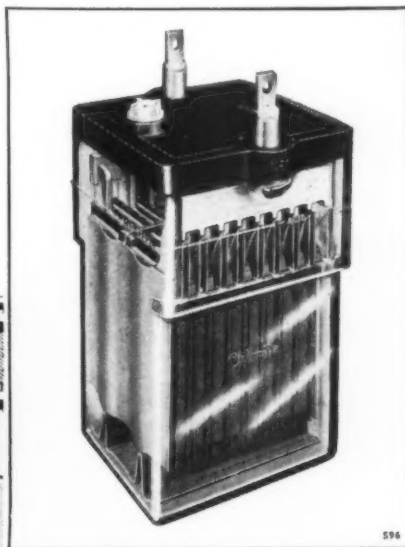
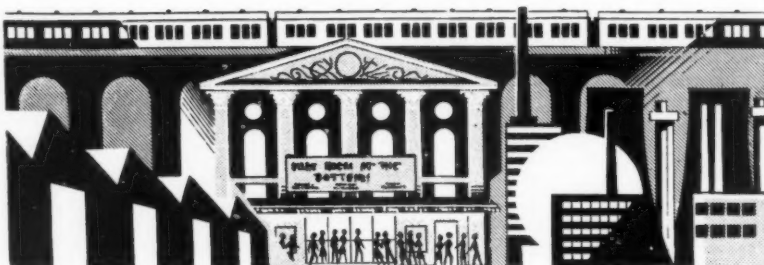
THIS LIGHT, robust cell, with its Planté positive and pasted negative plates, Porvic microporous separators and many other improvements in material and design, saves up to 50% of previously necessary battery space—yet performs its duties with greater efficiency and complete reliability. Specially designed for stand-by duties entailing discharge rates between, say, the 3-hour and the very high rates demanded for switch-closing purposes, it is ideal for trickle-charge operation and has all the remarkable length of life associated with the Planté type of construction.

The field in which the new cell is designed to replace current Planté types is a very wide one. Emergency lighting*, switch operation and emergency supply in hospitals, theatres, cinemas and other public buildings, nuclear and conventional power stations, all rely on trickle-charged batteries. In Great Britain today such batteries occupy millions of cubic feet of valuable space. The new Chloride cell could free almost half of it.

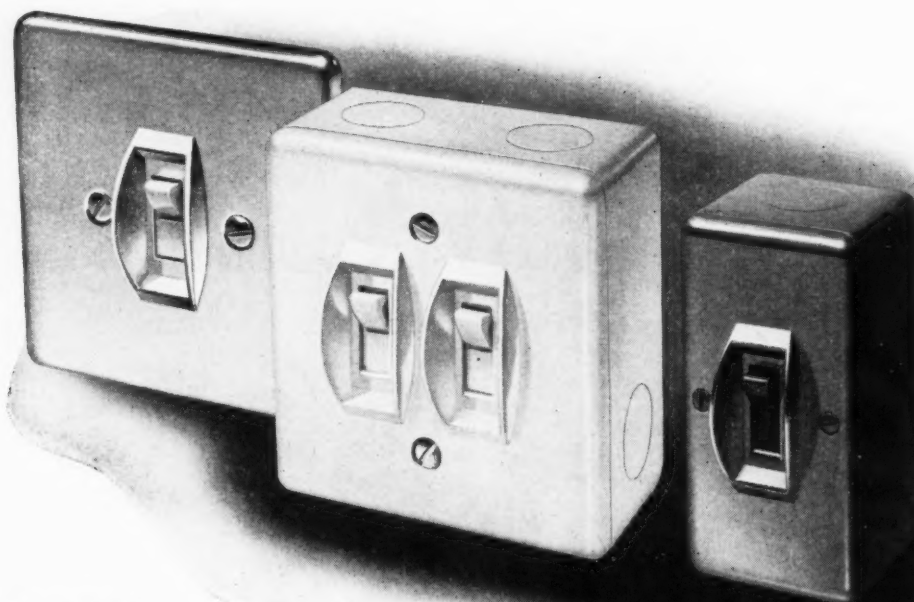
*The new cell will from now onwards be fitted in all Keepalite units—the Chloride Company's automatic emergency lighting system.

A PRODUCT OF CHLORIDE BATTERIES LIMITED
BACKED BY WORLD-WIDE SERVICE

Makers of Exide Batteries



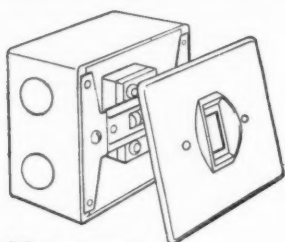
Enquiries to: London, Elgar 7991; Bristol 64086; West Bromwich 2361; Leeds 20248; Glasgow, Bridgeton 3734; Manchester, Blackfriars 1158; Belfast 27953



FALKS

new **METALCAST** switches *for use in offices, hospitals, schools, etc.*

Special features include:

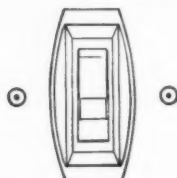
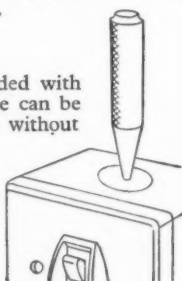


Matching covers and boxes

It is possible to avoid unsightly cast iron boxes in commercial surface work. The "Metalcast" box is of the same excellent finish as the plate and permits matching flush and surface installations.

Knockouts

Boxes are provided with knockouts. These can be removed cleanly without spoiling the finish. They thus obviate difficult drilling or bench work on site.

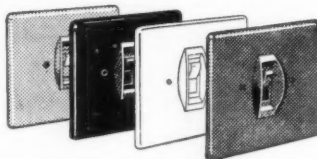


Effective dolly protection

The dolly cannot be damaged owing to the raised side protectors which also add distinction to the design.

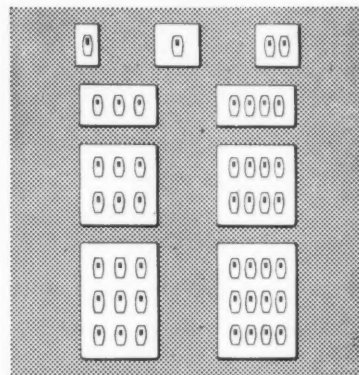
Secret fixing

Where required for schools and institutions all models can be supplied with plate fixing by miniature Allen screws.



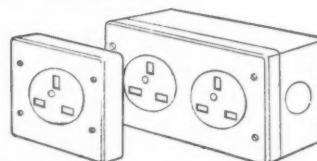
Choice of finishes

The complete Metalcast range is available in Florentine Bronze Plated Finish, Bronze Enamel, Silvercote Enamel or White Enamel. The enamels are based on an epikote resin to give great surface hardness and a resistance to acids and alkalis.



Widest range of all

See diagram—This applies to both flush and surface fixings.



Matching 13 amp sockets

In finishes as above, single and double units, unswitched, the single unit also being available switched.

FALK STADELMANN & CO. LTD., 91 Farringdon Rd., London, E.C.1. HOL 7654.
Showrooms at: 20/22 Mount St., London, W.1. MAY 5671 and branches.

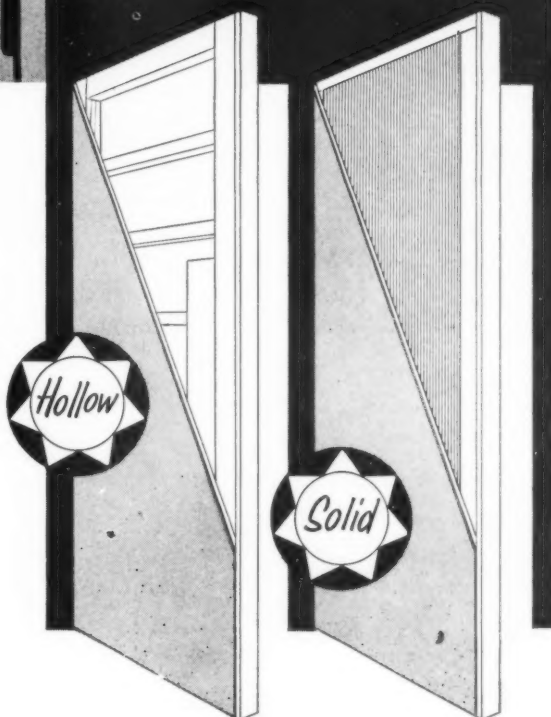
FALKS

medium price flush doors by Venesta

Gold Star

Venesta's new 'Gold Star' now bring you solid and hollow-core flush doors in a medium price range, but there is nothing medium about the superb Venesta workmanship. The frame and intermediate rails of the hollow door are carefully shaped not to show through even when the plywood face is highly polished. The core of the solid 'Gold Star' is of seasoned block core kerfed both sides to prevent warping. Send for folder (L5) with all details and prices.

- * Non-warp construction by craftsmen using the pick of kiln-dried deal and 5 mm African Mahogany plywood.
- * Bonded throughout with synthetic resin. Stile edges lipped with kiln-dried hardwoods tongued to frame.
- * Covered by a 5 year guarantee regardless of any maintenance clause there may be in the Building Contract. Should a Venesta door develop any fault due to bad manufacture within 5 years, an entirely new door will be supplied ready for hanging and finishing.
- * Built by Venesta, the first name in flush doors.



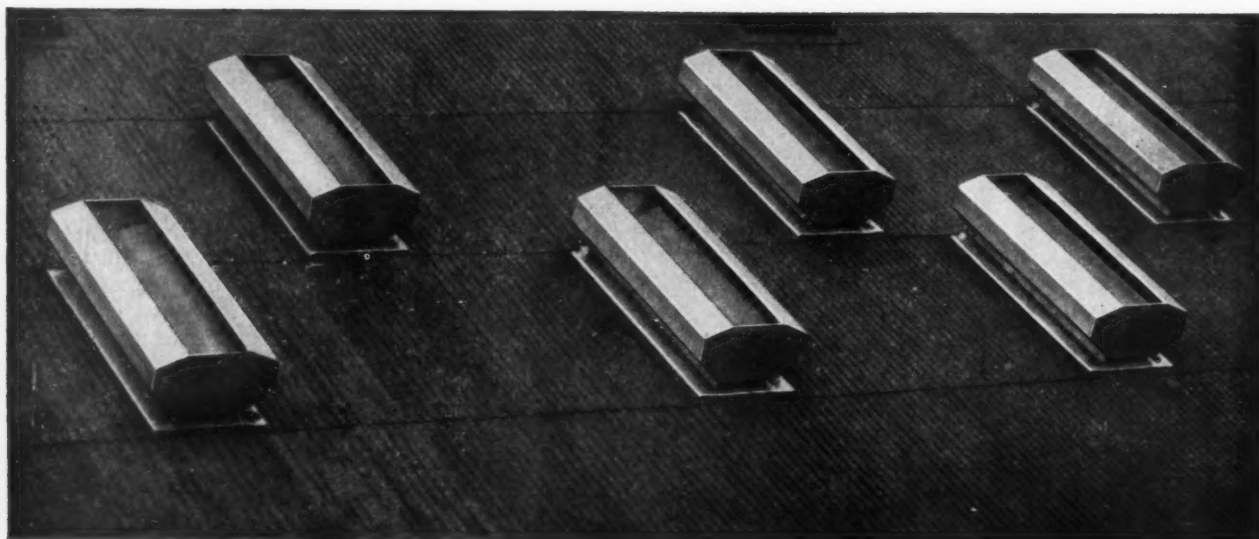
VENESTA PLYWOOD LIMITED

VINTRY HOUSE, QUEEN STREET PLACE, LONDON EC4 TEL: CENTRAL 3040 (24 LINES)

TA3389



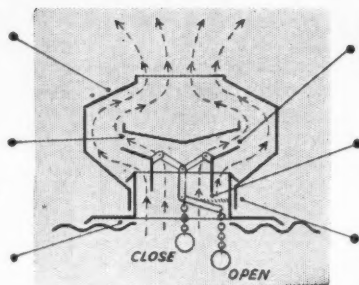
COWL EXTRACTOR VENTILATORS



Anti-corrosive aluminium alloy cowling eliminates maintenance.

Baffle and adjustable dampers aerodynamically designed to eliminate turbulence—provide unrestricted outlet.

Base suitable for fixing into patent glazing or roof sheeting.



Adjustable dampers remotely controlled with pneumatic, hydraulic or mechanically operated shaft and lever gear.

Hand operated dampers spring loaded—positive snap action into open or closed positions.

Close fitting base eliminates down draughts—gives full protection against weather.

WE ALSO MANUFACTURE:

Fan assisted ventilators

Continuous ridge ventilators

Fixed and adjustable louvred ventilators for roof or wall fixing with or without fusible link gear

Power operated ventilating shutters

TEMPLEWOOD

HAWKSLEY

BUILDING DIVISION

MEMBER OF HAWKER SIDDELEY INDUSTRIES LTD.

OUR TECHNICAL DEPARTMENT WILL BE PLEASED TO CO-OPERATE IN PREPARING COMPLETE VENTILATION SCHEMES
WRITE TO VENTILATION DEPARTMENT, 2 BUCKINGHAM AVENUE, SLOUGH, BUCKS. TELEPHONE SLOUGH 23212

Specify

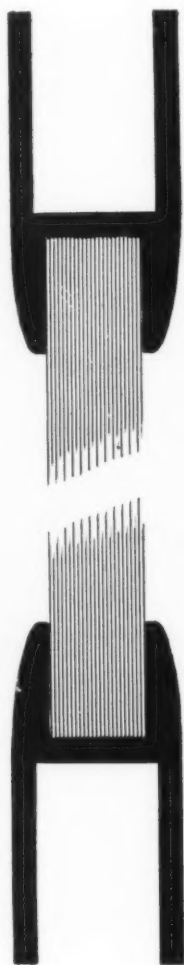
NEWEDGE

FITTINGS

FOR YOUR "ARMOURPLATE" DOORS

So that you get

NEWMAN'S "BRITTANIC" FLOOR SPRINGS with
"ADJUSTABOX" the modern method of door alignment
2" DEEP RAILS FOR MAXIMUM GLASS AREA
5 LEVER LOCKS & SLIDING ESCUTCHEONS



"NEWEDGE" FITTINGS ARE GUARANTEED 5 YEARS
APPROVED AND USED BY PILKINGTON BROTHERS LTD.

MANUFACTURED BY

NEWMAN'S

WILLIAM NEWMAN & SONS LTD.
HOSPITAL STREET, BIRMINGHAM, 19

Ask Your Glass Merchant for a Leaflet

"ARMOURPLATE" IS THE REGD. TRADE MARK OF PILKINGTON BROTHERS LTD.



glass roof domes are best!



Houghton Modern Secondary School, Darlington.
Architect: Borough Architect, County of Darlington.
Contractor: Edgar Lawson Ltd.



- pass ample light
- last for ever
- are fire resistant
- need no maintenance
- never lose their shape

Glass roof domes have many advantages over other forms of roof lighting . . . they pass ample light, last for ever and are fire resistant. Glass roof domes are leak-proof, and easy to fix on metal, wood or concrete curbs; they need no maintenance and never lose their shape.

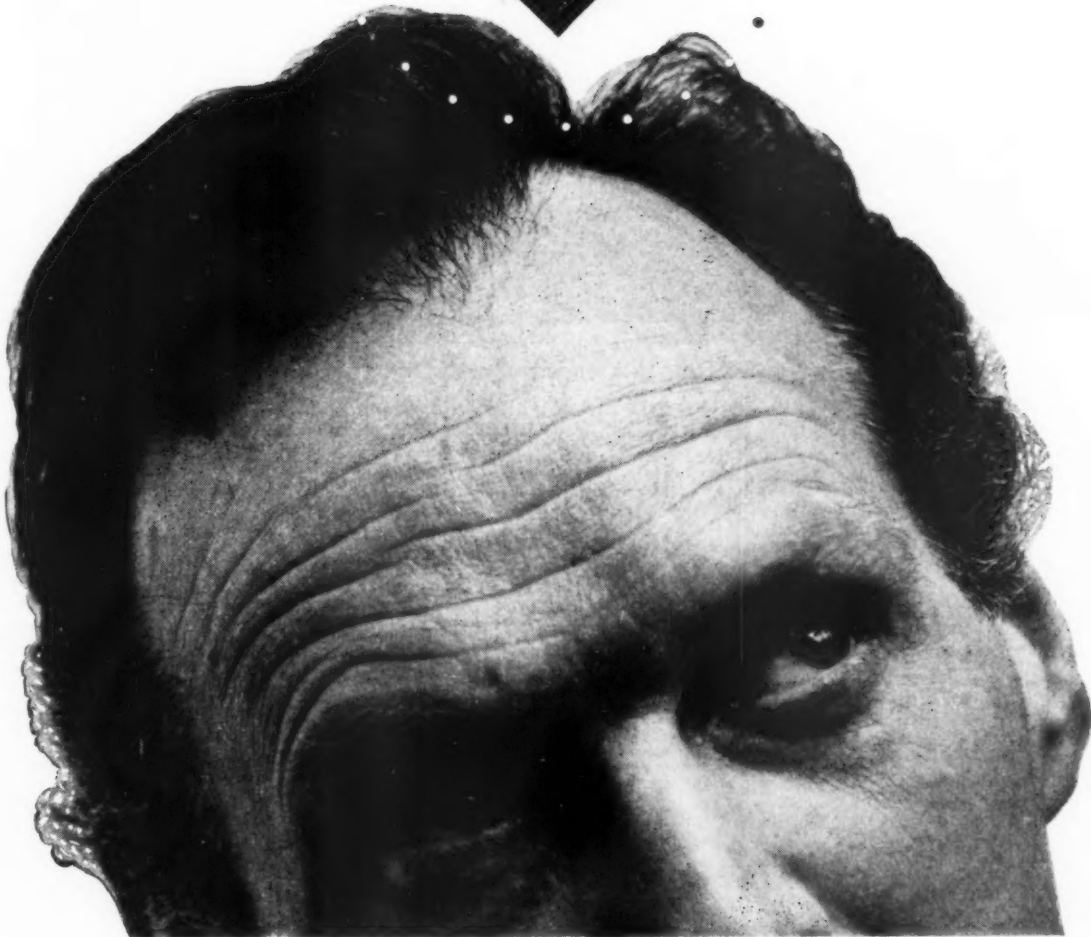
Think of glass roof domes
for your next building.

specify **GLASS** roof domes
Glass Benders Association

6 MOUNT ROW, LONDON, W.1. MAYFAIR 8334

think **Steelwork**

think **Boulton and Paul**



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

Boulton and Paul Limited · NORWICH · LONDON · BIRMINGHAM

AP/CE41

work in progress



Architects: Messrs. Stanley Peach & Partners
Quantity Surveyors: Messrs. W. S. Fidgen & Sons

HOWARD FARROW
LTD

*A Company Member of the
British Institute of Management*

WHEREVER the sign of Howard Farrow appears, there is work in progress.

This Photograph illustrates the new factory and office buildings, engineering services, external roads and other works for Corocraft Ltd., at Crawley Industrial Estate:

Work in progress includes sewerage, tunnelling, concrete structures, factories and domestic buildings.

Companies for whom we have recently erected industrial and other buildings

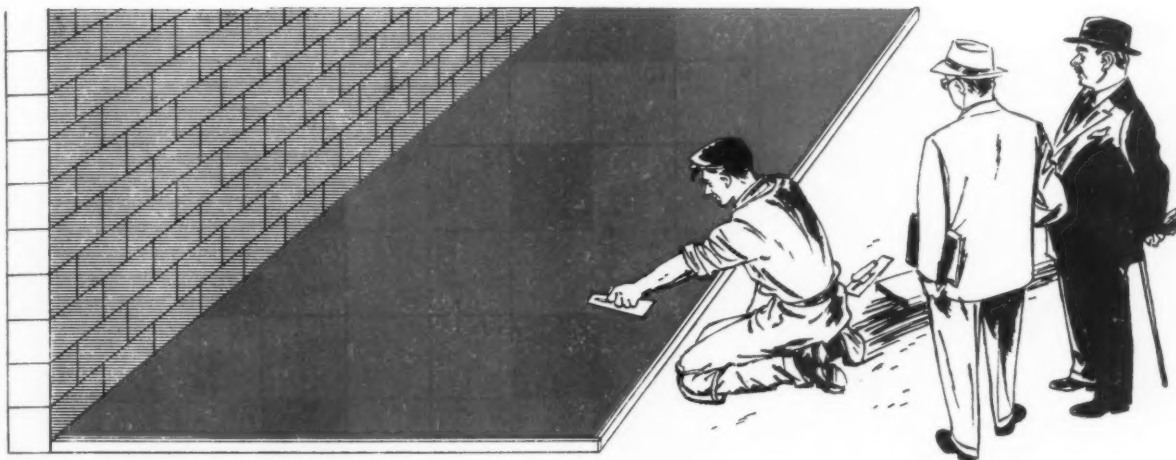
Standard Motor Co. Ltd.
Standard Motor Co. Ltd., Architects' Dept.
The Firestone Tyre & Rubber Co. Ltd.
Messrs. Dodge & Reid, Chartered Architects and Surveyors.
The Nestle Company Ltd.
Messrs. Dodge & Reid, Chartered Architects and Surveyors.
The Tilley Lamp Co. Ltd.
R. C. N. Golding, Esq., Chartered Architects.
Messrs. Chrysler Motors Ltd.
Messrs. Dodge & Reid, Chartered Architects and Surveyors.
Messrs. T. & W. Farmiloe Limited.
Messrs. J. M. Austin-Smith & Partners, Chartered Architects.
Messrs. Barclays Bank Ltd.
Messrs. W. Curtis Green, R.A., Son & Lloyd.
Shell-Mex & B.P. Limited.
Messrs. Shingler & Risdon, Chartered Architects and Surveyors.
Messrs. Sun Printers Ltd.
Messrs. Stanley Peach & Partners, Architects and Surveyors.
Messrs. Transair Limited.
Messrs. Clive Pascall & Peter Watson, Chartered Architects.

Messrs. Vent-Axia Ltd.
Messrs. C. W. Glover & Partners, Consulting Engineers and Architects.
Messrs. Benskin's Watford Brewery.
G. A. Bethell, Esq., Chartered Architect.
Messrs. Hygrade Corrugated Cases Ltd.
Messrs. Brocklehurst, Cooper & Williamson, Chartered Architects, Chartered Surveyors.
Messrs. Simpson's Brewery Ltd.
Messrs. Moore Simpson & Cleverly, F/A.R.I.B.A.
Messrs. Henry Sykes Ltd.
Messrs. Malcolm Glover & Partners, Consulting Engineers.
Beecham Group Limited.
Messrs. Brocklehurst, Cooper & Williamson, Chartered Architects and Surveyors.
Clinical Products Limited.
Messrs. Oscar Garry & Partners, Chartered Architects.
Messrs. Landis & Gyr Ltd.
Messrs. Huckle & Durkin, Architects and Consulting Engineers.
Messrs. International Aeradio Ltd.
Messrs. Dodge & Reid, Chartered Architects and Surveyors.
Messrs. Port Line Ltd.
Messrs. Grace & Farnier, Chartered Architects.

CIVIL ENGINEERING & BUILDING CONTRACTORS

BANK BUILDINGS, RUSSELL PARADE, GOLDERS GREEN ROAD, LONDON, N.W.11. Phone : MEAdway 3232

You live and learn



- BUILDER** "Do you know, this is the best cement colouring compound I have ever used?"
- ARCHITECT** "Which confirms that if the colouring agent complies with British Standard, it must be good."
- BUILDER** "And yet, to get this strong brick-red shade, I am only using 3 lbs. of this Febtone colouring compound per cwt. of cement."
- ARCHITECT** "Yes, what a difference to the colouring compound I previously specified. That needed 10 lbs. of colour per cwt. of cement to form the same shade."
- BUILDER** "Ah! but the colouring agent in that compound didn't conform with British Standard 1014-1942 Type A."
- ARCHITECT** "Yes, there's the difference. To conform with British Standard, the cement colouring material must be free from impurities and extenders."
- BUILDER** "Which gives the answer—the colouring matter of Febtone is obviously pure, unadulterated pigment and so a little goes a long way."
- ARCHITECT** "Which makes you wonder what is in some of the other cement colouring compounds."
- BUILDER** "Well, there's no wondering with Febtone and in addition, the product also hardens and plasticises which is a great help to the Builder."

You can rely on

FEBTONE SUPER PERMANENT COLOURS FOR CEMENT

(PATENT NUMBER 72728)



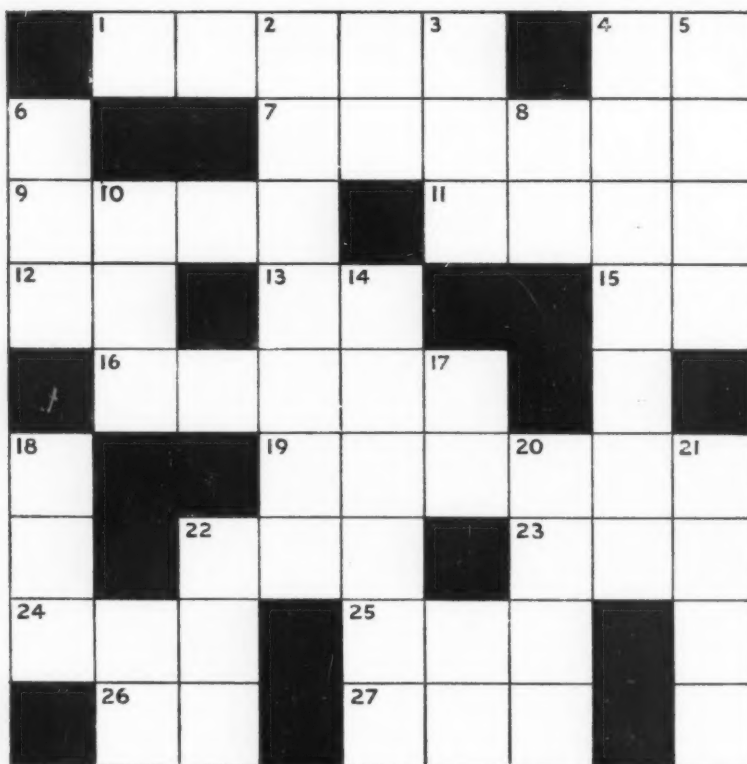
(GREAT BRITAIN) LIMITED

102 KENSINGTON HIGH STREET, LONDON, W.8

Telephone: WESTERN 0444

ALBANY ROAD, CHORLTON-CUM-HARDY, MANCHESTER 21. Telephone: CHO 1063

DHB 7133



B — — — E

Life always seems a puzzle when you've just had cross words with the fixer and been blank-well told what to do with blank tiles that won't fit. We can give you a clue.

The answer stands for perfect shade, perfect fit and excellent delivery.

Let us know your requirements and we will send you by return full details, colour charts and samples.



SILTEX
CERAMIC WALL TILES
T. & R. BOOTE LTD.

(Established 1842)

Burslem, Stoke-on-Trent

Fix tiles with Boote's "TYLOFAST" Tile Fixing Mastic!

TOMO double-glazing at London Airport



We think you'll agree that the appearance of these attractive offices at London Airport is enhanced by their TOMO double-glazed WINDOWS. But that's only a small part of the story. TOMO double-glazing also offers excellent thermal-efficiency values, remarkable sound-reduction properties, finely-controlled ventilation and total indoor window-cleaning.

On the subject of thermal efficiency, we should like to refer you to the report of a recent B.R.S. test quoted on the right. It speaks volumes.

When you work within whistling distance of aircraft, sound reduction becomes a matter of vital importance. Here TOMO WINDOWS score heavily. The total reduction in sound level depends finally, of course, on the thickness of glass employed and the space between panes. Using 32-ounce glass spaced at $1\frac{1}{2}$ in., TOMO double-glazing gives a reduction of approximately 40 decibels and will, we hope, save Shell-Mex and Esso personnel not a few headaches in the future.

One last point, TOMO double-glazed WINDOWS are suitable for inward or outward opening and can be top-hung, bottom-hung, side-hung or pivot-hung. Any further information you may require will be gladly supplied.

**FOR UTMOST EFFICIENCY
IN THERMAL INSULATION
AND SOUND REDUCTION—**

NEW!

A Stock-size TOMO double-glazed 'Picture' Window, horizontal-pivot hung, to the BSS644 overall size $5'11\frac{1}{4}"$ wide \times $4'0\frac{1}{4}"$ high. Made from best quality softwood, ready-primed; £25 nett ex-works.

—NOW AVAILABLE FROM STOCK!

TOMO TRADING CO. LTD., COWLEY PEACHEY, UXBRIDGE, MIDD.X.
Telephone: West Drayton 3751 (10 lines)

Administrative and operations offices for aviation fuel supplies at London Airport, half of which are occupied by Shell-Mex & B.P. Ltd. and the other by Esso Petroleum Co. Ltd. Architect: Frederick Gibberd, C.B.E., F.R.I.B.A., M.T.P.I.

BUILDING RESEARCH STATION TESTS

- ★ When a standard-production TOMO WINDOW Wall-Unit (8ft. by 8ft.) was tested at the Building Research Station, Garston, ★
- ★ the mean thermal transmittance of the complete unit was found ★
- ★ to be 0.31 B.Th.U./sq. ft./h./°F. This is equal to the thermal ★
- ★ transmittance of a traditional 11in. cavity brick wall! This ★
- ★ impressive result was further improved to 0.29 when the TOMO ★
- ★ pleated blinds, fitted between the panes, were lowered. ★
- ★ The U-value of the window-area only was found to be 0.38 ★
- ★ which, with TOMO pleated blinds down, became 0.35. At ★
- ★ 0.38, TOMO double-glazed WINDOWS are substantially ★
- ★ (29%) better than the U-value of 0.47 quoted for conventional ★
- ★ double windows in the I.H.V.E. Guide to Current Practice, 1955. ★

TOMO

DOUBLE GLAZED
WINDOWS

—purpose-made in finest timbers
to Architect's size, style and finish

an unbeatable guarantee for an unbeatable product



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

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

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



No. 170A

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



No. 23A

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



No. 25A

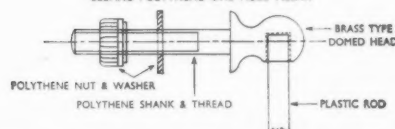
Double seat and cover, badged-B.S.S., four buffers manufactured from B.S.S. guaranteed materials. This seat is unbeatable for value and quality.

A RANGE OF FORTY COLOURS TO CHOOSE FROM

CELMAC—ALL POLYTHENE FITTINGS

This ALL-Polythene one-piece pillar is the latest development in the trade. Absolutely corrosion free, no metal at all—and cheaper than any other fitting. The flexibility of this fitting is an added safeguard against accidental breakage. All CELMAC seats are available with this fitting, or with moulded pillars, chromium pillars, all with various rods and spacers.

NON CORROSIVE CELMAC POLYTHENE ONE PIECE PILLAR



ROBERT M^cARD & COMPANY LIMITED
CROWN WORKS DENTON LANCASHIRE

Telephone : DENTON 3837/8/9



3270

1066

5174

697-24-95

692-05-81



512

1159-01

1847

4200

LOCKS & BRASSFOUNDRY



9100



UNION

To bring to the notice of architects, distributors, builders, and users a few good selling lines taken from the UNION and Showells ranges. Particulars and advice are available to everybody, but supplies can be obtained only from the best builders' hardware merchants.



8094



SHOWELL

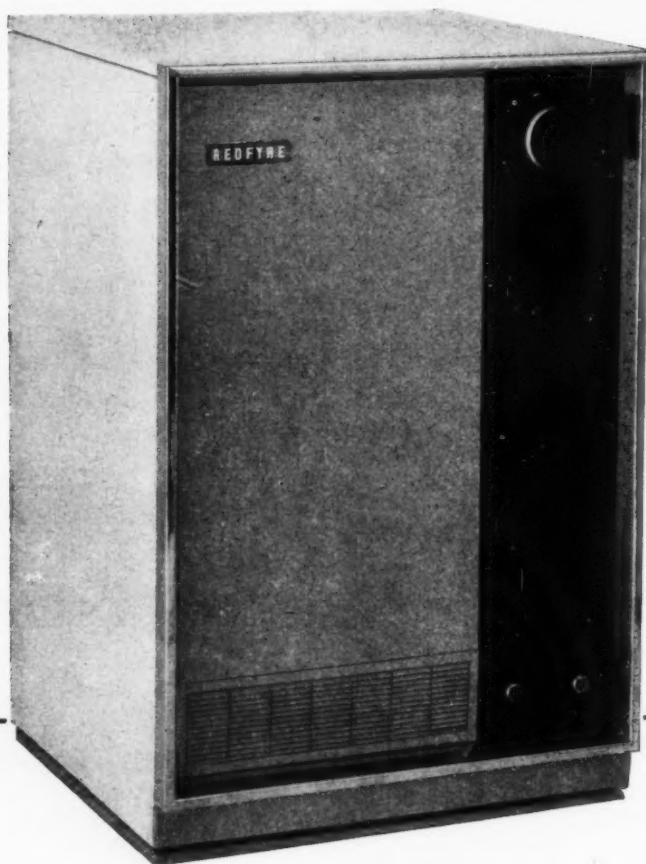
1180-03

1175-04

1401

JOSIAH PARKES & SONS LTD.
 UNION WORKS · WILLENHALL · STAFFS · ENGLAND
 BUSH HOUSE, LONDON · JOHANNESBURG, SOUTH AFRICA

EDWIN SHOWELL & SONS LTD.
 STIRCHLEY · BIRMINGHAM 30 · ENGLAND
 BUSH HOUSE, LONDON



The new REDFYRE CENTRAMATIC^{REGD.} makes oil-fired central heating the *natural* choice for three or four bedroomed houses

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

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

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

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

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

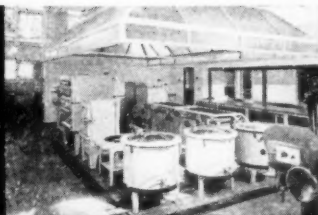
*Full technical specifications of the
Redfyre Centramatic oil-fired boilers are available. Please write to*

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

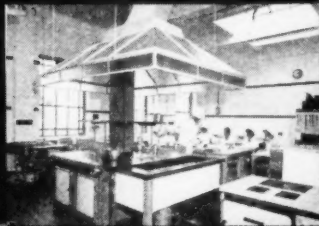


T

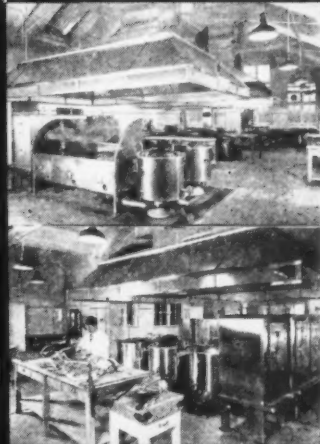
VE



Tetley Hall, Leeds University



Coventry Technical College



Thos. Firth & John Brown Ltd.

Thos. Firth & John Brown Ltd.



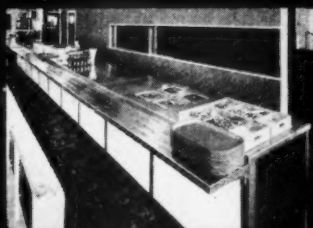
The Birmingham & Midland
Motor Omnibus Co. Ltd.

DESIGNED MANUFACTURED INSTALLED

from a single
item to a
complete scheme



St. Anthony's College, Oxford



Southampton Gas Board

FILL IN YOUR NAME AND ADDRESS AND SEND THIS
ENQUIRY TO US FOR DETAILS OF OUR COMPLETE
KITCHEN PLANNING SERVICE.

NAME

ADDRESS

.....

.....

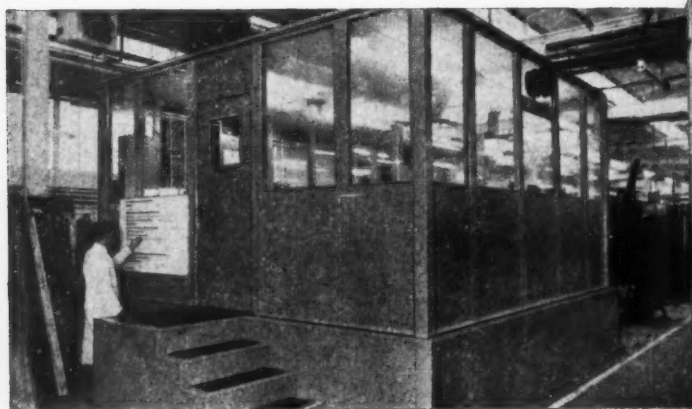
"Stotts & Oldham"

VERNON WORKS • OLDHAM • LANCs

THE SOUND APPROACH TO QUIET!

... install clean, streamlined N.S.E. Partitioning,
establish a happy congenial atmosphere and
increase staff efficiency.

EASY TO ERECT · ADAPTABLE · ECONOMICAL



For Office and Factory

.... it must be



STEEL PARTITIONING

*Inspect the full range of N.S.E.
Partitioning and Office Equipment at
our modern Showrooms in
BRISTOL, BIRMINGHAM, MANCHESTER
or visit our London Display Centre at
149, BOROUGH HIGH STREET, S.E.1.*



**Send
TO-DAY
for our
NEW FREE
fully illustrated
36 page Catalogue.**

NORWOOD STEEL EQUIPMENT LTD., HARLOW, ESSEX.

Tel. Harlow 25651.

Bricks are *scarce*—



Bricks are scarce. Seco units are the answer.

The architect's drawing above shows the pleasing effect achieved by building **WITHOUT BRICKS**.

It is an office block for Bryans Aeroquipment Ltd., Mitcham, Surrey, and is of entirely 'dry' construction.

The SECO system provides the designer with a new and flexible medium to give effect to his ideas.

build in

SECO

Write for information to:—

Supply Department

**SELECTION CONSTRUCTION
COMPANY LTD.**

26 Margaret Street, London, W.1
LANgham 7931

tested and
approved by
L.C.C., L.F.B.
F.O.C. and M.O.T.

FIROLA
FIRE RESISTING ROLLING SHUTTERS



for the prevention of fire-spread



FIROLA (Approved) Fire Resisting Shutters are fitted singly or in double sets, one on each side of an opening, giving a minimum fire resistance grading of two or four hours respectively. Manual or mechanical operation, fitted with automatic fusible link apparatus.

Full details see Barbour Index.

Above: FIROLA Shutters (double sets) installed for Messrs. Maple & Co. Ltd. Tottenham Court Road, London. Architects: Dalglish & Pullen F/R.I.B.A.

Left: FIROLA Shutters (single sets) installed for Eastbourne Terrace Development, Paddington, London. Architects: C. H. Elsom & Partners.

Haskins

Gnome House, Blackhorse Lane, London, E.17. LARKwood 2622
Brook Street, Basingstoke, Hants. Basingstoke 1070

GYPLITE



1	GRADE	Gyplite Browning
	AGGREGATE	Perlite
	USES	As an undercoat over :— Solid backgrounds other than in situ or precast con- crete and stone masonry.
2	GRADE	Gyplite Bonding
	AGGREGATE	Vermiculite
	USES	As an undercoat over :— In situ or precast concrete, stone masonry, Plasterboard e.g. Gyproc Lath, Rocboard, Base- board, Wood wool slabs e.g. Gypklith.
3	GRADE	Gyplite Metal Lathing
	AGGREGATE	Perlite and Vermiculite
	USES	As an undercoat over :— Metal lathing (all types.)
4	GRADE	Gyplite Finishing
	AGGREGATE	Perlite and Vermiculite
	USES	As a finish to all Gyplite undercoats.

* In many cases Gyplite Plasters will be suitable for use over backgrounds consisting of proprietary materials not listed. In these circumstances our Service Department will be pleased to advise.

the brand name
for the best in ready-
mixed lightweight
aggregate plasters.

GYPROC PRODUCTS LIMITED

Head Office: Singlewell Road, Gravesend, Kent. Gravesend 4251/4

Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.1. Govan 2141/3

Midland Office: 11 Musters Rd., West Bridgford, Nottingham. Nottingham 82101

London Office: Ferguson House, 15/17 Marylebone Road, London N.W.1. Hunter 4081/4

'GYPROC' IS THE REGISTERED TRADE MARK OF GYPROC PRODUCTS LIMITED

GYF. 2B



everywhere you look

Art Galleries, Airports, Aircraft, Abbeys.
Banks, Ballrooms, Banqueting Halls.
Cathedrals, Churches, Cafes, Concert Halls.
Drawing Offices, Dance Halls.
Exteriors, Entrance Halls, Exits, Embassies.
Floodlighting, Factories, Football Grounds, Film Studios.
Garages, Guildhalls.
Hospitals, Houses, Hotels, Highways, Halls.
Industry, Institutes, Inns.
Jibs, Jewellers, Jetties.
Kitchens, Kindergartens.
Lecture Halls, Lodges, Libraries, Lobbies.
Museums, Milk Bars, Mosques, Mines.
Nurseries, Nursing Homes, Night Clubs.
Offices, Oratories.
Palaces, Public Buildings.
Quarries, Quadrangles.
Restaurants, Railways, Restrooms.
Shops, Streets, Schools, Stages, Ships.
Theatres, Transport, Town Halls.
Universities, Underwater.
Van Docks, Vestibules, Vaults.
Workshops, Waiting Rooms, Warehouses.
Xmas Street Decorations.
Yards, YMCA Hostels.
Zoos, Zebra Crossings.

lighting fittings for every purpose

G.E.C.
LIGHTING DIVISION



STANDS UP TO THIS...
Primer 'X' adheres and keys firmly when brushed on to a glass plate under running water.

Considerable research has gone into the development of this new primer. Primer 'X' is a dual purpose primer containing special anti-corrosive pigments and a cationic agent which gives tenacious adhesion to all building materials and ferrous and non-ferrous metals. It is unimpaired by atmospheric dampness and presence of moisture. The firmness of the key provided by Primer 'X' compels moisture to seek alternative outlets, thus preventing flaking and peeling of paintwork.

**SPECIFY IN
CONFIDENCE
PRIMER 'X'
FOR ALL
PAINTING
PROJECTS**

THE IDEAL PRIMER FOR NEW AND MAINTENANCE PAINTING

★ *PRIMER 'X' has proved its effectiveness and durability under controlled field tests.*

★ *The ideal Primer for all maintenance work.*

★ *Saves money and time in ensuring against paint failure.*

★ *Invaluable for Housing Scheme Work, Schools, Public Buildings, etc.*

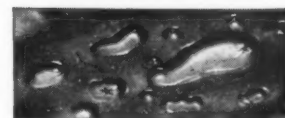
SUPPLIED IN PINK AND GREY · APPLY BY BRUSH

Write for further particulars and prices to:—

montgomerie, stobo & COMPANY LTD.



STOPS flaking and peeling



STOPS paintwork blistering



Deeside, Saltney, Nr. Chester.
136/154, Stranmillis Road, Belfast.
52/72, Rogart Street, Glasgow,
S.E.

Telephone Chester 23128 (3 lines). Telegrams 'Turpentine' Chester.
Telephone Belfast 66978 Telegrams 'Turpentine' Belfast.
Telephone Bridgeton 1005/6/7 Telegrams 'Turpentine' Glasgow.
Also at Slough.



WEDNESBURY

copper tube

NOW WEDNESBURY PLAN AN ATTACK ON CARBONACEOUS AND OXIDE FILMS. Extensive research has led to the introduction of new drawing media, purging and burnishing, making carbonaceous and oxide films virtually impossible. These developments have been incorporated in our production lines for marked sizes to B.S. 659.

All "Wednesbury" tube is solid drawn by the most efficient and modern processes, under strict laboratory supervision from raw material to finished tube, and backed by a prompt and efficient delivery service. Plan your quality by specifying "Wednesbury".

The WEDNESBURY TUBE COMPANY LIMITED . BILSTON . STAFFS.

Tel : BILSTON 41133 (9 lines).

Associated Company : Glynn Bros. Ltd., London and Manchester.

South Wales Warehouse : Penarth Road, Cardiff. (Tel : 22502.)

Manufacturers of

LEAD SHEET & PIPE: PLASTIC TUBE & FITTINGS: STEEL TUBES & FITTINGS: STEEL TUBE FABRICATIONS: MALLEABLE TUBE FITTINGS

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 'A' or a stylized building. Below the text, a group of seven people in mid-20th-century attire are shown in silhouette, walking and gesturing as if in a presentation or performance. The entire scene is set within a dark, trapezoidal frame that tapers towards the bottom.

ESCABOARD

-AN IMMEDIATE SUCCESS

NO FILLING! NO SEALING! NO PRIMING!

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

SAVES TIME...SAVES PAINT

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

CAN BE USED FOR FLOORING

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

ESCABOARD OFFERS NEW SCOPE

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



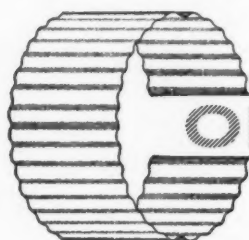
Manufactured by:
SVENSKA CELLULOSA AB
FIBREBOARDS DIVISION
SUNDSVALL • SWEDEN



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

Long as you like

at one go!



Contirol

**translucent corrugated
sheeting in
continuous rolls**

An entirely new departure—continuous corrugated translucent sheeting 6½ ft. wide and in 30-yard lengths, or longer—as long as you can handle. It saves work in fixing, needs less support and is stronger, weight for weight, than other materials.

Contirol is made from polyester resin reinforced with glass fibre, strong, shatterproof, resistant to weathering—ideal for roof lights, canopies, walls and shelters.

Contirol is available in a wide range of attractive light-fast colours, translucent and opaque.

*Write today for illustrated leaflet and full details of this
translucent sheeting in brand new form to*

JOSEPH WEIL and SON LIMITED

Friars House, 39-41 New Broad Street, London E.C.2. Phone: London Wall 5052

1A/3791

Plan with

modernfold



AND

USE ALL THE SPACE

When planning room partitions, use Modernfold Expanding Walls and Doors. Economic, simple to install and contemporary in appearance. Modernfold are the ideal answer whether for the Board Room, Office Blocks, Schools, Halls, or the private home. There is a wide choice of colours in a superb heavy quality P.V.C. leathercloth, which gives Modernfold a most luxurious appearance.

No floor track of any nature is required. Modernfold are completely draught-proof. Where reduction of sound is a particular problem the special 'Soundmaster' Modernfold is available. Details of scientific tests can be supplied. Modernfold open and shut at the touch of a finger, are available as single doors, pairs of doors, fully floating or curved doors. Include Modernfold, the contemporary method of room division, in your plan.

*Taylor Woodrow Ltd., Canteen, Ruislip Road, Southall.
Architects: Elliott, Cox & Partners, F.R.I.B.A., F.R.I.C.S.,
L.R.I.B.A., A.I.A.S., A.R.I.B.A.*



WALLFOLD by Modernfold

In quantity flow production, this great new range of expanding walls and doors, through their wide range of standard sizes makes them ideal for use in housing estates, etc. Covered in P.V.A. leathercloth, which can be painted with recommended emulsion paint.

modernfold

EXPANDING WALLS AND DOORS

HOME FITTINGS (GREAT BRITAIN) LTD.

Dept. A.J. 5, VICTORIA WORKS, HILL TOP,
WEST BROMWICH, STAFFS.
Telephone: Wednesbury 0761



the perfect combination



DOOR FURNITURE



MORTICE LOCK



INSERT CYLINDERS

Three in harmony... beauty, quality and maximum security are combined to present the finest value available in door furniture and locks. Suite includes Ogro handle and striking plate to match in non-corrosive aluminium alloy of lasting finish, the NEMEF mortice lock renowned for strength and ease of fitting, and CES single or double insert cylinder with automatic dust seal with infinite differs, available under sub and grandmaster suites. Full details and prices gladly sent on request.



GROUP SALES LIMITED

Offices and Warehouses (Ironmongery) Bromells Road, London, S.W.4. Telephone: MACaulay 6222. also at 1a Broughton Street, London, S.W.8.

DISTRIBUTORS AND AREA STOCKISTS:

H. & C. Davis Ltd., London, S.W.4.
The Metal Agencies Co. Ltd., Box 136, Bristol, 3.
Neville Watts & Co. Ltd., Sheffield, 1.

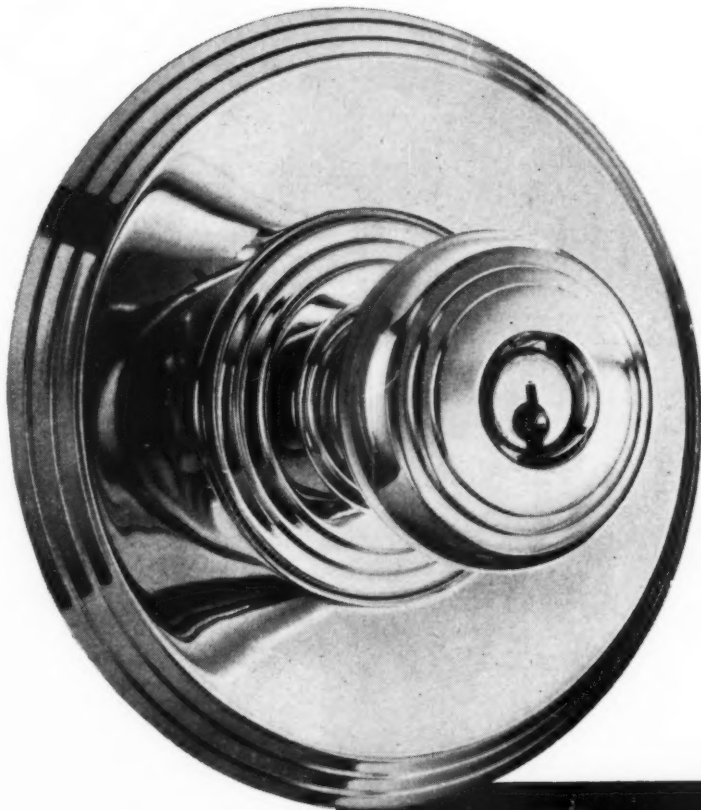
N. F. Ramsay & Co. Ltd., Birmingham, 1.
Mountford Bros. Ltd., Birmingham, 3.
William McGeoch & Co. Ltd., Glasgow, C.2 and Edinburgh.

Joseph Blair Ltd., Belfast, Northern Ireland.
Alfred Olby Ltd., Ramsgate, Kent.

THE OGRO TRADE MARK AND OGRO PACKING

All genuine OGRO Fittings bear the OGRO Trade Mark and are packed in OGRO Chequered Packing. The OGRO Trade Mark guarantees perfection of materials, the highest standard of workmanship and professional design. Avoid imitations—see that every piece bears OGRO trade mark.

Now available direct from America



The world renowned

Schlage Locks

by arrangement with
GROUP SALES LTD.
Sole importers to the U.K.

The unsurpassed quality of Schlage locks combined with beauty of decorative escutcheons represents a new concept in door and entrance styling. The long backset principle allows positioning of the key-in-knob lock practically anywhere on the door and gives the architect complete freedom in design.

A wide selection of Schlage locks is available in several finishes with an infinite variety of background colours, textures and patterns. Illustrated are a few examples of the elegant designs to be seen at our London showrooms, 1, The Pavement, Clapham Common, London, S.W.4 (facing Clapham Common Tube Station, Northern Line).

* all interior working parts in cold rolled steel. Treated to resist corrosion and rust. All exposed parts of brass, bronze or aluminium.

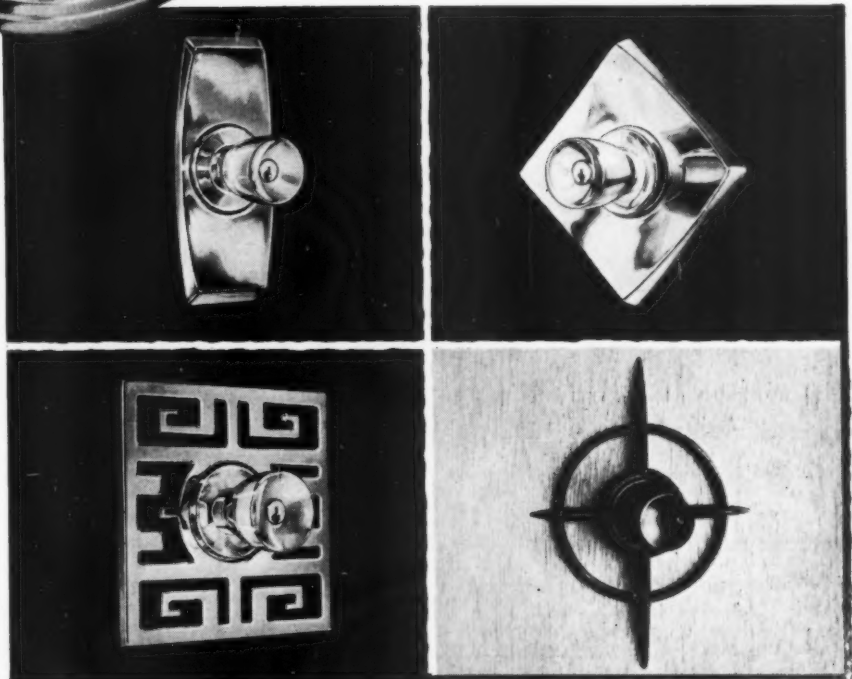
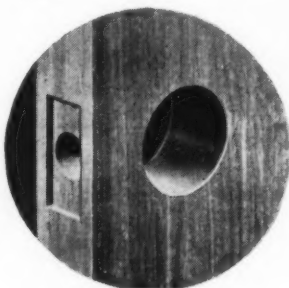
* Adaptable for many types of buildings where quality, convenience and security are desired.

* Long backsets. Type "A" locks up to 21in. Types "C" and "D" up to 42in.

* Schlage "A" locks can be supplied to suit the most intricate master key systems.

* The standardised cylindrical construction means simple installation. Only two holes bored in door are necessary to install lock and latch units. Supplied either pin tumbler or wafer tumbler operation.

Form No. 688 with further details of the Schlage cylindrical locks available on request.



Distributors for United Kingdom

H. & C. DAVIS & CO. LTD. Architectural Ironmongers

1, The Pavement, Clapham Common, London, S.W.4. Telephone: Macaulay 4501

Sole Importers: GROUP SALES LTD.



Being precise about drains

With pitch fibre pipes you can be precise. You know that you are specifying pipes made to BS 2760 which radically cut laying costs because of their precision machined dry-driven tapered joints. You can be precise, too, in planning site schedules because pitch fibre pipes can be laid in all weather conditions. Pitch fibre is the drainage system which is as up-to-date as your thinking.

Pitch Fibre Pipes

SEVEN reasons why pitch fibre cuts your costs

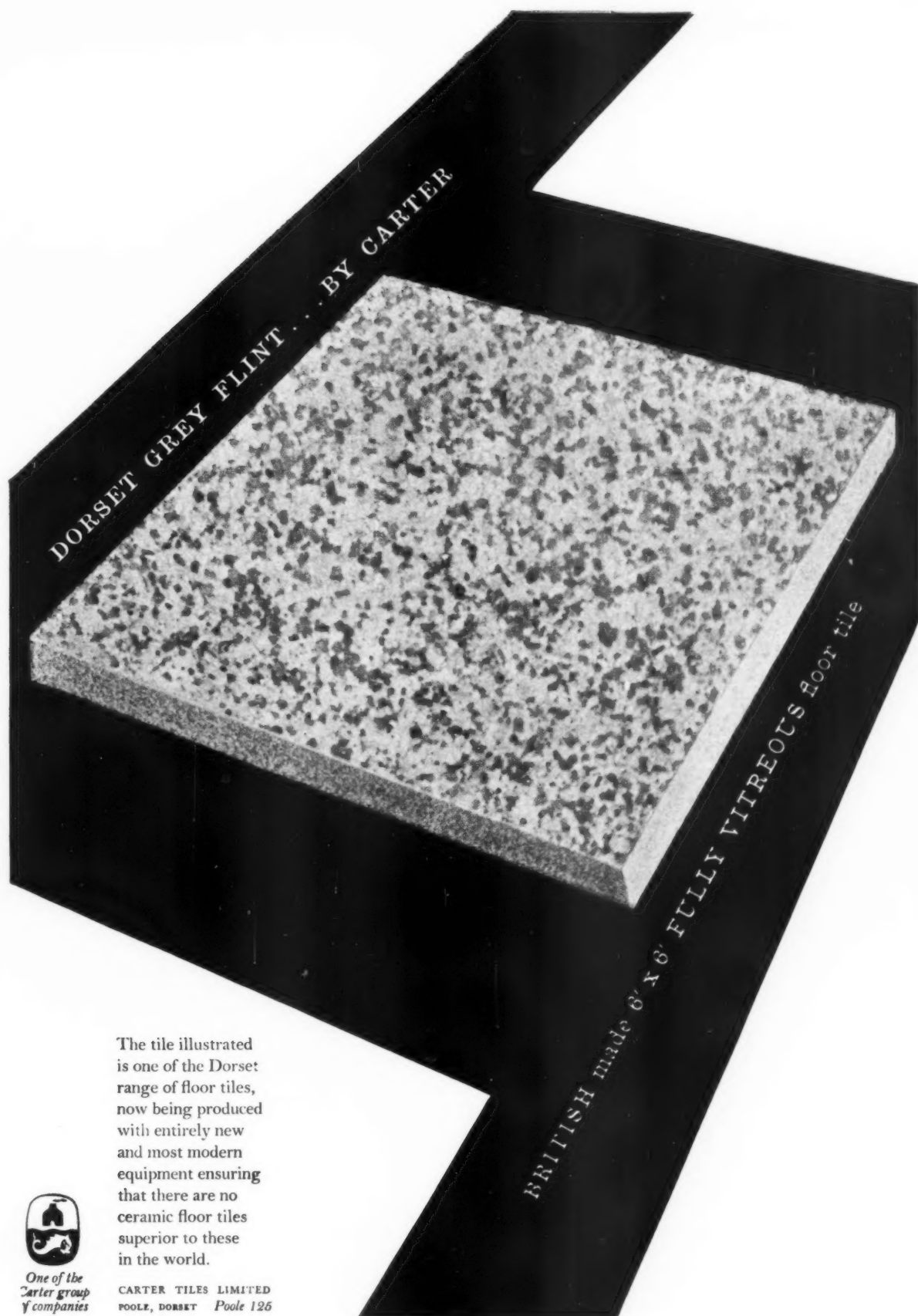
- Laying, testing and backfilling are simple and swift—rates up to 500 ft. an hour can be achieved with semi-skilled labour
- Concrete bed and haunch, and cement joints are unnecessary
- Schedules can be maintained regardless of weather conditions
- Pitch fibre pipes are light, strong, tough and precision made to BS 2760
- Wastage caused by breakages on site is drastically reduced
- Corrosion, root penetration, water infiltration and cracking through settlement are all eliminated
- Improved hydraulic flow makes flatter gradients possible

Write for information to: The Secretary, P.F.P.A., 27 Chancery Lane London WC2 · Telephone Chancery 6001

ISSUED BY THE PITCH FIBRE PIPE ASSOCIATION OF GREAT BRITAIN
THE KEY ENGINEERING CO LTD · TEMPLE TUBES LTD · UNION FIBRE PIPES (GREAT BRITAIN) LTD · FLEXPIPE LTD

P.F.P.A.

TGA PA2



The tile illustrated is one of the Dorset range of floor tiles, now being produced with entirely new and most modern equipment ensuring that there are no ceramic floor tiles superior to these in the world.



One of the
Carter group
of companies

CARTER TILES LIMITED
POOLE, DORSET Poole 125



*High School for Girls, Broadlands, Hereford
County Architect: W. Usher, A.R.I.B.A. Flooring Specialists: James Beattie Ltd., Wolverhampton.*

School days are busy days

All over Britain new schools are being erected and much thought and care is being devoted to provide our children with gay hygienic surroundings.

Armstrong Linoleum Flooring, manufactured in tile or sheet form, is available in a wide range of colours with plain or marble effects. In tile form it can be laid to any specified

design. It is extremely durable, withstands the heaviest traffic, and is easy to keep clean and maintain. An example of the tasteful use of Armstrong Linoleum can be seen in the above photograph of the High School for Girls at Broadlands, Hereford. Armstrong Linoleum Flooring is equally suitable for public buildings, offices, shops and homes. Full details on request.

Armstrong LINOLEUM Flooring

Makers of ACCOTILE, ACCOFLEX and CORK TILE



where
cleanliness
sells

'VITROLITE'

opaque glass, a permanent colour wall lining

by PILKINGTON BROTHERS LIMITED

ST. HELENS · LANCs

*'VITROLITE' is a registered trade mark of Pilkington Brothers Ltd.
Supplies are available through the usual trade channels.*

FOR 'HILLTOP' . . . 'the most imaginative experiment in licensed trade history'

the
architects
used

NAIRN

Vinyl tiles



The cafeteria at 'Hilltop', combined public house and community-centre at Hatfield New Town, Herts. The architects were Brett, Boyd and Bosanquet; the floorcovering which they specified was Nairn Vinyl tiles. Interior designer: HULME CHADWICK. Flooring contractors: S. H. WARE & CO. LTD.

MODERN ARCHITECTS, MODERN FLOORING

"The most imaginative experiment in licensed trade history." This was how the *Morning Advertiser* described 'Hilltop'. This modern project is another example of the fine use which up-to-date architects have made of Nairn Vinyl tiles.

What is 'Hilltop'?

A gift from two breweries (Guinness and McMullen's) to Hatfield, 'Hilltop' is an experiment in licensed house design. It combines, under one roof, a public house, an assembly hall-cum-theatre, a health clinic, two committee rooms, an unlicensed café with its kitchen, and the manager's private flat. A paved terrace runs around the licensed house.

How Nairn's twin range of tiles offers inexpensive colour schemes

Nairn make two ranges of 3.2 mm tile for commercial use: the contractors' basic A range, and the architectural design B range. The five colours in the range are those in greatest demand by architects, and Nairn make these tiles specially for contractors who want to lay floors at highly competitive cost. Moreover, by including a few tiles from the lighter, more

expensive B range, you can create an attractive, imaginative scheme—still at low cost.

Twelve-inch square tiles

Besides the standard 9" x 9" size in 2.0 and 3.2 mm gauge, you can get Nairn tiles in all colours of the 3.2 mm range in a 12" x 12" size. This is the most economic size for laying and is particularly suited to the scale of larger installations.

NAIRN Technical Advisory Service

Technical representatives at Nairn area offices are ready and willing to give you advice and information on anything and everything about floorcovering services. Just contact your nearest office:

MICHAEL NAIRN & CO LTD

P.O. Box 1, Kirkcaldy, Scotland, Kirkcaldy 2011 (10 lines).

LONDON EC1: 131 Aldersgate Street, Monarch 3211 (8 lines).

BIRMINGHAM 2: 65 Temple Row, Midland 5989 (2 lines).

BRISTOL 4: 349 Bath Road, Bristol 77840.

MANCHESTER 1: 4 Canal Street, Minshull Street, Central 1417 (3 lines).

GLASGOW C5: 113 Centre Street, South 1011 (3 lines).

NEWCASTLE-ON-TYNE: 41 Grainger Street, Newcastle 22807.

THE **Fordham** *ETERNA*



THE FIRST WHITE PLASTIC CISTERN

UNBREAKABLE — INCORRODIBLE

To B.S.S 1125-1959
Overall dimensions
Width 19½ in.
Depth 12½ in.
Projection 7 in.
Weight (complete) 7 lbs.
Reasonably priced

SOLE MANUFACTURERS:
FORDHAM PRESSINGS LIMITED
DUDLEY ROAD, WOLVERHAMPTON.
TEL: WOLVERHAMPTON 23861-2

Other factories at Earlsfield (London), Hinckley (Leics.), Sedgley (Staffs.)

By the makers of the well known
range of FORDHAM 'Cleanline'
Cisterns, Flushing Troughs, etc.

FLOOR FINISH PROBLEMS SOLVED AT A GLANCE



This simple selector gives the answer

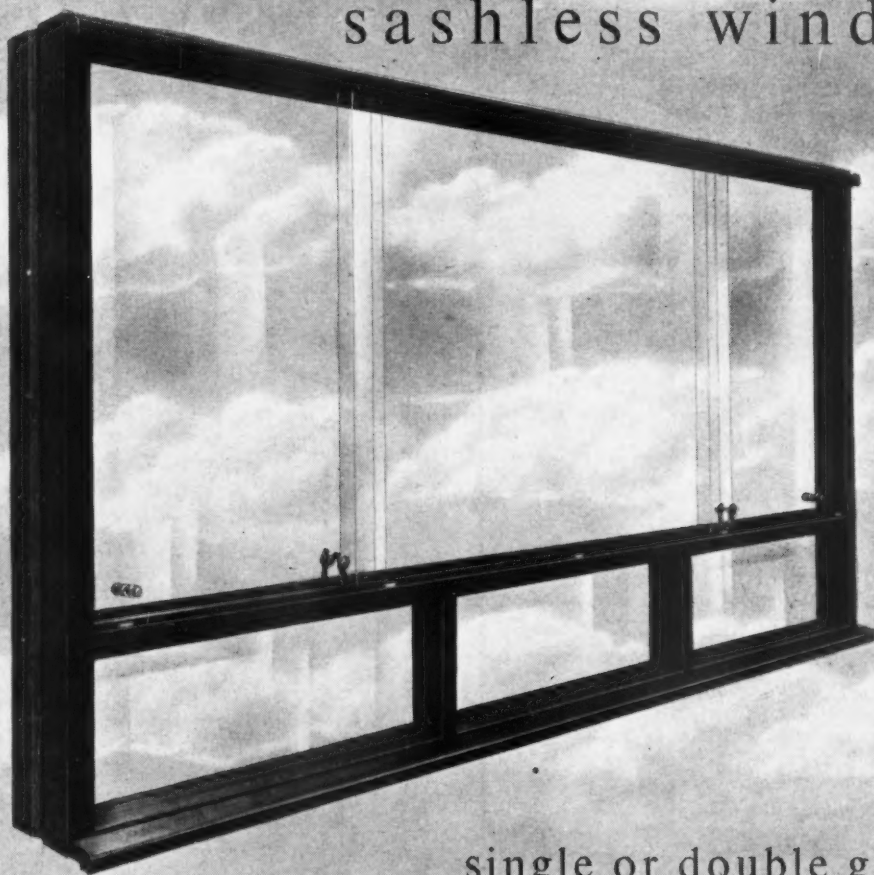
Invaluable. That's the only word to describe the FTL 'Floor Wheel'. Turn the pointer to the type of flooring you are concerned with. At a glance, the 'Floor Wheel' shows you: treatment required—type of finish obtained—maintenance. On the back of the wheel, there is detailed information on application, coverage, etc. You will find the 'Floor Wheel' a really practical aid.

* The FTL 'Floor Wheel' is available free of charge to any Architect who cares to send us his card or name and address. For further information or advice on any floor problem whatever it may be contact the FTL Floor Advisory Service

* Write FLOOR TREATMENTS LTD. (DEPT. A.J.), LLOYD BANK CHAMBERS, HIGH ST., HIGH WYCOMBE, BUCKS.
Tel: High Wycombe 4214

PIERSON

sashless window



single or double glazed

'THE GREATEST ADVANCE IN WINDOWS SINCE GLASS'

warmth—quiet—beauty: *Three qualities provided in a wide range of handsome Windows designed for handsome buildings.*

warmth and quiet *from the insulation of double glazing:*

beauty *in wide full vision picture windows framed in selected West African Hardwood.*

Horizontally sliding panes of Crystal Glass with polished edges glide smoothly in the specially grooved hardwood frames which are treated with a high performance durable sealer. The panes of glass are easily

and safely removed for cleaning and maintenance, and the patented 'Pierson' two-way locking device ensures freedom from draughts and offers complete security.

Further particulars can be obtained from the following sole area Manufacturers of the 'Pierson' Window in the United Kingdom

JAYANBEE JOINERY LTD.

High Street, Uxbridge, Middlesex. Telephone: Uxbridge 8222

THE MIDLAND JOINERY WORKS LTD.

Burton-on-Trent. Telephone: Burton-on-Trent 5721

PRICE BROS. & CO. (PENARTH) LTD.

Station Road, Penarth. Telephone: Penarth 57255

ALLAN BROS. LTD.

Tweed Saw Mills, Berwick-upon-Tweed. Telephone: Berwick 7443

HIDE & CO. (BLACKPOOL) LTD.

Squires Gate, Lytham St. Annes. Telephone: Blackpool 42001




Glass fibre treated with a special flame-resistant adhesive and bonded on the down-stream side to a flame-proof open-mesh fabric gives the FAR-AIR 'ROLL-KLEEN' filter its high efficiency. The area of filter fabric in use is automatically changed when the build-up of dirt causes the pressure of cleaned air to fall to a pre-set figure. 'ROLL-KLEEN' provides highly efficient filtration, large capacity for dirt holding, minimum restriction of operating filter area, with extremely low pressure drop in consequence. Of sturdy construction, the FAR-AIR 'ROLL-KLEEN' automatic filter has been designed for minimum maintenance.

for **HIGH** efficiency
at **LOW** cost

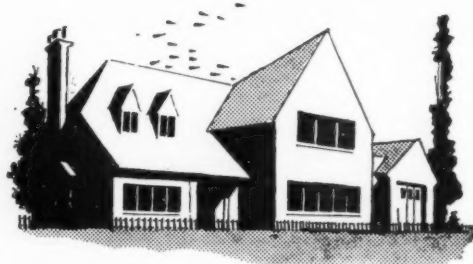
Interpose an **INTERMIT**

Far-Air 'ROLL-KLEEN'
automatic DRY FILTER

INTERMIT LIMITED, Bradford Street, Birmingham 5
Telephone: Midland 7961/4

Member of the  **BIRFIELD GROUP**

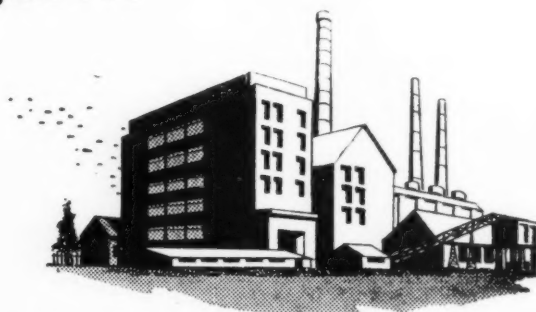
They all need Insulation . . .



home . . .



office . . .



factory . . .

They all need . . .



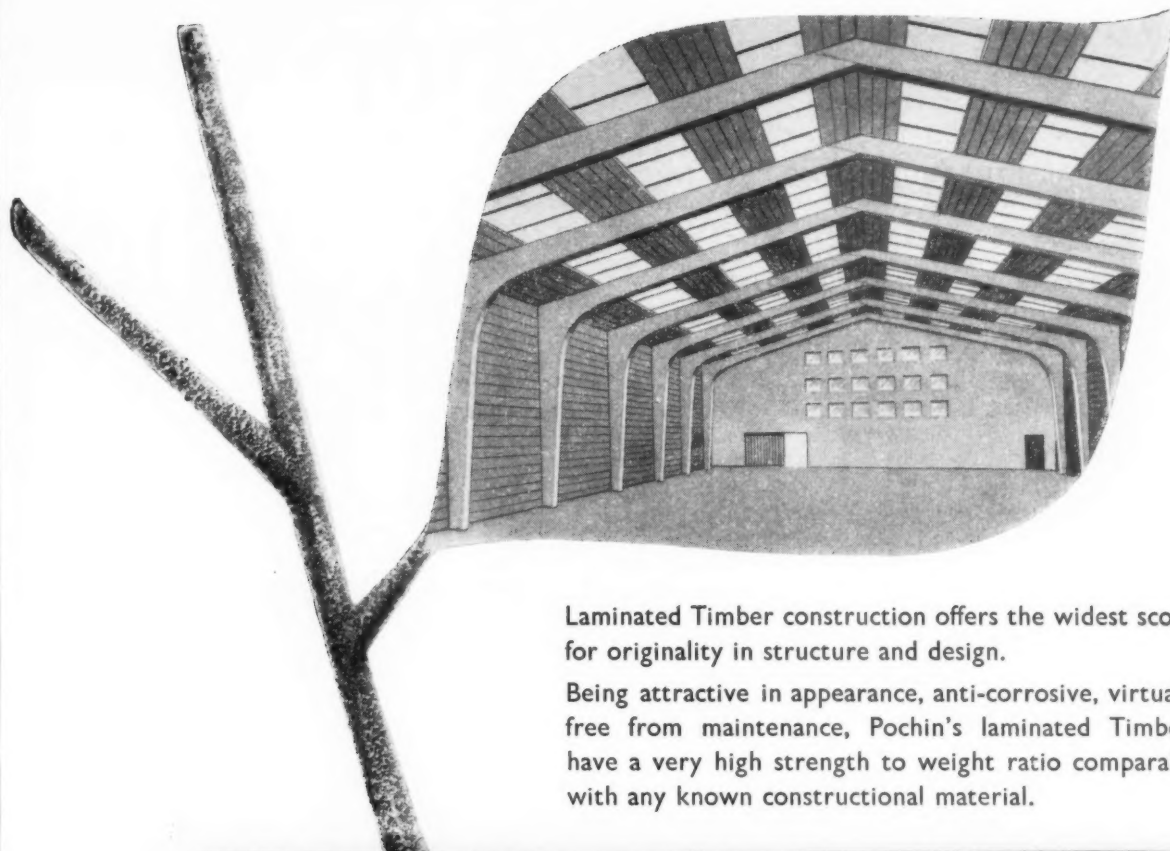
Rocksil is a pure mineral wool with exceptional insulating and acoustic properties. Available in many forms, it has a wide variety of uses in every class of building work.

Write for full information.

WILLIAM KENYON & SONS (METAMICA) LTD.
DUKINFIELD · CHESHIRE
MANUFACTURERS OF BUILDING INSULATION MATERIALS

Rocksil is manufactured by The Cape Asbestos Company Limited at Stirling.

KR56



Laminated Timber construction offers the widest scope for originality in structure and design.

Being attractive in appearance, anti-corrosive, virtually free from maintenance, Pochin's laminated Timbers have a very high strength to weight ratio comparable with any known constructional material.

STRENGTH AND ECONOMY IN

POCHIN

LAMINATED TIMBERS



NOTE THESE MANY FEATURES OF THE POCHIN ORGANISATION

1. Complete service for Architects includes a fully qualified Engineering staff to design and advise.
2. Timber engineering fabricated from stress graded Timber for laminated or box beams to any desired shape.
3. Full production facilities include Timber impregnating plant and kilns.
4. T.D.A. approved manufacturers.

POCHIN (Manchester) Ltd.,

King Street Works, Middleswich, Cheshire
Telephone : Middleswich 3221

- * ARMoured OR COMPOSITE
- * SLIDING OR FOLDING
- * AUTOMATIC OR NON-AUTOMATIC

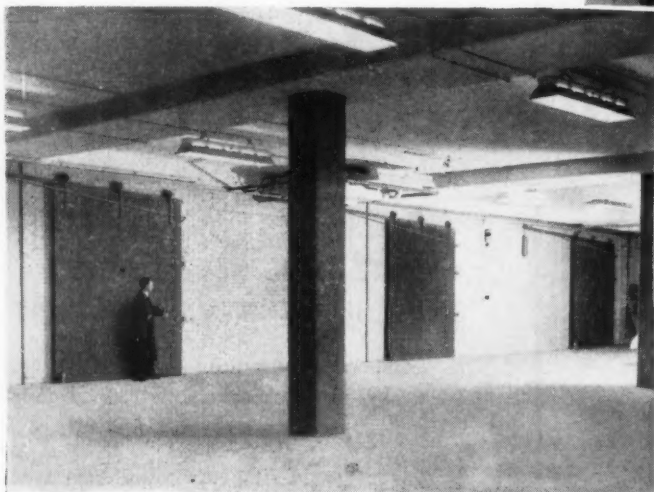
FIRE RESISTING DOORS

Mather & Platt fire resisting doors convert otherwise vulnerable openings in fireproof party walls into strong points halting the spread of fire.

Technical literature is available on request and representatives are ready to offer advice, without obligation, on fire protection problems.

Composite fire doors, hinged type.

Three Mather & Platt automatic sliding armoured fire doors at the works of a drawing office equipment manufacturers.



A 32.2



MATHER & PLATT COMPOSITE FIRE RESISTING DOORS ARE CONSTRUCTED IN COMPLIANCE WITH THE RULES OF THE FIRE OFFICES' COMMITTEE AND WITH THE REQUIREMENTS OF THE LONDON COUNTY COUNCIL.

Mather & Platt
LIMITED.

**PARK WORKS.
MANCHESTER, 10.**

Telephone: COLlyhurst 2321.
Telegrams: Sprinkler, Manchester.



SEDDON Circular and Rectangular Domelights may be fitted to timber or concrete kerbs on flat, barrel or vaulted type roofs. They are manufactured in one piece of rough cast glass, clear polished plate or Georgian mesh wired glass.

SEDDON Glass Dome Ventilators, either rectangular or circular, are available in galvanized steel or aluminium with weather proof louvres and fitted with controlled hit and miss shutters. They require no maintenance. We manufacture, supply and fix.



SUPERIOR GLASS DOMELIGHTS by SEDDON

Interior and exterior of Seddon 72in. by 72in. Rectangular Glass Domes and Ventilators fitted to the roof of North Staffordshire Royal Infirmary. Architect: Messrs. Martin & Martin and W. H. Ward.



Illustrated brochure containing sizes, details and specifications forwarded on request.

R. SEDDON
& Sons (St. Helens) Ltd.

Warrington New Road, St. Helens, Lancs.

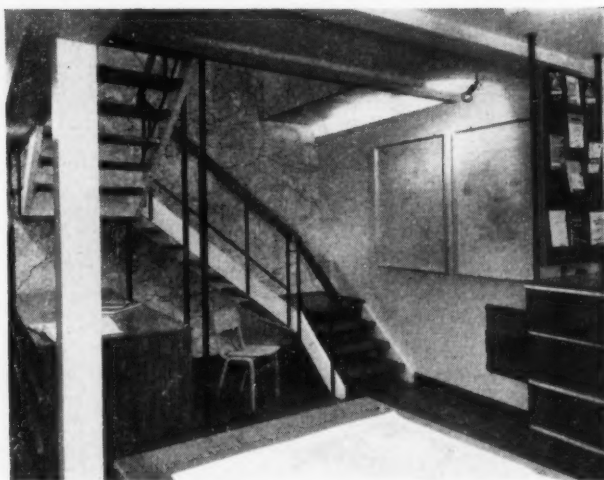
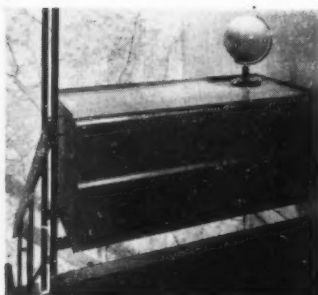
Telephone 5451/2



GEOGRAPHIA

The Ground Floor and Basement of the premises for Geographia Ltd., Fleet Street, London were carried out by our organisation under the direction of the architects, Westwood Sons and Partners.

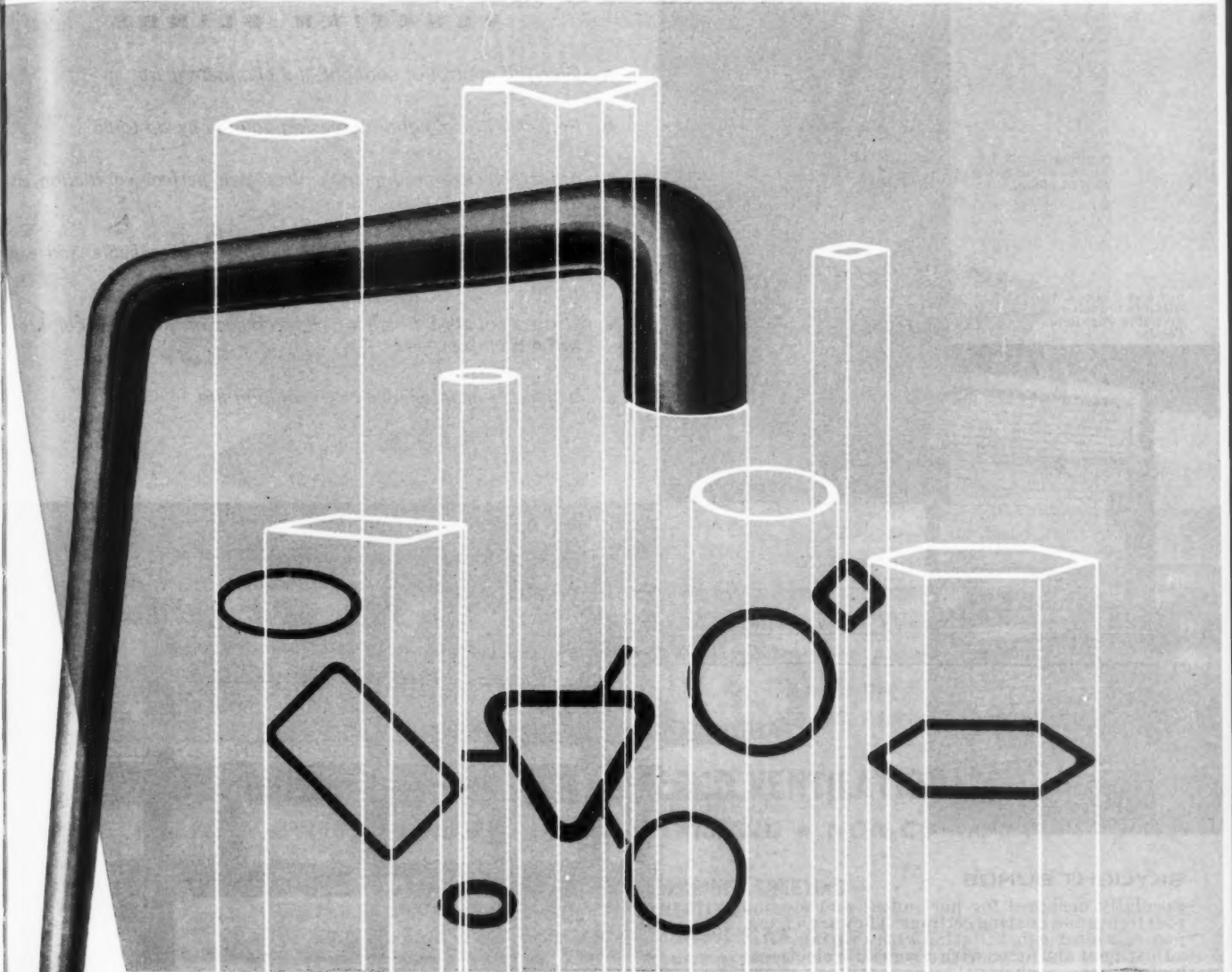
OUR DESIGN AND TECHNICAL SERVICE IS READILY AVAILABLE TO ASSIST IN THE DEVELOPMENT OF ALL TYPES OF DECORATIVE SCHEMES.



75 Harris & Sheldon Limited

The organisation with a background of 75 years experience
BIRMINGHAM • LONDON • GLASGOW • TORONTO

Is manipulation critical?



H.D.A. tubes can keep their temper...

Loss of temper in tubes, and of tempers in board-rooms, have both become rarer since H.D.A. evolved Hiduminium 1C, 14, 22, 43 and 46—alloys specially developed by them for easy manipulation. Drawn tubes and hollow extruded sections made from these alloys are not only easy to manipulate: they retain their strength

and smooth surface finish, as well as their weldability and excellent resistance to corrosion. Manipulation is only one of the problems associated with tube and hollow sections; but H.D.A. have all the technical knowledge and skill that the subject calls for—freely available on request.

Hiduminium

makes the most of

Aluminium

**HIGH
DUTY
ALLOYS**

LTD · SLOUGH · BUCKS

installations of

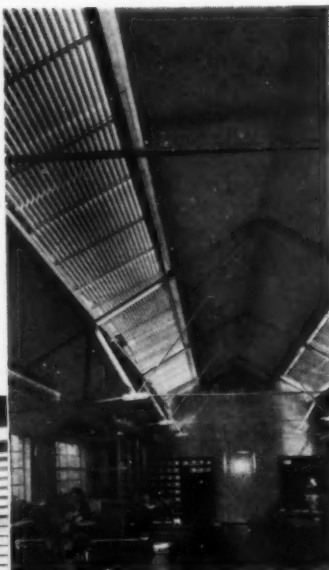
SUNWAY

REGD.

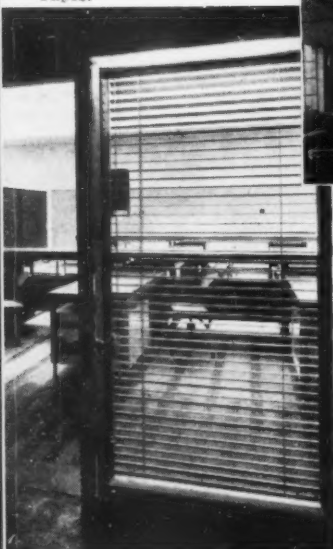
VENETIAN BLINDS

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

Sunway Skylight Blinds fitted to glass roof of office.



Sunway Standard Blind fitted with invisible Terylene Tapes.



Sunway Blinds with electrical control are at Lloyds.



SKYLIGHT BLINDS

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

STANDARD BLINDS

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

TWO-WAY BLINDS

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

DIM-OUT BLINDS

—suitable for Cine or Slide showing.

Main Distributors and Fixers

HORSLEY, SMITH & HEWETSONS

HORSLEY SMITH & CO. LTD.
Hayes, Middlesex
Telephone Hayes 2931



J. A. HEWETSON & CO. LTD.
Marfleet, Hull
Telephone 13880

Lightweight ventilation



Special glazing type pitched roof unit, incorporating moulded steps for maintenance and permanent access to roof sheeting above glass.

Illustration shows

24" unit replacing two sheets of glass approx. 7' 3" long x 4' 0" wide.

BROOKS

MOULDED GLASS-FIBRE FAN-POWERED VENTILATION UNITS

POLYESTER RESIN BONDED • FIRE RETARDING • NON-CORROSIVE
are standard for

- TURNERS BIG-SIX — TRAFFORD TILE — COMBINED SHEETING — DOUBLE SIX — LARGE-SPAN COMBINED SHEETING
- DECKINGS — ASBESTOS — METAL — WOODWOOL SLAB
- GLAZING MOUNTING — PITCHED SLATED AND BOARDED
- FLAT ROOFS — CONCRETE — TIMBER

also

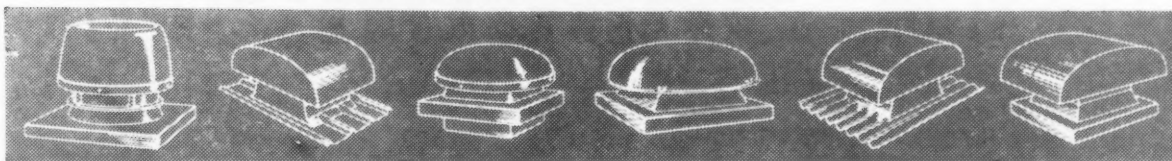
- CHEMICAL FUME UNITS WITH POLYTHENE COATED FANS
in six sizes — 6 inch to 19 inch diameter
- SMALL CAPACITY LOW PRICED GENERAL PURPOSE UNITS
Flat Base and Curb Types
- THE NELSON (400 cfm) — THE TRAFALGAR (750 cfm)
- SPECIALS — TO SUIT SPECIFIC REQUIREMENTS
as typical unit illustrated above

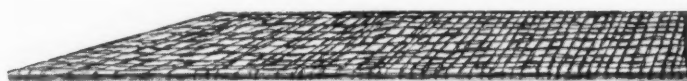
For further details please write to:

BROOKS VENTILATION UNITS LIMITED

TRAFALGAR HOUSE • BEDFORD PARK • CROYDON • SURREY • Telephone: Municipal 2361 (6 lines)

BRITAIN'S WIDEST RANGE OF POWERED VENTILATING UNITS

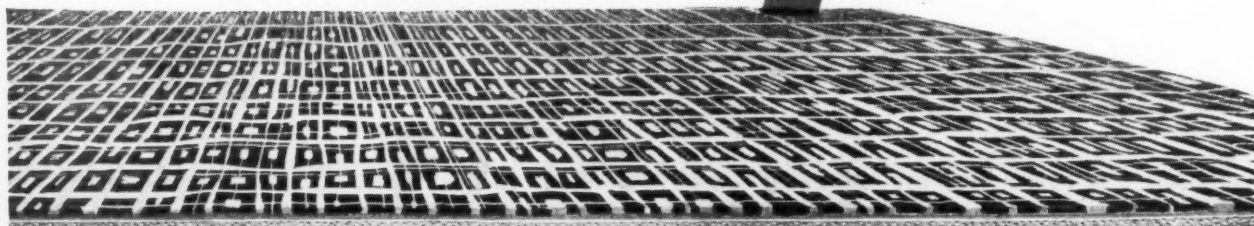




Fishnet designed by Ronald Grierson F.S.I.A.

BRI-NYLON
Shildon
— the carpet of the future
TODAY!

1960
7



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

8

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

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

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

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

BRI-NYLON Shildon CARPETS

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

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

THE ALFRED MORRIS GROUP OF COMPANIES 



The Architects' Journal

No. 3395. Vol. 131. May 12, 1960

9-13 Queen Anne's Gate, London, S.W.1. Whitehall 0611
 Subscription rates: post paid, inland £2 15s. 0d. per annum; abroad, £3 10s. 0d. per annum. Single copies, 1s.; post paid, 1s. 6d. Special numbers are included in subscriptions; single copies, 2s.; post paid, 2s. 6d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for £1 17s. 6d.; carriage 2s. extra.

NOT QUITE ARCHITECTURE

Libation on a Hot Patio Floor

This present generation of archaeologists, like all others before them intending to dig in Greece, use the *Iliad* as their source book: working from the data within it.

*

We might gauge what effect re-examination of old material has if we remember how Dr. Wittkower's book "The Architectural Principles of the Age of Humanism" sent a whole generation of young architects to the Palladian Villas, to Alberti, to a re-examination of the construction of the architect's mental framework and his role.

*

However, before Nestor's Palace was dug at Pylos the List of Ships in the *Iliad* was not examined very seriously. Pre-Pylos, a number of factors made it seem useless to do so: the real or supposed difficulty of finding the exact sites, the telegraphic nature of the List, and inadequate proof that it was not in fact not-so-scientific fiction. Alongside this there was a general belief, probably lay, that the major discoveries had all been made and no rewarding site left undug: that the days of the "fairy-tale" treasure were over. But

New **REVOLUTIONARY TREATMENT FOR WOODWORM**

FILLS the holes

FUMIGATES within

KILLS woodworm
and eggs
and larvae

RESTORES appearance
and value

SAFEGUARDS furniture
and woodwork

No smell

No mess

No skill

No sprays

SOLITOX

REGD. TRADE MARK

PATENTS APPLIED FOR

WOODWORM FILLER-KILLER KITS

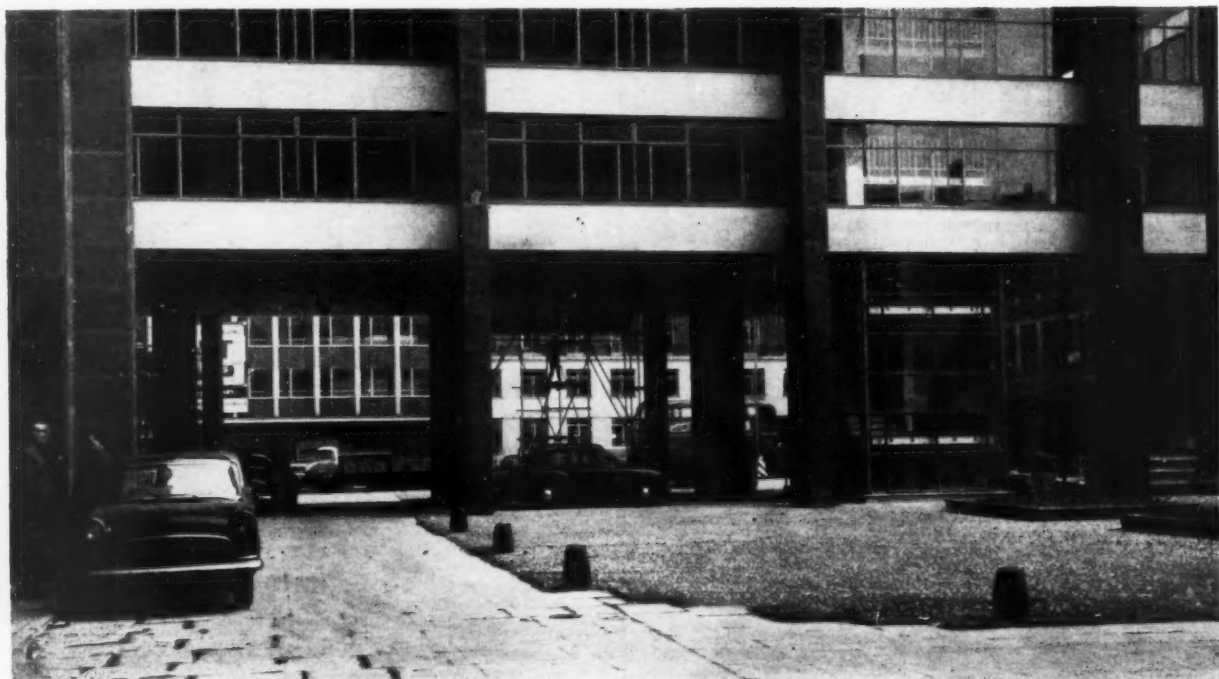
MINI-KIT 7/6 *sufficient for a small suite of furniture*

HOUSEHOLD 17/6 *contains 4 times the quantity of the Mini-kit*

BUILDER'S 5 gns *8 times the quantity of the Household Kit*

Obtainable at Chemists, Ironmongers and Stores

A product of
ASHE LABORATORIES LTD, LEATHERHEAD



Striding High

Why are our buildings imprisoned by our street pattern? Elsewhere in this issue engineer Alan Harris discusses the problems associated with segregating pedestrians from motor vehicles by raising pavements and thus helping to restore freedom of movement to both. But why are not buildings given the same freedom (under careful planning control) from the narrow restriction of the traffic route? The framed building—universal now for all major structures—gives us the ability to bestride the road, but this property is rarely, if ever, used. The first example was in Coventry's Broadgate, when Donald Gibson closed the vista from Hertford Street by throwing a bridge across it

where it entered the square. In State House, Holborn, and Bowater House, Knightsbridge (architects: Trehearne and Norman Preston and Partners and Guy Morgan and Partners, respectively) shown top, and above, the design allows traffic to flow below (in a limited manner in the former, more radically in the latter), but in each case the building is rigidly site-enclosed. Architects and planners could well start planning not only pedestrian decks but a new building pattern at an upper level and create a finer townscape in the air than ever could be achieved within the cramped, vehicle-ringed sites on the ground. See also pages 716-717.

to a
Gree
mism
which
quali
we h
a wa
fair-
to co

Post-
find
sions
mani
cant
ideas
for
out
ing a
farm

So,
at t
muc
loca
thes
from
the
field
it m
ally
thes
mon

Nov
unt
are
in t
feri
arch
at l
can
pou
lab
obj
be
led
be
som
mo
the
som
doi
do
alw
Su
dir
kee

An
vis
bu
Ki
see
ho
be
cu
Sp
he
ey
wa
pl

716

to a certain extent the opening again of the Greek museums has dispelled this pessimism. The room in Athens full of gold—which has a tremendous, precious, regal, quality quite unlike the hard carroty stuff we have for rings nowadays—was bound in a way to re-encourage us that even small fairy-tales are worth having and do add up to certain effect.

*

Post-Pylos, the image of the "fairy-tale" find is probably back to its original dimensions and has become less Victorian, Germanic in proportions and glitter. A significant part of this reformation of images and ideas is in the concept of appropriate size for a palace—since Nestor's Palace turned out to be about the same standard in building and accommodation as a small Provençal farm.

*

So, collating List with maps, the young group at the British School in Athens finds that much of their new interest focuses on sites located in the Spercheios Valley: one of these sites will be the palace Achilles set out from. Purely from the quantity of shards of the correct date picked up* in ploughed fields on the supposed location of the sites it might be fairly surmised that these actually are the Homeric sites and that some of these might be worth excavating; if the money were forthcoming.

*

Now like architects, young archaeologists, until they have broken ground on their own, are just names on paper. They therefore feel in this business of money that they are suffering—if not under an injustice such as architects have under "aesthetic control"—at least under irrationalities. The value that can be got out of, say, a few hundred pounds in Greece, in how far it will go in labour, in the quantity and quality of the objects that might reasonably be expected to be found, and in contributions to our knowledge—is incomparably greater to what can be done (even idealistically) with the same sort of money in England. Of course the money is not in some common pool. But these bands of young men abroad represent something more than just what they are doing. Whether poor Britons, or well endowed American teams, they represent, and always have done, their cultures abroad. Surely some money could usefully be directed in this sort of direction in order to keep up our prestige.

*

Anyway the suspense is killing me, because . . . When I was at school I could never visualize what type of man Achilles was, but since seeing Paul Newman as Billy the Kid, I have no doubt. And now I want to see the base course, see the siting of the house in the Spercheios Valley; preferably before Burt and Kirk give me a very badly cut sequence of the boat going down the Spercheios and one of their frightful limpid heroines impossibly impeccable crying her eyes dry. I used to resent Helen, but I wouldn't mind Brigitte. Won't someone please build my love on a firm Foundation!

MARGARET GILL

* By Nicholas Coldstream and John Lazenby.

EDITORIAL BOARD: (1) *Consulting Editor*, F. R. Yerbury, O.B.E., Hon. A.R.I.B.A. (2) *House Editor*, J. M. Richards, C.B.E., A.R.I.B.A. (3) *Executive Editor*, D. A. C. A. Boyne. (4) *Editor Information Sheets*, Cotterell Butler, A.R.I.B.A. (5) *Editorial Director*, H. de C. Hastings.

TECHNICAL EDITOR: (6) Lance Wright, A.R.I.B.A.

SPECIALIST EDITORS*: (7) Planning. (8) Practice. (9) Surveying and Specification. (10) Materials. (11) General Construction. (12) Structural Engineering. (13) Sound Insulation and Acoustics. (14) Heating and Ventilation. (15) Lighting. (16) Sanitation. (17) Legal. (18) Electrics.

ASSISTANT EDITORS: (19) *Assistant Editor* (Technical) G. C. A. Tanner, A.R.I.B.A., A.S.T.C. (arch). (20, 21) *Assistant Editors* (Buildings), Ian Moller, Sheila Wheeler. (22) *Assistant Editor* (Production), Alan Parkin, B.A. (23) *Assistant Editor* (Information Sheets), V. A. Groom. (24) *Photographic Department*, H. de Burgh Galwey, W. J. Toomey. (25) *Editorial Secretary*, Mary Sheehan.

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

The Editors

HOW MUCH OUGHT WE TO SPEND ON HOUSING?

DESCRIBING the housing of the last quarter-century in Great Britain as "the sanitary slums of the future,"

Donald Gibson, speaking at the Health Congress at Torquay, suggested that we do not spend enough on our homes. According to him the standard we have been accustomed to represents only the cost to a family of about eight years of motoring.

This will come as a surprise to most English people who have always thought that they spend rather a high proportion of their incomes on their homes. Certainly more than most continentals (who spend more than we do on food), certainly more than those who live in hot countries.

Compared with our past record, however, there is evidence that the proportion has dropped. A. E. Marshall, the City Treasurer of Coventry, speaking at the same Congress, pointed out that, whereas in 1938 9.67 per cent of our national personal income was spent on rent (or its equivalent), rates and water charges, in 1957 this percentage had fallen to 5.36. This represents a remarkable shift in spending habits. It is one which architects should take notice of and correct. Not (heaven forbid!) because they have a vested interest in people spending more on building, but because they are among the guardians of our way of life and because environment must always be of decisive influence in this.

It is important that our concept of the home and of building in general should grow with our wealth. The fault with our local authority housing is that the idea of the home which it has embodied was concerned with little more than shelter and sanitation. This was understandable in a time of great housing shortage, but it is insufficient now. We must now plan, as Donald Gibson pointed out, not simply against the weather and against disease but for an acceptable mode of living. Our characteristic situation is one in which the land available for building is more restricted than ever before, but in which our building resources are greater than ever before. We must expect to have to use these building resources if our environment is to keep pace with our needs; and in this case we must expect our expenditure on housing to revert to a more fitting proportion of the whole outlay. See also page 713.



MANZONI HUMAN

The Minister of Works, Lord John Hope, is glad that the architect and the engineer have not each retreated into "a neatly defined sphere of influence." He said so while talking to (and praising) the Institution of Civil Engineers, and banged his point home by referring to the award of the RIBA Gold Medal to engineer Luigi Nervi.

*

In reply, engineer Sir Herbert Manzoni showed how much engineers shared the architects sphere of influence. His profession, he said, had built more than half the 3,500,000 houses put up since the first war and "an even greater proportion of all the town planning undertaken." Aesthetic appreciation, he said, was not the prerogative of any particular professional discipline.

*

In the interests of professional harmony I'll leave it at that, with my sleeve full of laughter.

WHAT GOES UP!

Last week the editors suggested that all proposed buildings should be displayed by local authorities so that the public could know what was going on and even, perhaps, prevent it from happening. On the same day the *Daily Telegraph* published a letter by S. P. C. Plowden (not an architect), who said the

RIBA should set up a permanent, changing exhibition—on the lines of The Design Centre—where "good architecture" would be illustrated by "models and other visual aids."

*

I don't know if people are interested enough in architecture to keep on visiting such a centre. Still, it's not a bad idea. And it would be even better if prospective clients were able to buy carefully documented pamphlets on different building types at different prices and to varying specifications, and to keep themselves informed on the standards to expect before they briefed their architects.

*

Incidentally, I've just come across an interesting bit of Scottish building law. It seems that anyone altering or rebuilding his property must show his proposals to the neighbours. I don't know what happens if they object, but this seems to me a very healthy idea.

ARCHITECT GOES WEST

I wonder what H. J. Whitfield Lewis, Middlesex County Architect (formerly LCC Housing Architect) and his colleagues think of the prospect of being housed in offices at Northwick Park, Wembley, instead of in Westminster. In planning terms the move seems debatable. The design, by Lewis's predecessor C. G. Stillman—now in private practice—is uncompromisingly in the modern idiom, fortunately, but needs refinement (see opposite page).

THERE'S HOPE IN NOTTING HILL

I'm always glad to hear of the production of more film strips on architecture and design. But film strips depend so much on the people who present them that I feel a little nervous about a new one on "The Modern House in the United States."* It could give the impression that architecture is only for the rich eccentric. Still, it has a useful accompanying note about Lake Meadows. This, it says, "replaces a slum area which had a 100 per cent. negro population. Thirty per cent. of the prospective tenants are white—an example of how the attraction of life in imaginatively-designed modern buildings can overcome racial prejudice." And anyway I'm sure that school-children who see the work of Neutra, FLW and Mies for the first time will have an appetite for more.

* Educational Productions, East Ardsley, Wakefield

FLAT, LOW AND FUNCTIONAL

While we've been waiting to get around to hospital building in this country, Americans have been going ahead with a tremendous programme of wrong hospitals in the wrong places. Whatever the shortcomings of our National Health Service the need for cautious handling of money makes it easier for us to build correctly. "You're so much richer over here," said America's Isidor Rosenfeld, when he talked the other day at Nuffield Lodge—which just shows what a nice impression our work gives. America is certainly richer for Mr. Rosenfeld's one-man revolution in hospital planning, which is based on what he calls "horizontal continuity." By this he means that people who want to consult each other should be able to do so on one floor. He doesn't insist on single-storey buildings, but he does say that one storey is better than two, two than three and so on. The trouble is that most Americans who have hospitals to build dream of tall blocks, so Mr. Rosenfeld has made it his job to travel round his country giving them flatter and lower ideas.

TOP PEOPLE WALK

I'm always pleased by the presence of architects at anything to do with traffic engineering. I was glad, therefore, to see that the RIBA's next president is on the editorial board of a new monthly journal, *Traffic Engineering and Control*,* and that the current president, Basil Spence, has written in it about the willingness of the architect to help in the segregation of vehicles and pedestrians.

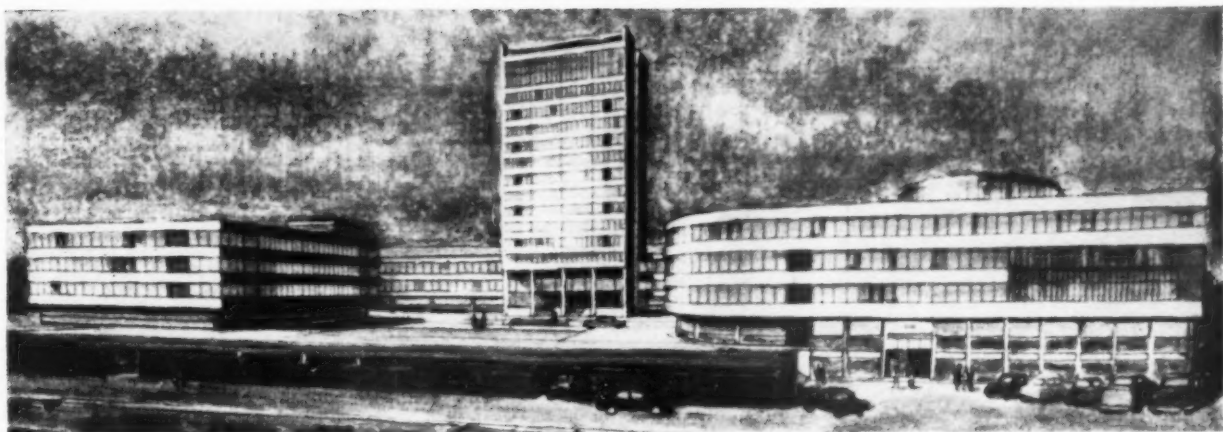
*

Incidentally the traffic engineering consultant, Conrad Auden, writes in the first issue about the vertical segregation of pedestrians and vehicles and says that the pedigree of this Barbican arrangement is "by Corbusier out of Leonardo." Illustrations show Leonardo's ideas, and we are reminded of the abortive Corbusier scheme for the Porte Maillot in Paris, with its three layers—pedestrians, motorways and parking areas.

KEYSTONE TOPS

Kenneth Campbell, the distinguished president of the ABT has taken me to task (page 714) because I said the Asso-

*Published by Printerhall Ltd. Monthly, 3s. 6d.



Proposed county offices at Northwick Park, Wembley, for Middlesex by the former county architect, C. G. Stillman.

ciation had been "so long dead and so blissfully unaware of it." I meant this as a compliment to the ABT, which has been hit so hard so often that it *should* be dead. It simply won't lie down, but continues to work tirelessly, together with its publication *Keystone*, on behalf of the weak and the underprivileged. Even the most recent blow—the formation of the association of official architects—has not had the effect of drawing architectural blood from the Association.

THE STATES RESTATED

However blasé we may be about our post-war schools they are still admired and envied in Europe and America. It's not surprising, therefore, that two people who had a big hand or two in these schools—David Medd and his wife Mary Crowley—have been asked to write about a year-long visit to America in that country's *Progressive Architecture*. Since they returned they have given several excellent talks on their visit and I look forward to seeing their percipient observations on the social and architectural scene in book form.

TENDER SUBJECT

The dangers of "competition by tender" are familiar to readers of this column. I have just been looking through a booklet called "Central Town Development" published by Goddard and Smith, a firm of surveyors, valuers and estate agents who specialize in advising municipal corporations on shopping and commercial development. They offer, in fact, an "all-in" planning and design service for town centres, which includes, they

say, "an entirely new method of offering," designed to "encourage competition to the utmost degree," and so ensure that the "highest possible value in terms of ground rent" is secured by the local authority.

In the list of benefits to be obtained by using this service a general increase in rating and rental values appears first, and improvement in the overall layout and appearance appears last. If one is to judge by the two schemes illustrated in the booklet, one for Crewe and one for Wakefield, the architecture might be described as "suburban parade," and the layouts as "1930 burgh engineer's."

OBITUARY

ASTRAGAL was sorry to learn of the death of Dr. Charles Holden, a man who designed this country's first major buildings in a contemporary manner (remember that the cruciform-planned London Passenger Transport Headquarters was designed in the mid-twenties) and whose underground stations were the major prewar British contribution to modern architecture. The criticism his firm received over the design for the English Electric Offices in the Strand and over London University does not damage his great reputation as a pioneer.

ABROAD HINT

When this issue comes out it will be nearly the last date for applications for this year's Working Detail competition. So, if you would like to be paid for the pleasure of looking at foreign buildings, turn to page 626 of the issue of April 21 to see what you have to do.

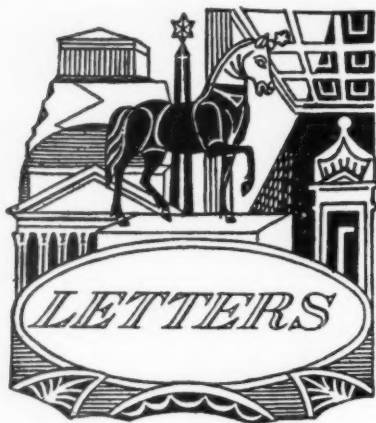
GROUPS IN BEDS

Bedfordshire has always been close behind the leading counties in architectural enterprise, and their new county architect, John Barker (ex-Bucks and Coventry) seems determined to keep it there. The county council, are going to spend another £10,000 a year on its staff, which is being increased in size and reformed on a group basis. Naturally enough, considering the county architect's background, a programme of development work is being planned. Perhaps Herts, Beds, Middlesex and Kent could form the badly needed rival to CLASP.

NO MORE THE MOOR

This country is even more short of prisons than it is of nuclear power stations, and one of the troubles is shortage of sites. The Government's policy seems to be to put power stations in national parks, so why don't they put prisons there, too? That is ASTRAGAL's prognostication after reading evidence given at the Dartmoor Prison inquiry. It is really fantastic that even Prison Commissioners should wish to build a new prison on the site—a design which, being lower in height, would be more sprawling, alongside a village already spoiled by inferior new housing. Some of the Princetown inhabitants wish the prison to remain, and usually, as at Letcombe Basset, when a community fights for survival it deserves success. In this instance, the climate and the sordid, unhappy environment demand a new site, and the bulk of the buildings and staff houses destroyed.

ASTRAGAL



Clifford Culpin, F.R.I.B.A., M.T.P.I.

Peter Burberry

William Roseveare, M.Inst., R.A.

*Sir William Holford, F.R.I.B.A.,
P.P.T.P.I.*

*G. Grenfell Baines, A.R.I.B.A.,
A.M.T.P.I.*

Kenneth J. Campbell, A.R.I.B.A.

Where's that Tiger?

SIR: Your editorial comments on the RIBA/Ideal Home Magazine Scheme seem to have lost sight of the main object of the Scheme as originally conceived. This was the urgent need to set a higher standard in the fields of speculative and private housing and it was for this reason that the Council gave their approval to it.

The object of the Scheme was not only to create immediate opportunities for some architects but to secure the increased employment of architects in the long term by attracting public interest in good design. In the last few weeks the first show houses built as prototypes by builders in various parts of the country have been opened to the public, and the attendances have been phenomenal. Some 3,500 people are said to have passed through the Bradford show houses each weekend since they opened. There have been four figure attendances at Coventry and Bromley. Altogether some 70,000 people have seen the show houses to date. These facts alone demonstrate the immediate success of the Scheme in arousing public interest in architect designed houses. It is clear from the correspondence in your columns that the main factor in increasing the cost of the houses for sale above the figures quoted in the "Book of Plans" is the increase in the price of land. This is beyond the control either of the builders or the RIBA. It should be remembered that the first houses have deliberately been sited as close as possible to big centres of population where they can easily be seen by prospective buyers, with the result that the sites are relatively expensive.

It is certainly not true that all the show houses built under this Scheme are advertised at prices much greater than those published in the original book of small house plans. The show house at Leaverstock Green, for example, is priced at £4,400, and is sited on a corner plot worth £1,100. It was quoted in the "Book of Plans" at £2,960 to £3,460 and is therefore well within the estimated figure in spite of the fact that a downstairs W.C. has been added to the original design. This house has been sold for £4,240 on a standard plot on an improved specification. It must be realised that as this Scheme is only just getting under way, and the first houses erected are prototypes, it is reasonable to suppose that prices will fall if there is a large demand for them. One of the architects has told us that he is now working for builders who never employed architects before. These builders are today selling their architect-designed houses better than rival builders in the same area who are carrying on in the old way. If this Scheme is given the fullest support by architects and builders throughout the country, the lesson that good design pays will be learned very much more rapidly.

The Council have always realized that this Scheme was experimental and would exhibit weaknesses. We shall look into all criticisms to see how they can best be corrected in the future. But don't let us kill this promising Scheme at its most critical stage when the public is showing such keen interest in it.

CLIFFORD CULPIN

London

We are, of course, highly pleased if the RIBA/Ideal Home Scheme is successfully arousing public interest. Our criticisms were never directed at the "main object" of the Scheme and we never claimed that *all* the show houses built are advertised at higher prices than those published in the book as Mr. Culpin implies. We merely pointed out that there was a marked increase in the price of some houses and asked for an explanation. Although the main cause of the increase may be the price of land, some of it, as a spokesman of the NFBTE stated last week, is due to the builder building to higher standards. This is like an advertising campaign for a specially tailored cotton shirt and when the public comes to buy substituting silk shirts; nothing immoral about it, but sharp-ish practice and against the initial policy. Needless to say we have no wish to kill the Scheme, and if it is well thought out and backed with conviction it won't die easily.

THE EDs.

Water Regulations

SIR: Would it be possible for the author the interesting article of Water Regulations published in the A.J. for April 21, to comment on the following points, which, while not mentioned in the text, seem to be of some importance in relation to the possibility of eliminating water storage in British buildings?

1. *Cost.* (a) While the diameters of pipes directly supplied from the mains are likely to be generally smaller, the service pipe

from the main may have to be larger to supply several fittings simultaneously instead of sink and cistern only. This could well become important in buildings with well-planned plumbing and short pipe runs, sited some way from the main.

(b) The water main will have to be capable of dealing immediately with the full demands from buildings without the evening-out effect of the storage cistern slowly filling. It would be interesting to know what effect this would have on economy if the principle of no storage were universally applied.

2. *Waste.* Increased waste due to leaking washers, etc. is usually quoted as one of the disadvantages of high pressure. Is this a significant consideration?

3. *Noise.* While it cannot be assigned a monetary value, plumbing noise is of some importance, particularly in domestic buildings. Higher water pressures would tend to make this worse.

The diagram illustrating a typical British plumbing installation showed the service pipe passing up an external wall and into the roof space at the eaves! It is a great pity that this particular example of bad practice was used since, even if it is still typical, it in no way advanced the argument put forward in the article.

PETER BURBERRY

The author replies: 1. The total simultaneous demand is not likely to be affected by the type of system except as a calculated risk. Since it may just as easily be continuous as peaked, the make-up to the tank must keep pace with the demand, hence the rate of input to the building will be calculated equally in both cases. Suppose it were less than adequate to cope with a sustained peak load, then the effect of a general pressure drop from say 45 lb. to 25 lb. would be far better than the possibility that the tank was running dry (with dangerous consequences). 2. Why should we accept that inadequate maintenance is the standard condition? It is no longer tolerated with the gas supply, and in some areas the water undertaking runs a free washering service. Also, the distinction between high (mains) and low (tank) pressures can disappear as high buildings push up tank heads, and peak loads cut down the pressure from old overloaded mains.

3. Plumbing noise is a function of water velocity and/or bad installation. Its avoidance, at both high and low pressures, is inherent in the design of the system, and of the terminal appliances.

While all Mr. Burberry's comments are relevant, the issue posed is that they are not less relevant nor, equally, more intimidating, in those countries which have never heard of a tank. With his last point I fully agree, and excuse myself on the ground that this is a single purpose diagram, not a working drawing. The piping was separated visually for clarity.

SIR: I note with interest in the JOURNAL of April 21, pages 629-632, your article on the case for revision of our water regulations,

commending dispensing with the storage tank and extension pipe system of hot water supply, and substituting a pressure relief valve.

Some few years ago I was concerned in a case where the plumber had misunderstood the manufacturer's instructions, and installed an immersion heater type of boiler direct from the main, with disastrous results; he did not provide the pressure relief valve, which I agree would have avoided the main pressure on the boiler exceeding its tested capacity, but even if he had done so, what provision is there in the illustrated system to overcome the possibility of a breakdown of the thermostat, and the temperature of the water rising to boiling point?

WILLIAM ROSEVEARE

The author replies: A safety valve set to normal mains pressure would not have saved the low pressure (thin shell) heater which presumably was used, and a qualified plumber should not have made such a mistake. It is, however, significant that but for the existence of the U.K. low pressure standard the error could not have occurred.

Certainly the overseas systems incorporate safety devices: pressure stabilizing valves, etc. A temperature limit cutoff in addition to the thermostat would be an inexpensive extra in any country, for the possibility mentioned is not limited to the high pressure system.

London Chair of Town Planning

SIR: In your issue of 14th April you said it was understood that I was resigning from the Chair of Town Planning at London University, because of my nomination by Council to succeed Mr. Basil Spence as President of the Royal Institute of British Architects. I should like to make it clear that this is not the case. The College Committee of University College has now considered the matter and has decided to grant me leave of absence to the extent that may be necessary if I am elected.

I should be grateful if the many correspondents who followed up your announcement would accept this as an acknowledgement of their very kind valedictory letters.

WILLIAM HOLFORD

London

RIBA/Ideal Home Scheme

SIR: May we trespass on your columns again to clear up possible misunderstandings? On referring to fees in our first letter we meant fees received in the way of royalties from the RIBA Ideal Home Scheme. Many others apart from Mr. Howard are purchasing the design and the cost comparison referred to was between royalties received in the ordinary way and costs in entering the competition and preparing the working drawings. On this basis alone the work is amply rewarded and is actually bringing

in new work, one of the rare instances in the history of the firm where entering an architectural competition has paid in monetary as well as other terms.

As Mr. Howard says, our engagement at Bromley is on Part C of the RIBA Special Scale for Speculative House Building, and we are being paid for many other house type designs, including the modified version of the Ideal Home type. As we are already being paid Scale fees, additional royalties will not be expected.

Not having completed the Bromley job, and finding the early phases exceedingly difficult for various reasons—purchasers' wishes, builder's honest doubts, Planning & Byelaws and so on—it is not possible to report whether the new RIBA scales represent fair reward for work done as conscientiously as possible (with, it must be admitted, not entirely happy results, but try it some of you critics!) but with our client's consent we intend to summarize our experience for the interest of the profession when the full story can be told.

London

G. GRENFELL BAINES

Dead or Alive?

SIR: In the last issue of the AJ, ASTRAGAL referred to the ABT as a body unaware that it had been long dead. I have just been elected president of the ABT and I am not accustomed to taking office in a defunct organization. ASTRAGAL went on to praise (very kindly) a recent study by the ABT of the problem of urban motor roads—an unusual effort, to say the least, for a dead body. The ABT took a considerable part in the creation of SPUR, another effort which I believe earned ASTRAGAL's approval.

The Association also carries on a day to day struggle up and down the country to improve the salaries and working conditions of architectural and other assistants with some success. This too I believe is an activity which ASTRAGAL normally finds a creditable one. It also runs here and overseas a very useful series of annual examinations for Clerks of Works. I don't know whether ASTRAGAL approves of this, but I imagine he would.

In short, for the sake of a witty phrase, ASTRAGAL has done some damage to a body which does a great deal of work—admittedly quietly—which I am sure ASTRAGAL would not wish to damage. A column of lively comment which tries to be objective always runs the risk of being irresponsibly cheap if not worse and ASTRAGAL has come dangerously close to the edge of slickiness once or twice recently. I believe it to be entirely unintentional, but "I didn't mean it" is a poor defence when one hurts one's friends by accident. Of course if one *means* to insert a knife deftly under the fifth rib then that is an entirely different matter.

KENNETH J. CAMPBELL

London



TORQUAY

Donald Gibson's Seven Points

Donald Gibson, speaking as president of the Housing and Estate Management section at this year's Health Congress at Torquay on April 26, put forward seven proposals for bettering our housing. These were as follows:—

1. That we should conceive of housing not merely as the providing of shelter, but as the encouragement of a way of life. Under this head he named the providing of an annexe for old people in preference to an old people's home and the "garage-workshop-hobbies" room for greater leisure.
2. That schools should make their library, swimming bath, workshop, gymnasium and hall available to local residents. The gains arising from this, he thought, were far too great to be set aside because of administrative difficulty.
3. That we should cut down costs on roads and services in order to spend more on the houses themselves. As examples he cited the combining of footpaths with carriageways (but not before houses have been excluded from traffic ways) and the lighting of streets from houses, not from expensive columns.
4. The rehabilitation of old estates by unified hedging and fencing, by landscaping and by the proper use of white paint.
5. The providing of new parks on the scale of those provided in the past. This generation has tried to make do with "small unbuildable bits of land": these are not enough.
6. Building societies to make the employment of architects a precondition for a loan.
7. Investigation of the courtyard type plan as a means of giving privacy within the fairly high densities to which we must build. Some, but not all, of these will need more money, but while introducing his proposals, he pointed out that up to now we have been spending "only about eight years of the family motoring" on the building of a permanent home.

AA

Playne elected President

Edward Playne has been elected president of the AA for its 114 session. Trained at

the AA, once partner of Sir Aston Webb and of Grey Wornum, he is now in partnership with John Lacey.

RIBA

Criticism by R. H. Sheppard

On the invitation of the President, Richard H. Sheppard has undertaken to give the criticism of the drawings submitted in competition for the RIBA Prizes and Studentships, 1960-1961. Mr. Sheppard's criticism will be delivered at a General Meeting of the Institute to be held in January, 1961.

COMPETITION

Development in the Costa del Sol

Luis Soler, Pierre Vago, Franco Albini and Antonio Sebásia are the architects judging a competition for the planning and development of the *Zona Residencial Elvira* in the Costa del Sol, Marbella, Spain. Prizes consist of 5,000, 3,500 and 2,500 square metres of land and 250,000, 100,000 and 75,000 pesetas for first, second and third prizes respectively and free holidays in the area of varying duration. Applications for entry must be submitted by the end of May, 1960. Apply: *Zona Residencial Elvira, Apartado de Correos num 220; Malagar, Spain.*

Offices in Baghdad

Gio Ponti is one of five assessors in a competition for new offices for the Electricity Service of Irak in Baghdad. The first prize is £3,000. The closing date for entries (which may be extended) is May 15. Applicants should send £2 deposit and obtain conditions from the Irak Embassy, 21, Queen's Gate, S.W.7.

DIARY

Planning and Controlling City Growth. Paper by Senhor Luis de Guimaraes Lobato, one of the principals in Salazar's professional technocracy who is responsible for technical development in Portugal as well as town planning in Lisbon. At the RIBA, 66, Portland Place, W.1. 6 p.m.

MAY 17

Exhibition of New Building Materials. At the Building Centre, 26, Store Street, W.C.1. Opening at 12 noon.

MAY 17-28

Problems in the Design of High Buildings. Two day symposium at the RIBA, 66, Portland Place, W.1.

MAY 18-19

Exhibition of Designs for Industrial Art Bursaries Competition. At the RSA, 6, John Adam Street, W.C.2.

MAY 18-JUNE 3

RICS Junior Organization AGM. At the RICS, 12, Great George Street, S.W.1. 6.15 p.m.

MAY 19

MOW

Director General of Works

A. J. Filer, General Manager of the Directorate General of Works, will retire on August 14, 1960. Thereafter the Directorate General will consist of C. G. Mant, F.R.I.B.A., who will be appointed Director General, E. Bedford, A.R.I.B.A., Chief Architect, and A. B. Mann, B.Sc. (ENG.), M.I.C.E., Chief Engineer. The Directorate General will have joint executive responsibility for all professional services in the department, including works, lands, and accommodation services. Mr. Filer has been holder of the post since Sir Charles Mole retired.

RIBA

Bronze Medal Awarded to Roehampton

The Royal Institute of British Architects' 1959 Bronze Medal for London Architecture has been awarded to the LCC's Architect, Hubert Bennett, for the design of the 11- and 12-storey blocks of maisonettes and flats at the LCC Alton (West) Estate, Roehampton Lane. A suitable tablet will be erected on one of the blocks to mark the award.

The Council's Alton Estate at Roehampton is one of the largest post-war housing jobs undertaken by the Council and one of the largest undertaken anywhere in Europe. The section containing the tall blocks, the subject of the medal, is a 100-acre site, lying between Roehampton Lane and Richmond Park. The design and execution of a scheme this size naturally occupied a number of years and although the award of the medal is made to Mr. Bennett, the responsibility extends back to his predecessor as Architect to the Council, Prof. Sir Leslie Martin, and to the team of designers in the Housing Division of the Architect's Department under H. J. Whitfield Lewis (now Architect to Middlesex County Council), then Principal Housing Architect, and M. C. L. Powell (now Schools Architect), Assistant Housing Architect, with Colin Lucas as Section Leader. In the team were G. F. Bailey, John Partridge, W. G. Howell, J. A. W. Killick, S. F. Amis, M. C. D. Richmond, J. R. Galley, and R. Stout. The contractors for the tall blocks at Roehampton were Wates Ltd. The engineer was W. V. Zinn. A bronze medal was awarded in 1954 for the LCC's Ackroydon Estate, Wandsworth.

Cost and Management Conference

The last of the series of conferences on methods of controlling building costs at the design stage is to be held at the University of St. Andrews from June 23 to 26. Sponsored by the Cost Research Liaison Committee of the RIBA and the RICS, the conference will be similar to those held at Great Missenden, Bristol, York and Manchester. Applicants should write to the Secretary, to the Management Committee, at the RIBA, giving their age, qualifications and experience. Conference fee: eight guineas.

Controversial AGM

G. F. Whitby and D. H. McMorran opened the discussion of the RIBA's annual report with a series of points and criticisms which could have been an embarrassment to a less popular President and Council. Mr. Whitby commenced by asking whether the report of the Council was in accordance with the by-laws. Basil Spence, President, admitted that the report had been issued late but asked whether it mattered. Mr. McMorran promptly pointed out that members had not, in consequence of the lateness of the report, had time to study it carefully. He said that all members signed a declaration to obey the by-laws. Mr. Spence asked him to stretch his conscience. . . . In the end the motion was put to the meeting that the meeting be postponed. There were four votes for the postponement. The majority of the 200 members present stretched their consciences and destroyed the by-law.

Mr. McMorran then went on to criticize the fact that there was no statement on student fees in the report, no report from the Registration Committee on whether ARCUK should hold exams, and finally he questioned whether the Oxford Conference gave a mandate for the reconstitution of the Board of Architectural Education (which is already in effect) and why the length of office for members was not given or what constituted a quorum of the Board. He received no detailed answer to these points, but Mr. Everard Haynes, secretary to the Board, pointed out that the Board was under no necessity to hold exams, save when the Council approved and the Board recommended. One of the most effective comments made in the meeting was by architect planner Walter Bor, ably supported by Graeme Shankland. He said:—

"I should like to comment on the new Committee structure, as far as it relates to the change from the old Town & Country Planning and Housing Committee to the new Design and Planning Committee.

"At a time when town planning issues are of paramount importance, we are relegating Planning to second place. Once upon a time there was a Ministry of Town & Country Planning; this was first changed to a Ministry of Housing and Local Government and has finished up as a Ministry of Housing, Local Government—and Welsh Affairs. Is it our intention to follow the Government's deliberate policy of watering down the importance of town planning by changing a not very effective Town & Country Committee to a possibly even less effective Design and Planning Committee?

"With regard to Town Planning, we are told that the Design and Planning Committee 'will be concerned either to devise or pursue a major policy aimed at restoring the architect to the forefront of planning and/or in some way reconcile the architect's need for professional freedom with the social necessity for Planning.' In other words, Mr. President, this Committee is mainly concerned with the furthering of the interests of architects in or against planning but is

not really interested in Planning as such.

"This then is our policy at a crucial moment in the history of our towns, when vast twilight areas and parts of the central areas are ripe for renewal and when the unbridled incursion of the motor car threatens to choke—or explode—our cities. Post-war town planning has so far mainly been concerned with the redevelopment of blitzed areas and the development of New Towns. The much more difficult and complex task of urban renewal is staring us in the face and we are not ready for it. The town planning profession is desperately short of architect/town planners sufficiently skilled and experienced to tackle these formidable problems. Last time I called here for more architect/planners. Mr. President, I was reported as having asked for more ABSTRACT planners—just about the last thing we need now!

"Whose fault is it that town planning lost its appeal and got into a rut? I think we architects must take a good deal of the blame since for the past decade or so we as a profession have turned our backs on to planning. If we now ask for architects to be restored to the forefront of planning, then surely planning must be in the forefront of the RIBA. In any case, if all major cities were to have Architect/Planners as Chief Officers, it is very doubtful if we could fill the posts. It's all very well to talk for the restoration of architects to the forefront of planning but first we must re-examine our own attitude to Planning and educate more architects as town planners. If we don't take Planning seriously as a profession we shall be ousted from this field by other professions who do take it seriously.

"Next year we shall be hosts to the International Union of Architects. Forty nations are in the IUA and their representatives passed the following resolution in 1953 'at each stage in the planning process—in large areas, national and regional—the architect town planner should act as adviser and prepare design projects. On the other hand it considers that in the planning of cities and towns only architects qualified as town planners are competent to carry out the planning work.' Our representatives voted for this resolution. How can we face our guests if we have not managed to put our own house in order in these matters?

"Mr. President, ladies and gentlemen, our cities are in danger and in urgent need of the most skilled attention by architect/town planners. As far as the Committee Structure is concerned, this should reflect the importance this Institute attaches to town planning. There may or may not be a case for a separate Design Committee. But may I urge the new Council to set up a separate Planning Committee solely concerned with planning matters and urban design, for which, I submit, there is a very strong case indeed."

Richard Sheppard and Robert Matthew both emphasized on behalf of the Council that they had sympathy for and supported Mr. Bor's views.

A member asked why there was no mechanism by which a special general meeting could be held. In reply Cleeve Barr stated that the constitution committee had recom-

mended to Council that such a meeting could be held at the wish of at least 100 members. Leslie Watson asked that the Constitution Committee report be submitted to the Allied Societies. Cleeve Barr replied that the Allied Societies Conference had seen it and two special general meetings would be held to enable members to discuss the report.

R. B. Redfern stated that he had issued a questionnaire to 1,000 members and had had hundreds of replies which showed that the Board of Architectural Education should reconsider the Oxford Conference report, the members of which were out of touch with the profession. There was, he said, a divergence of opinion whether two "A" levels will improve status or that external exams should be abolished. The Board was less concerned with the status of schools rather than of architects because teachers are in a majority on the board. He recommended that the membership of the board be in proportion with the members of architects in private practice, public office, teach-

ing, and so forth.

Although William Allen said that the questionnaire had, in his opinion, consisted of tendentious queries, begging their replies, no one queried whether individual Gallop polls were an effective method of running the profession. Mr. Redfern's motive, that the implementation of the Oxford Conference report be deferred until the membership views were considered, gained only 18 supporters.

A member asked what the Council did to ensure that the professional scale of charges was observed. He queried the all-in fee of 6 per cent. to cover surveying, architectural and engineering fees. Mr. Spencer said it was the duty of all members to report cases and supply proof.

Although a number of other members spoke, the constant interruption by a few, notably Messrs. McMorran, Whitby and Redfern, must have discouraged participation in the discussion of the report for fear of being thought over-factious and needlessly prolonging the proceedings.

APARTHEID ON THE ROADS?

By Nigel Seymer

On April 28th the Pedestrians' Association for Road Safety held a five-hour conference on *Planning for Road Safety*. The problem of how to segregate pedestrian from vehicular traffic in our towns, new and old, was the main theme of the four principal speakers—although one delegate from Durham was more concerned about the protection of level crossings where mineral railways cross roads in that county.

The conference got off to a rousing start with a talk by Sir Alan Herbert on "The Cromwell Road Extension." He spoke of "absolute bedlam" on Hammersmith's "Junior M1," complaining that the 40 m.p.h. limit is not enforced, and that the local inhabitants had been "befuddled, bewildered and cheated by Whitehall" ever since 1936—in which year he criticized the scheme to build what would be equivalent to an "unfenced railway track" through his neighbourhood, and was assured by a Government spokesman that traffic lights would be installed.

If the defect of this road were simply that it was unfenced, the obvious answer would be to fence it off, thus forcing people to use the subways which have been provided. This would at least prevent pedestrians getting killed—an elderly cripple was killed recently crossing the road immediately above a subway. But this would not satisfy Sir Alan. His attitude to subways is equivocal: he wants them (he's been agitating for them), and yet he talked of them as if they were places to avoid—just the place to be raped, even if you didn't get a bubble car landing on top of you (one such vehicle did apparently get into a subway). So Sir Alan wants

traffic lights as well as the subways: he wants "segregation in time" as well as "segregation in space." This surely would be equivalent to wearing both belt and braces. Subways are expensive; and there would seem to be no point in building them if you're going to have traffic lights anyway. But we must remember that he has been "befuddled by Whitehall."

"Fiendishly ingenious"

C. D. Buchanan spoke of the motor vehicle as "this fiendishly ingenious and damnably convenient contraption." Discussing "The pedestrian-vehicle conflict," he outlined the very provocative thoughts which he has set down in his book *Mixed Blessings—The Motor in Britain*, and more recently in an article which appeared in the Winter 1960 issue of *International Road Safety and Traffic Review*.

The pedestrian-vehicle conflict showed itself in various ways—direct collisions, assailing of nerves, battering of the senses by noise and pollution of the atmosphere. Gradually pedestrians had been stripped of all their amenities, till now they took it for granted that they had to run for their lives at the approach of a motor. This was wrong. The criterion of a civilized environment was the standard at which pedestrians were catered for, and it should be the cardinal aim of town planning to free the pedestrian from the domination of the motor vehicle.

This aim had been preached ever since Alker Tripp first propounded the "pedestrian precinct" principle in 1942. But in the blitzed cities the idea of precinct planning had been completely missed even whilst it was being preached. With only

a few exceptions, one could see the old, bitter conflict being renewed, though the streets are wider and the traffic faster. In the New Towns, however, the precinct principle had been successfully applied. Despite stiff opposition from the bus companies and the multiple stores, the shopping centres of Harlow and Stevenage had been laid out as genuine pedestrian precincts, with no wheeled traffic in the shopping streets. This had shown that it was possible to keep traffic out of the central shopping area of a medium-sized town (the Borough Surveyor of Watford, a town of some 80,000 inhabitants, told the conference that it was intended to close the main shopping street of that town to traffic). In big cities the precinct principle was very difficult to apply. It might be possible to keep traffic out of certain shopping streets, as had been done in the case of Lijn Baan in Rotterdam; but the Lijn Baan has to be entered from Cool Singel, a main street which is as difficult to cross as any street anywhere, and the visitor's abiding impression of Rotterdam was one of a whirling hell of traffic. Dealing with traffic was rather like dealing with wrinkles in wallpaper—smooth them out in one place and they came up worse somewhere else.

Vertical segregation?

Probably the best hope of eliminating the pedestrian-vehicle conflict in big cities lay in vertical segregation: in lifting the pedestrians above the motors. It was possible to visualize a situation in which, for certain city blocks the whole ground area was given over to wheeled traffic, including parking space and loading bays, while the civilized life of the city was carried on at first-floor level—to which there should be access by escalator directly from the Underground, in the case of London. Fundamentally this presented an architectural problem; but it was not an insoluble one. Mr. Malcolm MacEwen (Chief Information Officer, RIBA) said that in three years' time the British motor industry would be able to turn out three million vehicles in a year; it would be nearly twice as large, in proportion to the population, as that of the USA. The Government was financing to some extent this runaway expansion of the motor industry. But should we really allow the motor industry to bolt in this fashion? Could we afford, as a nation, to spend so much on manufacturing vehicles that will clog the streets, and so little on renewing the obsolete areas of our cities?

When were we going to spend money on research into the planning, architectural and engineering problems of city reconstruction on the scale that money is spent on research into missiles? If we failed to apply greater resources in finding the solutions and putting them into practice, the motor car might prove to be the H-bomb of city planning—our most expensive misdirected missile.

It had been said by some that we must emulate those countries which had learned to live in comfort with the motor vehicle.

What country had yet achieved this? Conditions in German cities were far worse for pedestrians and vehicles than in our cities. The planners of Cumbernauld thought there might eventually be 1.4 cars per family. With such general car ownership it was not possible in existing cities to plan for the unrestricted use of cars.

The Stevenage story

Mr. L. G. Vincent (Chief Architect, Stevenage Development Corporation), in a talk illustrated with slides, showed how Stevenage is achieving something like complete segregation of three types of traffic: pedestrian, cyclist, and motor. The main roads in the town were flanked by footways and cycle tracks; and these were led under intersecting main roads by underpasses with gently-sloping approaches—no one would be tempted to climb a steep bank to reach the road level rather than use such an underpass. Such underpasses had always been envisaged in the original plan. Unfortunately Whitehall vetoed many of them in the early stages, and they

were now having to be constructed piecemeal and were costing twice what they would have done if they had been built when the roads themselves were built.

The shopping core of the town is completely pedestrian; service roads for delivery are provided at the backs of the shops, and adjacent to these are car parks for 4,000 cars—none of them more than two minutes' walk from the central shopping streets. Mr. Vincent mentioned that in Essen, sales in a certain street had gone up by 25 per cent. after this street had been closed to traffic except for two hours each day.

In one of the newest housing areas, there would be a network of footpaths completely separate from the roads giving access to the service courts, where garages would be provided right by each house. Thus the houses would have neither fronts nor backs in the orthodox sense; on leaving their houses people would have the choice of proceeding on foot on the footpath system, or collecting their car from a garage at the end of their plot.

Ministers have at last joined with planners in calling for the segregation of motor traffic and pedestrians. One device which has been airily extolled is that of raising pavements to first-floor level and using the space beneath for a widened carriageway. Recently the JOURNAL invited the engineer Alan Harris to study the problem in a typical major shopping thoroughfare, Oxford Street. The study was necessarily brief, and his reactions to the problems posed are given below and serve to remind what gulfs lie between bright ideas and their satisfactory realization.

OXFORD STREET

Walk above or below the motor car?

The advantages of completely separating pedestrians from motor traffic in any busy shopping street are obvious. To start off with, that high proportion of accidents which results from mingling feet and wheels would cease. A shopping centre where people with money can reconnoitre goods for sale free of mortal danger should be a more efficient selling organization; moreover, when the footway is raised so that vehicles circulate beneath, as in the suggestion made by the Minister of Transport, a substantial extra space is available for vehicles and a very considerable extra space could be made for pedestrians—at the limit, the whole road could be roofed over. Were it possible, for instance, to utter an incantation whereby all the shopwindows and all the pavements in, say, Oxford Street were raised to a level above the roofs of the buses and all pedestrians could reach this level without effort, how great the benefit.

The Minister of Transport may or may not be ready to pronounce the words of power; a short visit to Oxford Street helped define the wonder which his words would have to work. Oxford Street is a useful test case; it is a major shopping centre and while the north side is mostly big department stores, the south side is much more heterogeneous. There is little uniformity in floor levels and there is enough rise and fall in the road profile for it not to be too easy.

At first sight, it looks neat. Improvement all round, no demolition, nobody upset. Structurally speaking, the problems are uncomplicated: such as they are, they are those of any engineering operations in a long occupied and densely developed area. The footpaths and carriageways are stuffed with services, the location of some of which is known and of some can be guessed at; there would remain inevitably some dis-

agreed
digging
would
rupting
cellars
and do
Street
a stru
compa
propen
provid
equiva
The ro
ing:
raised
Now
pedest
shop v
leads
to tub
of the
be i
shoul
artery
of th
it lies
be su
very
when
to pa
no in
to co
from
station
The
ment
level
pram
mech
cases
but t
and i
be le
too r
way
avail

Hanc
As f
they
in th
will
but
some
room
build
front
bus
and
alter
meas
hous
on
prov
A p
attra
Acco
is f
pres
they
ram
be p
up
but
be l

agreeable surprises for the contractor digging for his foundations. All services would have to be diverted without interrupting their use; there would also be cellars beneath footpaths and basements and double basements. Nevertheless, Oxford Street could be roofed over completely for a structural cost which would be minute compared with the cost of acquisition of property in any alternative scheme for providing the West End with three or four equivalent extra lanes of traffic flow.

The real problems however, are the following: (a) Access for pedestrians to the raised footpath; (b) rearranging the shops. Now the value of Oxford Street for pedestrians is twofold; firstly it is a huge shop window; secondly it is an artery which leads them from shops and offices away to tubes, buses, taxis and cars. The essence of the proposal is that the shop window should be in no way diminished—indeed, it should be enhanced. But the pedestrian artery must not be blocked; indeed, much of the value of the shop window is that it lies on an artery. If the operation is to be successful, then, it must not only be very easy for pedestrians to attain the shops when they want to, it must also be tempting to pass along the shop windows even with no intention of shopping. We have, then, to consider access from neighbouring streets, from buses, taxis and cars, and from tube stations.

The first thing to note is that these pavements will be 18 ft. to 20 ft. above road level, and the way up must accommodate prams. Some sort of escalator or other mechanical aid may be installed in special cases (though the difficulties are formidable), but the basic approach must be a ramp—and it will be about 200 ft. long and cannot be less than 6 ft. to 10 ft. wide. Clearly too many of these and little extra carriageway below or footpath above will be left available.

Handling the ramp

As far as buses, etc., are concerned, if they are to stop and discharge passengers in the carriageway, a major loss of space will result, not only to the carriageway but to the footway above, since a void of some 80 ft. length will be needed for headroom in the ramp. If this is against the buildings, it neutralizes that much shop front, if away from the buildings, the bus stop must take the form of an island and will be a single purpose access. An alternative would be to devote premises measuring some 20 ft. by 50 ft. to the housing of a ramp; if the premises were on a corner, they would also serve to provide access from neighbouring streets. A possible solution but perhaps not an attractive one.

Access from neighbouring streets by a ramp is feasible. It may be assumed that the present footpaths will become useless since they will no longer lead anywhere and ramps could be built over; it might even be possible to arrange the ramps so that upper level side windows are possible, but this is more doubtful, there seems to be little room.

It would be necessary to close the ground level carriageway completely to pedestrians, to forbid setting down and taking up of passengers in the Oxford Street carriageway and to provide extensive access ramps up side road pavements with bridges across the road. Upper level entrances to Tube stations would be built, and buses and taxis would require the fashioning of special and fairly extensive concourses complete with ramps. Two such at least would be necessary between Marble Arch and Oxford Circus; each would require the clearance of quite a lot of property.

A major operation

When we turn to the rearrangement of shops, the difficulties are substantial. First, we have the question of levels. In many places, the height necessary for clearance falls halfway between floors; either stairs up or down to enter the shops, or a substantial increase of pavement height with the corresponding increase of ramp length are needed. Moreover, floor levels vary between blocks and occasionally within blocks; the road itself is not level but floors are and the pavement would have to take the form of level stretches joined by abrupt inclined planes over the side roads. But how do the shops transfer their shop windows to the upper level? Let us assume that the department stores can do it fairly easily, passing lightly over the question of what it will cost them. What about the small single premises shop which either does not own the accommodation upstairs or has sub-let it? How do they move upstairs? How do they fashion a shop window at the new level? and who is going to move in downstairs? It will be dark, it will be noisy, the air will not be of the cleanest. As an administrative and legal operation, to get the small jeweller's shop from the ground floor to the new esplanade 20 ft. higher up, give him a window and see that equity is respected, as an operation it looks like a nightmare. Let's face it; the attempt would set going a happy roundabout of manoeuvre and speculation, with property merging, splitting and changing hands and fortunes made and lost—just as in the days of Haussmann. Or would commercial interests welcome the scheme with sufficient conviction to see it through? Would they feel that this was an asset which they must have?

The probabilities are that an official scheme of this sort would have such an influence upon property values as to provoke extensive reconstruction, privately financed, and the market might solve, for good or ill, the problem of the small jeweller's shop. In fact, raising the footpath is not a cheap and clever way of solving some of our traffic problems, it is a major operation capable of bringing major advantages in its train.

Let us see how this scheme compares with other possibilities for the same locality. There are first of all the bulldozer approaches—pull down all the south side and widen or alternatively drive relief roads through the back streets north and south of Oxford Street. These proposals differ essentially from the raised footpath scheme

in that they re-draw the map, with systematic and extensive demolition. All very fine, if demolition is accepted. If it is, to pull down the whole south side would leave the ground admirably clear for a complete raised footpath scheme; we have seen that something very close to it might result from raising footpaths: it could even be a necessary preliminary. As for the side roads, they would undoubtedly ease traffic and the relief would enable footpaths in Oxford Street to be widened. But basically the improvement would be one of degree and not of kind; better value for one's demolition would be found elsewhere.

Raise the road

There is another suggestion, however. If the separation of vehicles and pedestrians is desired and it is difficult to raise the footpath, why not raise the road? For preference, it would be raised enough to give clear standing headroom so that subways could be formed freely at frequent intervals across Oxford Street and through the ramps up from side streets—though some side streets might be sealed off, many would have to remain. This scheme has every practical attraction. The only engineering works needed would be retaining walls, extension of manholes—and fill, the most straightforward of operations. Shops and their windows remain untouched—indeed display space could be doubled by show-cases or, indeed, small shops, against the retaining walls; services are not interfered with; ramps to bus stops are short enough not to be too embarrassing. The improvement is limited, however, since though the footway could be extended somewhat under the road, the road could not be cantilevered out much beyond its present line without raising questions of daylight obstruction. Thus, while circulation of pedestrians could be much improved, vehicles would have to make do with much the same space as at present, though there would be no pedestrians to dispute possession.

Nevertheless, the cost of this scheme in money and in administrative complications would be of a lower order altogether than that of the others discussed.

Let us sum up.

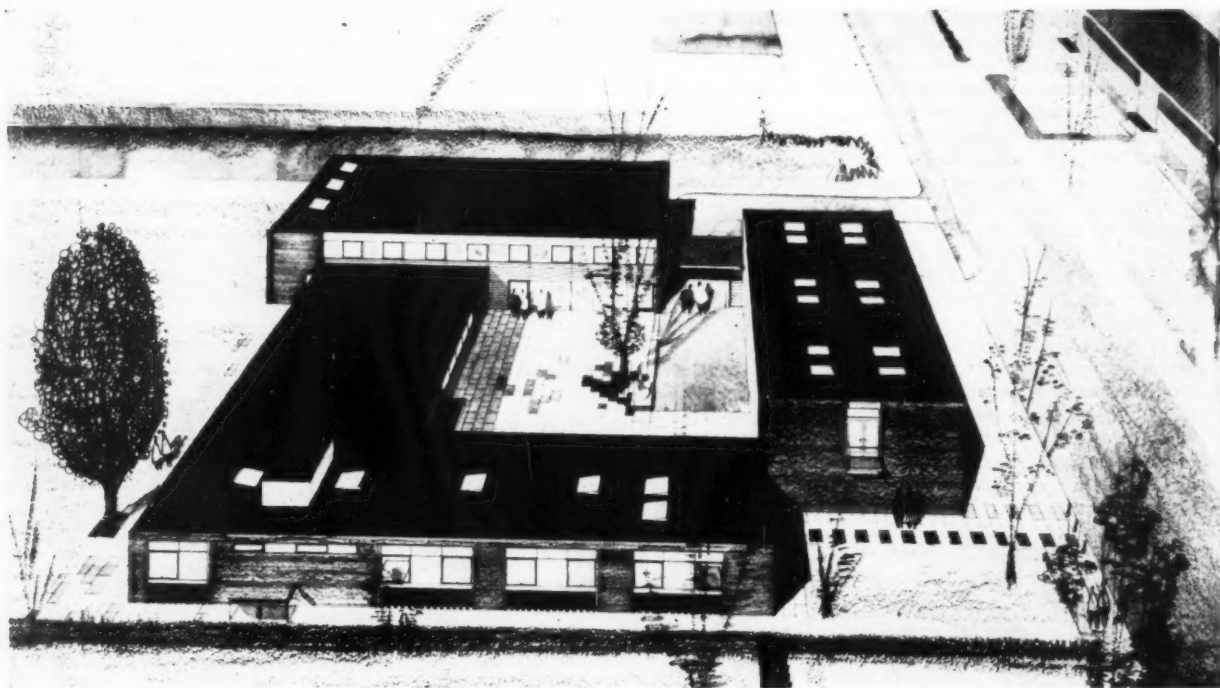
Raising the footpaths is structurally simple and relatively cheap.

Providing adequate access to the raised footpaths is difficult though not impossible. Providing the shop windows at the new level is a major operation of great physical and administrative difficulty.

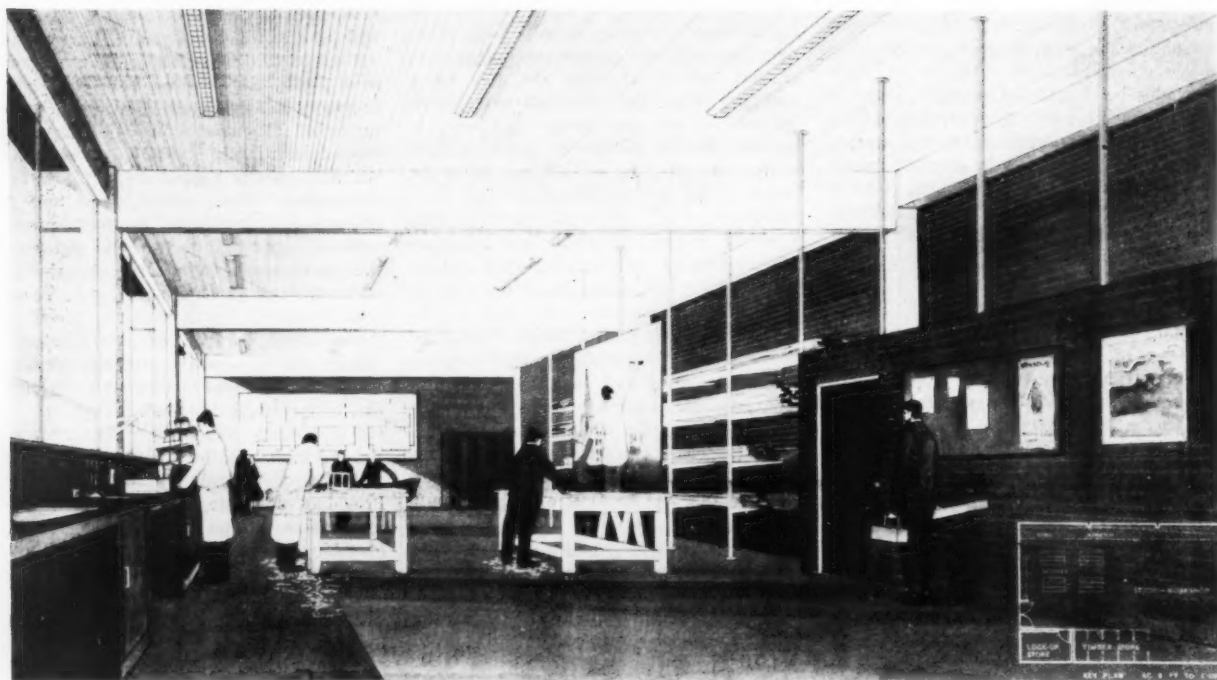
The demolition of the whole south side or the creation of relief roads, are major works of reconstruction and are not strictly comparable with the proposal to raise the footpaths.

The proposal to raise the road leaving the footpaths more or less at their present level is simple to carry out and would meet with few practical difficulties. It would achieve most of the objects sought by the raised footpath scheme, with the major exception that it would be difficult much to enlarge the existing carriageway. As an operation not of the first magnitude, it could nevertheless bring substantial benefits.

WORK AND PLAY FOR CHRISTIAN YOUTH



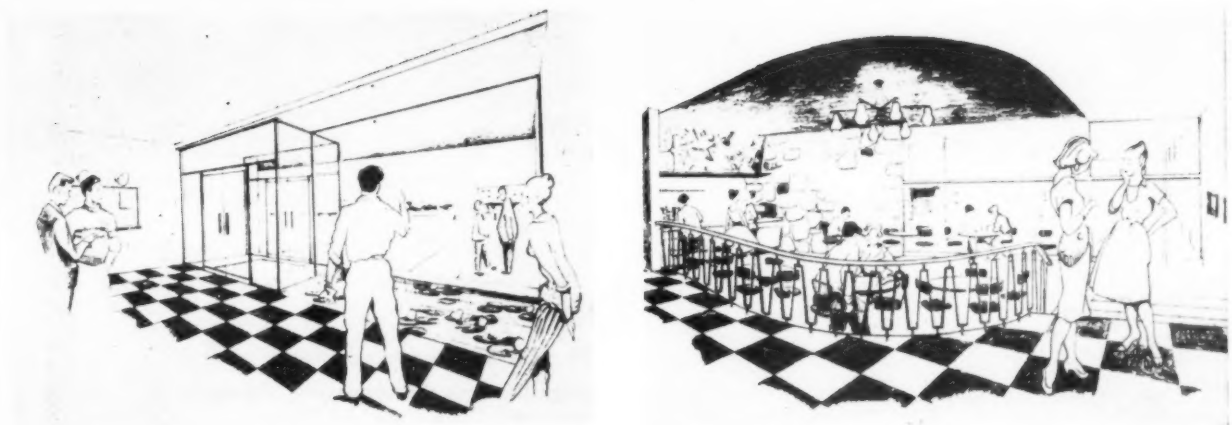
Club to be built in stages, by Mortimer Partners.



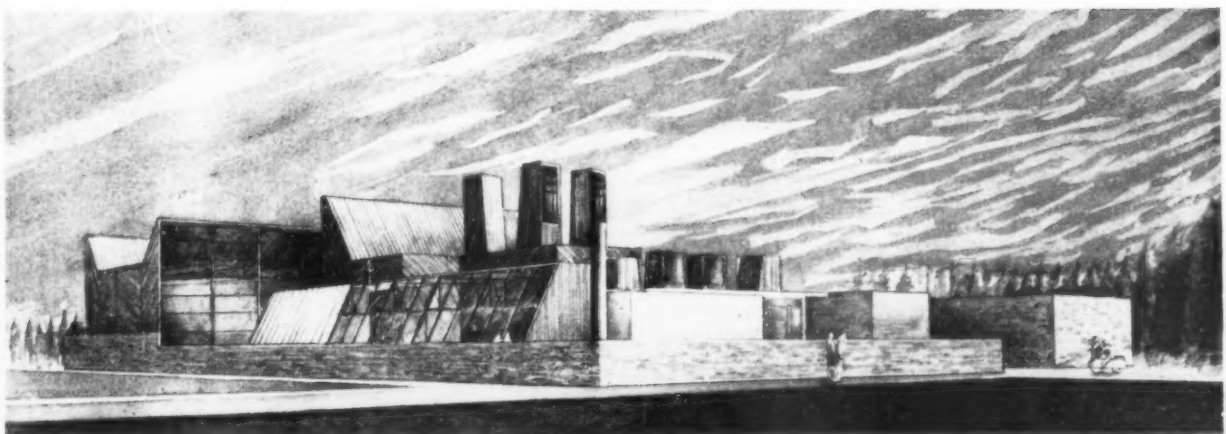
Sketch for a workshop-studio, by J. Mansell Jenkinson and Son.

With commendable speed the Y.W.C.A. has followed up the Albemarle Report on the need for a livelier, better-endowed Youth Service, with a small exhibition of new and imaginary youth clubs, at their headquarters in Baker Street. There are some good ideas here: the young need places to work at what passionately interests them at least as much as they need coffee bars or games rooms, and J. Mansell Jenkinson and Son have pictured one such studio-workshop here. Mortimer Partners of Yorkshire have got down to planning a youth club which could be built in three stages as fast as the money was raised, starting with a "nucleus club" and extending it round a courtyard, and including a wing designed to bring in revenue consisting of lock-up shops with bed-sittingrooms above. The whole could be

CLUBS



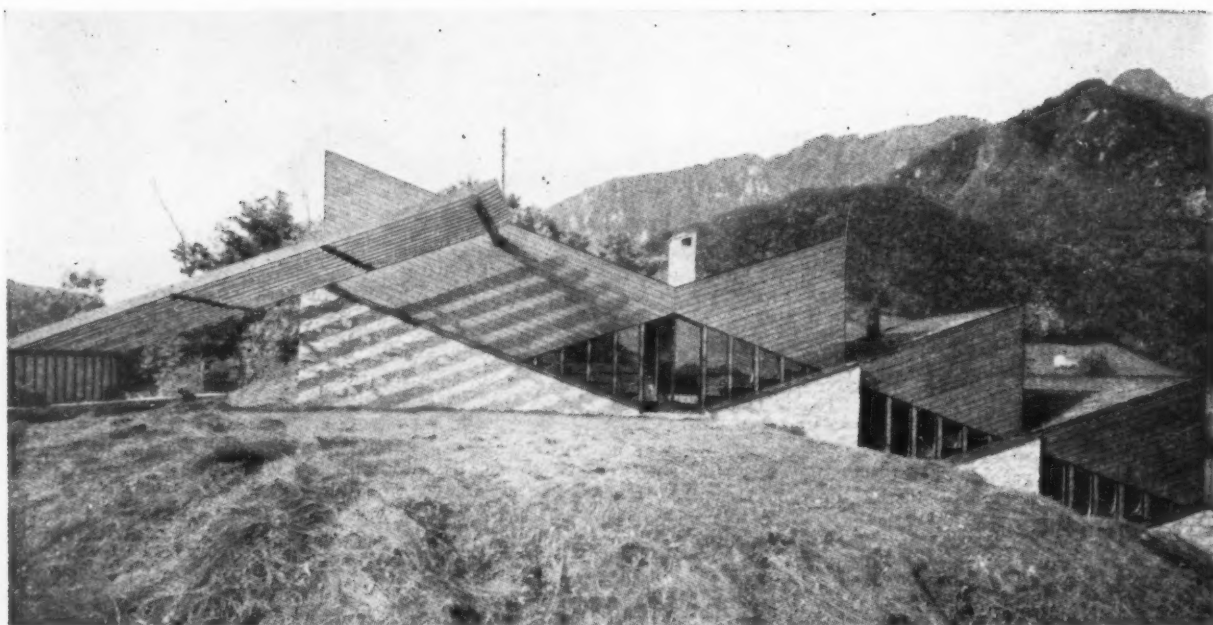
Exterior and two interiors of Youth Club for a New Town by Elsworth Sykes and Partners . . .



. . . and by Peter Goodridge.

built, the architects estimate, for about £30,000. But there is no visible connection at all between the small, unpretentious and evidently money-cramped buildings actually put up for the Y.W.C.A., such as the small club with bed-sittingrooms at Perry Common, Birmingham, designed by Holland W. Hobbiss & Partners, and the sketches for an imaginary youth club presented alongside. Examining Peter Goodridge's vast, walled, vaguely industrial-looking Fortress of Youth, one wondered how this sort of youth-club-in-the-air could help organizations planning real clubs to produce better buildings, and how the organizers of the exhibition had selected or briefed the architects. One hopes that when the Albemarle Report is implemented, reality and imagination will come closer together.

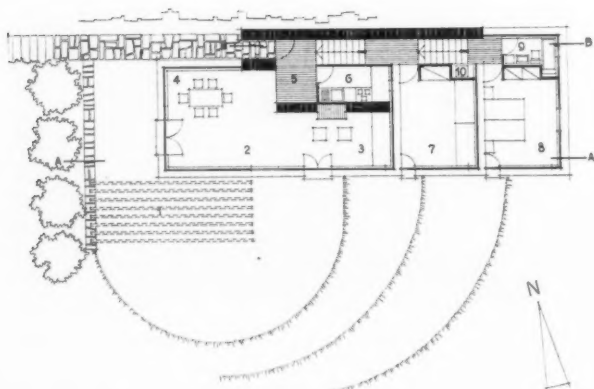
SMALL COUNTRY HOUSE AT ROUIO: SWITZERLAND



View of the house from the south.

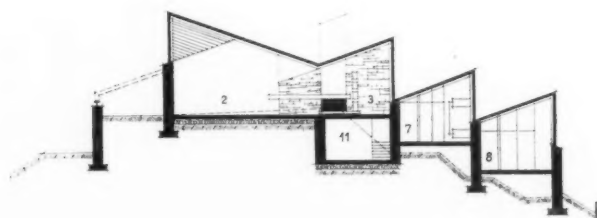
The problem of designing a house in the country can of course be handled in a number of ways. This solution is ingenious and original. Although it is, in fact, designed by Tita Carloni and Luigi Camenisch as a holiday retreat it would serve equally well as a dwelling for a small family. The house is on a hillside near Rouvio, 1,500 ft. above Lake Lugano, and the floor levels are staggered to follow

the slope. The foundations are of stone and a large amount of the superstructure is in timber: both local materials. This commonly accepted method of giving a building "integration with the surroundings" is in this case not nearly as important or effective as the design of the roof which is in sympathy with the background hills. (Reproduced from *Werk*, April 1960.)

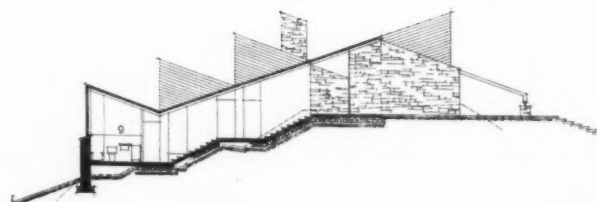


Floor plan. Key:

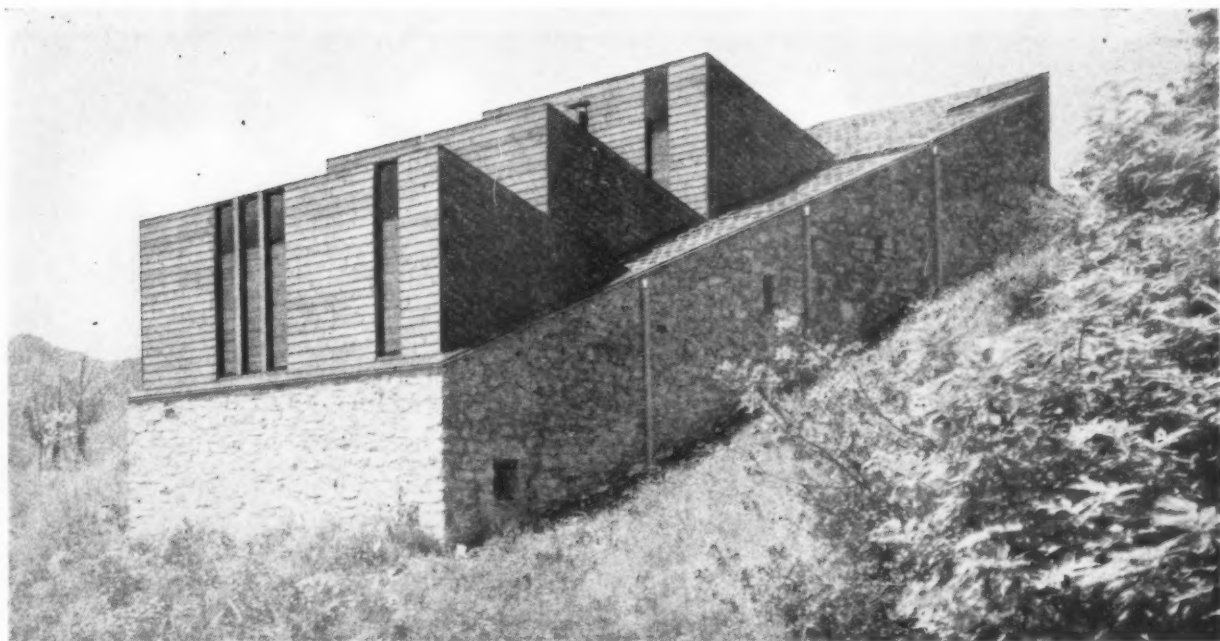
- | | |
|-----------------|--------------------|
| 1. Pergola | 7. Children's room |
| 2. Living room | 8. Parents' room |
| 3. Chimney | 9. Bathroom |
| 4. Dining space | 10. Oil storage |
| 5. Hall | 11. Cellar |
| 6. Kitchen | |



Section A-A



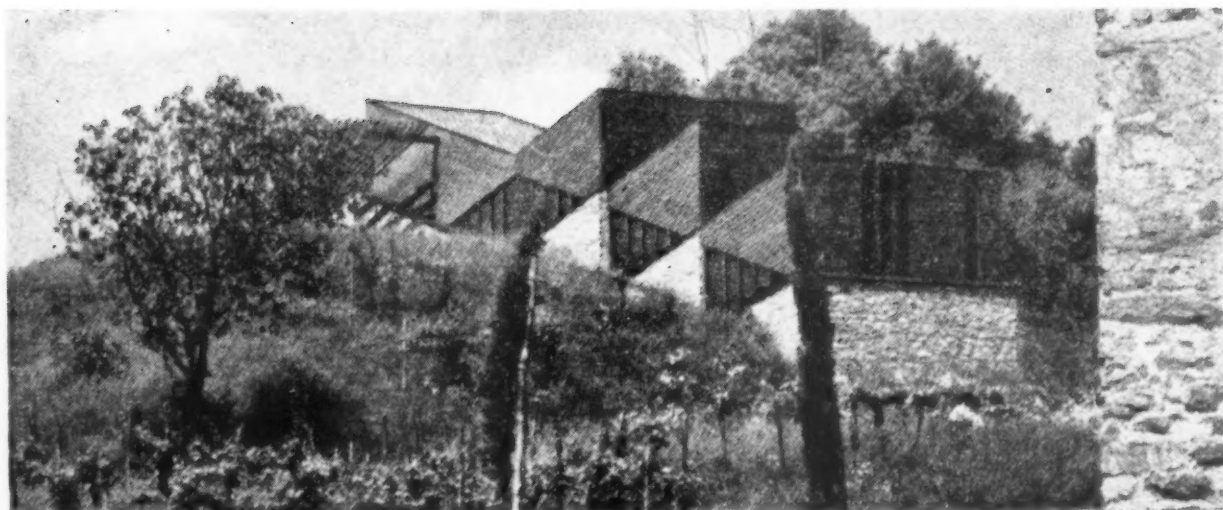
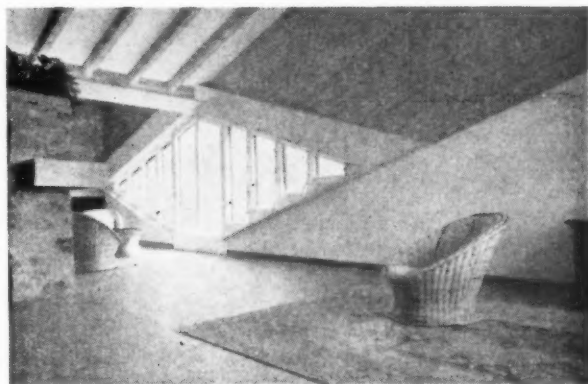
Section B-B



Above: from the north-east.

Right: the living room looking south-east.

Below: from the south-east.



REDEVELOPMENT IN SALFORD



A model of the scheme, recently approved by the City Council, put forward by the City Engineers and Surveyors office for the redevelopment of the Broad Street Area of Salford. The development is to take place over an area of about 90 acres lying to the south of Broad Street which is part of the A.6. As such it is one of the busiest radial roads in the Manchester conurbation. Slum clearance of some 55 acres is necessary and this has already been started to the west. Rebuilding should start before the end of 1960 and over 2,300 dwellings are to be built in 15, 12 and 4 storey blocks.

Apart from clearance and redevelopment of the slum area, one of the main purposes of the project is the improvement of the A.6 by widening it to take six lanes of traffic and constructing a new junction at Pendleton Church (lower left of picture). This is at present the worst bottleneck in the city and the designers propose to solve it by means of a roundabout at this point for local traffic, including buses, with an underpass for through traffic between Manchester and the north-west.

One of the most interesting parts of the scheme is a proposal to create a vehicle-free shopping centre (in the foreground). At the moment there are a large number of shops along the southern side of the A.6 and it is proposed to move these to the safety of the new precinct. This idea has been criticized by the local press and traders who seem to think that they will lose custom if people cannot park their cars immediately in front of the shops: a fear that would be quickly dispelled if there was sufficient knowledge of the success of pedestrian shopping areas elsewhere (e.g., Stevenage).

In addition to the shops, of which there will be about 150, there are plans for a swimming bath, licensed restaurant and an hotel. It is hoped that the eventual redevelopment of the area will include plans for a new town hall and that this will form the nucleus of a centre which is at present entirely lacking in the city. The proximity of Manchester's large shopping and civic centre has prevented the rise, in Salford, of any well-defined central area to which the inhabitants are naturally attracted.

THE INDUSTRY

Brian Grant describes a new industrial reflector, a small refrigerator, various types of up-and-over garage doors and a pump for small bore heating systems.

Industrial reflectors

The illustration below shows one of Falk's Ranmore range of industrial reflectors for use with colour corrected mercury vapour lamps. These lamps have an average life of about 4,000 hours and give a very good colour rendering without having to use tungsten lamps and are made in various sizes up to 1,000 watts. The reflectors are of spun aluminium with an anodized reflecting surface, and the lampholder housing is of the open type which provides a certain amount of upward light and also helps to keep the wiring cool. With a maximum spacing/height ratio of $1\frac{1}{2}$ to 1 the reflectors are suitable for high bay lighting and have a cut off of about 20 deg. They are intended for under

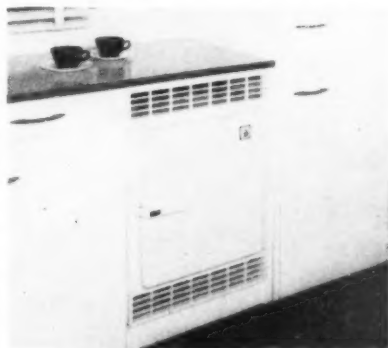


One of Falk's Ranmore range of industrial reflectors.

cover industrial applications. (Falk Stadelmann & Co., Ltd., 91 Farringdon Road, London, E.C.1.)

New small refrigerator

Electrolux have recently announced the MB.16, a built-in model which is a development of the original version produced several years before the war, when it sold, I believe, for something under £20. The new model has a capacity of 1.6 cu. ft., and costs £36 13s. 4d. including purchase tax, whether operated by gas or electricity, and finished in white or cream. For installation it needs a recess 28½ in. by 19½ in. wide, with a depth



A 1.6 cu. ft. refrigerator by Electrolux.

of 18½ in., and it can be supplied with either a right or left hand hung door. Shelf area is 3½ sq. ft. and there are the usual shelves inside the door (detachable) and a storage compartment for frozen food. This model is for sale to builders and estate developers, though presumably architects may specify it, and since it is a fixture it can almost always be included in a mortgage. (Electrolux Ltd., 153, Regent Street, London, W.1.)

Garage doors

Two recent leaflets deal with the up-and-over type of garage door. The first illustrates the Eclair glass fibre reinforced plastics door, which is a one piece moulding and is very light to handle. The door has a permanent black finish and needs no painting, while it is also possible to arrange light panels in it. Installation is simple and the makers claim that it should not take more than a couple of hours. The doors are made to fit an opening 6 ft. 9 in. high with widths of 7, 7½ and 8 ft., but can also

be up to 8 ft. high and 15 ft. wide, or equivalent areas. Minimum necessary side clearance is only 3½ in. (Eclair Doors Ltd., Anne Road, Handsworth, Birmingham 21.) The other leaflet is from Bradys, who make several types, a counterbalanced over door in aluminium or exterior grade mahogany plywood for openings 6 ft. 3 in. high and widths between 6 ft. and 10 ft. 2 in. Clearances of only 2 in. behind the jamb and 3 in. behind and above the door head are needed and as all parts are supplied drilled ready for assembly the manufacturers consider that fitting is well within the capacity of the average householder. Spring balanced over door gear is also supplied for fitting to existing hinged doors, the springs being adjustable to door weights up to 200 lb. Rolling shutter door of timber laths for openings of any size is also available. (G. Brady & Co., Ltd., Ancoats, Manchester, 4.)

Small circulating pumps

The Housemaster circulating pump for small bore heating systems incorporates a filter to provide clean lubricating water for the bearings, in which runs a stainless steel rotor shaft. The pump can handle water up to 270 deg. F. and the smaller model has a capacity of 7½ gal./min. at 2 ft. head, the corresponding amount for the larger model



The Housemaster circulating pump.

being 12 gallons. The pump should be installed with its shaft horizontal, and the condenser and terminal box can be mounted on either side of the housing as required. (Lee, Howl & Co., Ltd., Tipton, Staffs.)



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

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

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

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

Write for Leaflet No. UJ/2.

INFORMATION CENTRE

96

726

10.192 design: building types

CHURCHES

Liturgy and Architecture, Peter Hammond.
(Barrie and Rockliff, 37s. 6d.)

The broad object of this book is to claim for church design the same standard of enquiry and collaboration which (in this country at all events) is applied to schools. The author is an Anglican clergyman who has been greatly impressed by the church building which has been done in the last 30 years or so in those Catholic dioceses of Europe and America where the Liturgical Movement has obtained a hold. The Liturgical Movement has many objectives: one of the most important from the architect's point of view is to get congregations to participate in what is done at the altar. This leads to an abandonment of the long rectangular plan bequeathed by medieval tradition and canonized by the Gothic Revival. What is to replace the long rectangle is still an open question: squares, circles, hexagons, tall shapes, ellipses—all (and many others) have been tried, but none has obtained an ascendancy. Alongside of the liturgical revival and often connected with it, is a social reassessment. This calls for the removal of historical detailing similar to that which has taken place in other building types. It also calls for the removal of what is sometimes referred to as the "cathedral complex": the desire, that is, to build an impressive monument rather than a place to house a specific (though important) social act. Behind this there lies the thought that a building influences those who use it (particularly if it has been made specially for them) and that if it enshrines a concept which is false, their mentality and behaviour risk being likewise. Peter Hammond has pointed out that church building must be the joint work of liturgists, sociologists, and architects. It may well be that this continued uncertainty about the plan arises because the sociologist is generally absent. It is probable that the functional requirements of a church are no less exacting than those of other buildings, but they are not all to be discerned solely from *a priori* reasoning: they must be tested and refined by use. This process seems not to have been carried out. This book is a cry of alarm and a much needed one. English church building has been almost universally undistinguished. Little notice has been taken of the functional revival on the Continent and most of such borrowings as have taken place have been of irrelevant decorative effects. Any architect who has a church to build is certain to receive an insufficient brief and is likely to receive one which is misleading also. If he reads this book, he will at least be able to ask some very pertinent questions.

SFB File No. (21) G

UDC No. 69.022.325

17 CONSTRUCTION: GENERAL

light cladding, 7: materials and finishes, metals

Having in his last article considered the Joint, *R. Michael Rostron turns to materials and finishing. Leaving timber, glass and other materials to later articles, he takes in turn mild steel, stainless steel, aluminium and copper, and considers for each metal and each finish the first cost, appearance, the degree of maintenance needed and any practical considerations which may affect its use for curtain walling.

The notes on properties of materials used in light cladding which constitute this and the next articles are necessarily brief, since a large quantity of data is available elsewhere. The information which has been included is that which is directly related to the choice of materials and their performance as light cladding framing and panels. Details of maintenance and appearance have also been given attention, since, as will be shown in a later article, these are among the most important criteria upon which choice of materials is made.

Mild steel

The greater part of steel used in building is mild carbon steel. It is one of the most common materials used in light cladding, for framing elements, panels and windows as well as for a multitude of fixing accessories and trim. Its virtues are its cheapness and strength, but it also has the severe drawback that it is more prone to injurious corrosion than any other building material. A less serious disadvantage is that it has a limited number of possible shapes.

Mild steel can be formed into a great variety of shapes by hot rolling or cold forming, but it cannot yet be extruded as can aluminium and bronze. Hollow shapes and the complicated sections produced by extrusion cannot, therefore, be formed in steel. It is also very much more expensive to roll new shapes in steel than to extrude new shapes in aluminium or bronze: whereas an extrusion die may cost about £50, the cost of new rolls for steel may be £1,000 or more.

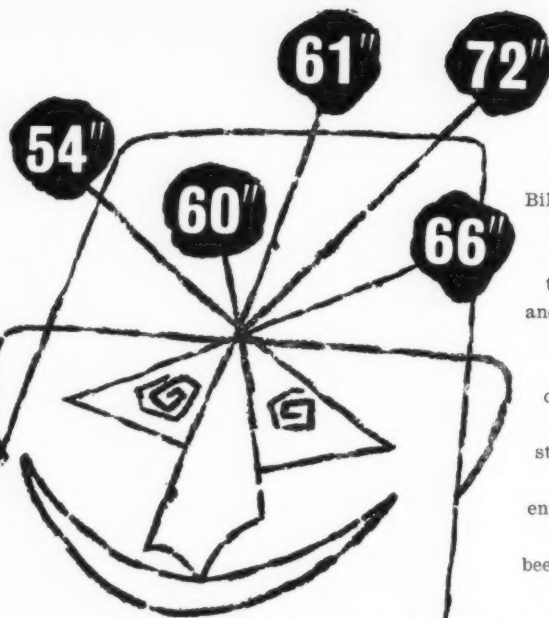
* Previous articles in the series were as follows: Heat Transmission, February 25, 1960; Stability, March 3; Condensation, March 10; Fire Resistance, March 17; Sound Insulation, March 31; The Joint, April 28.

Yes!

Specify the **BILSTON**

ATLANTA

whatever size
bath is needed



Whatever size a bathroom is to be, a Bilston Atlanta can be specified. Made in five sizes, the Atlanta has the superior Bilston finish and durability, plus design features that make it particularly safe and comfortable. No matter how large the estate, standard specification of the Bilston Atlanta ensures complete satisfaction.

The Atlanta has been selected for the Design Centre and costs no more than an ordinary bath.



- Atlanta
- Magna
- Cresta
- Marina
- Mermaid
- Bermuda



ALL THIS WITH THE ATLANTA!

Flat Bottom—the Atlanta flat bottom helps to prevent slipping . . . ensures comfort. Particularly suitable where a shower is to be fitted.

Safety—the low sides make the Atlanta safer for young and old. It can be fitted to give an overall height of only 16".

Taps can be fitted centrally, or on either corner to facilitate installation and maintenance.

Fittings—the Atlanta is supplied with or without hand grip. The feet can be adjusted to accommodate all types of trap, including the Bilston "WasteFlo" prefabricated waste trap and overflow unit.

Also available with the Bilston O.P. Hand Grip specially designed to meet the needs of the elderly or infirm.

Colours—the Bilston range includes white, or the exact colour required for any decorative scheme.



BILSTON—the bath SPECIALISTS

Bilston Foundries Ltd Bilston • Staffordshire • Illustrated literature is available on request

technical section

Unprotected steel corrodes more quickly than either cast or wrought iron, and the principal problem in the use of mild steel is the choice of a suitable protective coating. Coatings may be metallic (such as zinc or cadmium), paint and stove enamel, vitreous enamel and stone and asbestos. They are all liable to damage both before and during erection and some, such as painting and stove enamelling, require periodic renewal.

Metallic coatings can be applied to steel by electroplating (for zinc and cadmium) and by metallization, galvanizing and cementation (for zinc only). In each case a film of protective metal is applied over the steel, but only metallization, which consists of spraying heated, atomized metal, can be carried out *in situ*. Cementation (sherardizing) is limited to comparatively small components.

In rural and marine atmospheres, a 2 oz. per sq. ft. zinc coating has a life of upwards of 25 years* and provides economical protection if its appearance is acceptable. The recently developed bright zinc solutions and cadmium plating give a whiter and more-lustrous finish, but cadmium plating is more expensive. In industrial atmospheres both cadmium and zinc should be protected by paint.

Painting is the most transient method of protecting mild steel and it is not usual for protection to be given for longer than five years. Three-coat painting is essential: a rust-inhibiting primer of lead or zinc base, an intermediate coat to give added thickness and preparation for the final coat, and the finishing coat which is both decorative and protective. A point often forgotten is that metal primers are not in themselves protective; primed steelwork should not be left exposed to the weather for longer than is necessary.

Where appearance is unimportant, tar and bitumen paints are an effective and cheap protection, but their dark colour is not attractive and they are generally used for built-in steelwork, such as attachment devices. It is not possible to over-paint with a decorative coat.

Stove-enamelling is basically a paint treatment applied under ideal, factory controlled conditions. Its chief advantage is that the paint film is thoroughly dried and hardened before exposure and as a result its durability is generally superior to that of paint applied on site in the usual way, although the paint film is extremely thin. Baking is being superseded by infra-red heat treatment which means that drying out starts at the metal base and proceeds outwards to the paint surface, thus reducing defects owing to surface hardening of the film. Stove enamelling is not confined to metals; it can be applied to asbestos cement and glass and the whole process only takes a few minutes.

Whilst stove enamelling provides a tough and extremely durable finish it cannot be considered to be permanent. Like all paint treatments, maintenance will be required at intervals.

There is little doubt that the most effective protective finish to mild steel is vitreous (porcelain) enamel. Vitreous enamel on steel or aluminium, is, perhaps, the

most promising of all panel materials. It is extremely durable and long-lasting (vitreous enamelled signs, such as those of Stephens Ink, are in excellent condition after 50 years and more) provided it is not damaged by impact, and any colour can be used. Recent developments have made possible the application of vitreous enamel to structural sections of steel and aluminium as well as the extension of finishes to include a large range of full gloss, eggshell, semi-matt and full matt surfaces on both aluminium and steel sheet. Decorative embossing and corrugating and designs and lettering can be incorporated without difficulty.

The process consists of applying a thin coating of glass which is fused to the metal base. Porcelain frits are fired at temperatures up to 1,650° F for steel and 1,000° F for aluminium to give a coating 0.01 in. to 0.025 in. thick. Maximum recommended panel size is 6 ft. 6 in. × 4 ft. on 16-gauge metal, although 18-gauge may be used for smaller sizes. Minimum curve radius at flanges and corrugations is $\frac{1}{8}$ in. The cost of vitreous enamelled steel sheet is rather more than twice that of galvanized steel sheet and about 50 per cent more than coloured glass (see Table 1).

Table 1. Approximate relative costs of framing and panel materials

Framing	
Softwood	40
Hardwood	60
Galvanized steel	100
Aluminium mill finish	140
anodized	160
bright polished	310
Stainless steel	185
Bronze	300-600
Panels and Sheets	
Galvanized steel	100
Fully compressed asbestos cement	110-130
Coloured glass (stoved colour)	160
" Vitrolite "	190
Vitreous enamel on steel	220
on aluminium	350-400
Aluminium mill finish	250
colour anodized	400
" Vitrolite " glass sandwich panel	320*
Stainless steel	330-400
Bronze	400-600
Slate	1,200
Polished granite	2,700
* Average.	

Factor of 100 arbitrarily assigned for each table.

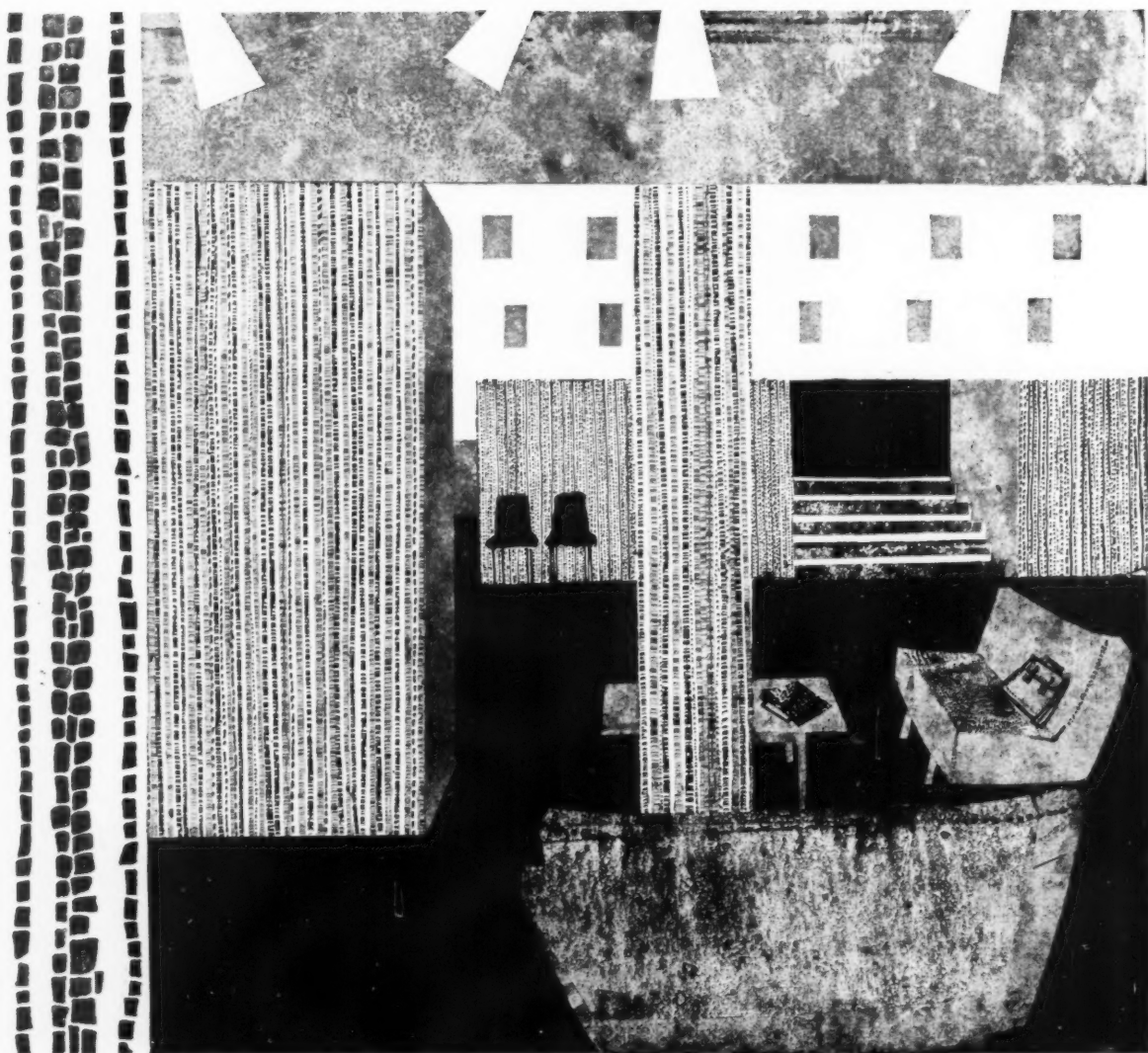
Although extremely durable when in position, vitreous enamelled steel should be handled and fixed with great care. Penetration of the coating and chipping will ultimately result in rusting and for this reason it is essential that both sides and all edges of the sheet be enamelled and all surface modelling carried out and holes drilled before enamelling. If attention is given to these points there should be no reason for disfigurement by rust.

If cleaning is necessary a damp leather or mild soap and water are all that is required but, with good detailing, rain-washing will remove most deposited dirt.

The American National Bureau of Standards have published a report* on the weathering of vitreous enamelled panels and it was found that after 15 years,

* J. C. Hudson, "The Corrosion of Iron and Steel," Chapman & Hall, London (1940), p. 38.

* D. G. Moore and W. H. Harrison, "Fifteen Years Exposure Test of Porcelain Enamels," National Bureau of Standards.



Drawing by Robert Dodd



A place for Wallpaper

THE FOLLOWING COLLECTIONS
ARE AVAILABLE FOR ARCHITECTS CONCERNED
WITH THE SPECIFICATION OR DIRECTION
OF DECORATIVE SCHEMES

PALLADIO, HAYWARD, THE ARCHITECTS BOOK

AND MAY BE SEEN AT

The Architects' Department The Wall Paper Manufacturers Limited
19/21 Mortimer Street London W 1
or King's House King Street West Manchester 3

technical section

provided initial coverage was complete and the panels were enamelled both sides, no corrosion or colour fading occurred regardless of the type of enamel applied. Panels least affected by exposure were those having a high resistance to acid attack (i.e. full gloss enamels) and those most difficult to clean were full matt types. Eggshell and semi-matt showed the same cleaning behaviour as full gloss.

Mild steel sheet may also be protected by stone, in dust or granular form, and by asbestos. Although both these methods are little used, they offer excellent protection. Stone dust or chippings are fused by a refractory process to the steel base, to produce a matt surface with a similar texture to coarse sandpaper. There is a large range of uniform and textured colours, and patterned designs can be incorporated. Since cleaning is difficult, uniform exposure to rain should be given so that even weathering takes place.

Asbestos may be applied to both steel and aluminium sheet in either felt or sprayed form. Steel should be primed or zinc coated before application of asbestos. The surface is dead matt and some patterning and modelling of the sprayed asbestos are possible before drying. A fairly limited range of colours is available. It adheres well to steel and, being absorptive, behaves in rain in a similar manner to traditional materials, absorbing water and gradually drying out. Because it is easily damaged it is inadvisable to use sprayed asbestos at low level.

Many protective finishes can be coloured. Copper plating, for instance, can be coloured with a great variety of hues; zinc can be coloured black by nickel sulphate dipping, and red and green gilding is possible. There is little experience on the weathering properties of such chemical colouring, but since lacquering is usually necessary, weathering will depend on the durability of the lacquer. It is likely to require periodic maintenance.

Stainless steel

Stainless steel is the generic name of a large number of steel alloys, but for building work the most important are the austenitic (high chromium, high nickel) and ferritic (plain chromium) steels. Plain chromium steels have less resistance to corrosion than those containing nickel. Generally, corrosion resistance and cost increase and mechanical strength decreases as the nickel content rises. The thermal expansion coefficient of austenitic steel is greater than that of mild steel and ferritic steels less. The bulk of stainless steels are the austenitic type and offer a high resistance to corrosion. Where conditions are not severe, however, ferritic steels, which are 15-20 per cent cheaper, are successfully used.

Stainless steels are supplied in sheet, bar, tube and light structural forms, but in cladding their most useful form is sheet and strip. Shaping is generally done by press, as tooling costs for rolls and dies are considerable. Fully-corrosion-resistant welds can be made and when polished are invisible.

The main drawback of stainless steel is that it costs

more per pound than most other materials. Very approximately stainless steel framing costs about 85 per cent more than galvanized steel and sheets may be three to four times as much. The architect's principal problem, therefore, is that of ensuring the utmost economy of use, which usually means using as little as possible. In relating price per pound to price per square foot it should be noted that strips and narrow sheets cost less per square foot than wide sheets and that cost does not decrease uniformly with thickness. For example, 32-gauge (0.01 in.) is only one-third the cost of 18-gauge (0.05 in.) sheet.

For framing, the main use of both stainless steel and aluminium (and, less frequently, bronze) is as facing cover strips to galvanized mild steel cores, thus limiting the demands made on the protective coating of the mild steel. Sheets should be as thin as possible compatible with flatness and rigidity.

One of the most difficult problems to be overcome when using any sheet material is the prevention of waviness. It may be due to manufacturing variations, unequal stresses set up in the sheet after erection or to thermal movement. It should, however, be realized that a perfectly flat sheet of any material is difficult to manufacture and maintain in position, but apparent waviness will increase with both reflectivity and thinness. Because thinness in stainless steel is an economic necessity and because high reflectivity is a characteristic of the material, the prevention of apparent waviness in stainless steel is of great importance, although it is not a problem confined only to this material.

The most thorough research on stainless steel cladding in general and the detection and prevention of apparent waviness in particular is contained in the Princeton University Study, "Curtain Walls of Stainless Steel," and its supplementary studies, especially No. 4*. It was found that the slopes at which waviness became apparent varied from 1.00 per cent for reflective finishes to 1.25 per cent for dull finishes and 2.00 per cent for heavily textured finishes.

The most effective way of preventing apparent waviness in sheets of stainless steel and other materials is to use textured or embossed sheets and to avoid the use of highly reflective finishes. In addition, transference of thermal and moisture movement stresses to the sheet should be avoided by flexible attachment and jointing. Bonding to a flat rigid backing will, by increasing the effective thickness of the sheet, also avoid buckling. Table 2, reproduced from the Princeton Study, gives the

Table 2. Maximum recommended distance between supports or stiffening ribs of flat unbacked stainless steel sheets (from the Princeton University Study: "Curtain Walls of Stainless Steel")

Thickness gauge	inches	pinch pass, dull polished and bright polished finishes	softened and descaled and satin finishes
20	0.038	5.6 in.	7.5 in.
22	0.031	4.7 in.	6.2 in.
24	0.025	3.7 in.	4.9 in.
26	0.019	2.9 in.	3.8 in.
28	0.016	2.4 in.	3.2 in.
30	0.013	1.6 in.	2.5 in.
32	0.010	1.5 in.	2.0 in.

* Study No. 4, "A Reflective Method for Testing Flatness and Thermal Buckling of Metal Panels," Princeton (1957).

Introducing the

Ascot De Luxe G512

the new water heater giving complete control

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

Temperature Selector

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

Gas and Water Controls

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

Ease of Fixing and Maintenance

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

Versatility

The De Luxe is designed to operate as either a single point heater with a 9in. spout, or as a small multipoint heater.

Performance

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

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

ASCOT GAS WATER HEATERS LIMITED, 255 NORTH CIRCULAR ROAD, NEASDEN, N.W.10



REGD. TRADE MARK

ASCOT

A **Radiation** Company

technical section

maximum distance between supports or stiffening ribs for flat unbacked stainless steel sheets of various thicknesses and finishes.

There are four standard finishes of stainless steel used in building:—

1. Softened and descaled (American 2D). A light grey matt finish, smooth and suitable where a non-reflective effect is desired.
2. Pinch pass (American 2B). A more-lustrous and brighter finish than softened and descaled.
3. Dull polished (American No. 4). A common finish produced by grinding and most used for architectural trim. It is bright but not highly reflective.
4. Bright polished (American No. 8). A highly reflective finish which represents the highest commercial polish available.

Dull- and bright-polished finishes are most used by architects for internal work in such places as kitchens, but they cost up to 60 per cent more than standard finishes and are unnecessary for cladding. Both standard finishes (softened and descaled and pinch pass) diffuse light and have considerable metallic lustre, but they do not reflect images. They also require periodic maintenance to retain appearance. Generally, softened and descaled finish should be used for flat sheets and pinch pass for textured and embossed sheets.

Textured, embossed and "rigidized" sheets are less susceptible to apparent distortion and waviness and, since stainless steel begins to be uneconomical when sheets thicker than 23 gauge (0.028 in.) are used, surface patterning can be both visually and economically attractive. At the same time it should be remembered that textured sheets cost about 15 per cent more than flat sheets of the same thickness. Thus 22-gauge textured will cost about the same as 20-gauge flat. In addition, ribbing will increase the area of metal required up to as much as 100 per cent. In such a case 26-gauge ribbed costs almost as much as 18-gauge flat. Despite these factors, the net result of the use of thinner sheets, textured, ribbed or embossed, is usually an over-all saving.

Stainless steel can be coloured and a recent glazing technique allows the lustre of the metal to show through. The possibilities of applying this technique to deep areas only of textured sheets suggest a wide range of coloured and textured visual effects.

Although stainless steel is corrosion resistant, it must be periodically cleaned to retain its appearance. As with vitreous enamel and glass, rain washing will remove most deposited dirt and occasional washing with soap and water is all that is required. The stainless steel used on Messrs. Bowaters' office and factory at Northfleet (architects: Farmer and Dark) is exposed to a severe coastal atmosphere and a nearby cement works and retains an excellent appearance with monthly cleaning. Cleaning is carried out at the same time as window cleaning. In a less-contaminated atmosphere, bimonthly or quarterly cleaning of the steel would seem to be acceptable.

Aluminium

The popularity of aluminium for both framing and panels is attributable to the fact that it possesses many of the virtues of stainless steel, such as its resistance to harmful corrosion, whilst comparing favourably with the cost of mild steel. Its cost for both framing and panels lies roughly midway between mild and stainless steel. It may thus be regarded as a compromise and, as with all compromises, some virtues must be sacrificed to cost. At the same time, aluminium, like bronze, can be extruded into a wide range of complex shapes which are not possible in either of the steels. Its main disadvantage is a very high coefficient of thermal expansion—about twice that of carbon steels—which requires the utmost care in detailing.

Aluminium can be wrought into sheets and cast as well as extruded and a wide range of alloys is available for each purpose. For extruded framing and other sections the heat-treatable wrought alloys are used which contain magnesium and silicon. The most common alloy used for this purpose is H9 (solution treated) although H9-WP (fully heat treated) is also used. Occasional use is made of H30 which also contains manganese. The maximum economical shape for extrusion of aluminium is that contained within an 8-in. circumscribing circle in lengths up to 36 ft. For greatest economy 16 ft. is a recommended maximum length.

Sheet aluminium is made from the non-heat-treatable wrought alloys, usually N3 (aluminium/manganese) and occasionally N4 (aluminium/magnesium) in sheets up to 20 ft. long and up to 7 ft. 6 in. wide. Casting alloys LM5 and LM18 can be cast to a minimum thickness of $\frac{1}{8}$ to $\frac{1}{4}$ in., depending on size. Maximum economical size of cast plates is 4 ft. by 5 ft., but in extreme cases 6 ft. by 10 ft. is possible.

The application of extruded aluminium for window and framing sections is common enough to require no elucidation and panels of plain and textured aluminium sheet are gaining popularity. A form which has received little exploitation in this country, possibly because of cost, is the use of extruded sections for column and beam covers and panels. One of the few examples of this use in England, offices for the Northern Aluminium Company at Rogerstone (architect, Frank Scarlett), is shown in Fig. 1. In America interlocking aluminium shingles and aluminium clapboards are extensively used. The clapboards are of 22-s.w.g. N3 alloy in lengths up to 24 ft.

A wide variety of mechanical finishes may be given to aluminium varying from the usual mill finish through scratch and emery brushing and patterning produced by shot blasting and rolling to the very expensive polished finishes.

Most aluminium alloys can be coloured, by dyeing, enamelling, lacquering, plating or painting and designs, lettering and even photographs can be incorporated in the finish. Their durability varies widely and most require a protective anodic coating. The widest and most stable range of colours is the enamelled and painted finishes but painting requires a surface prepared

the bricks for the job **SANDLIME BRICKS**

FOOTINGS

Sandlime Bricks are available in Special Purpose and other load bearing grades to suit your job; of guaranteed strength and thoroughly durable.

FACINGS

Sandlime Bricks of facing quality (Class A of B.S. 187 - 1955) give maximum light reflection, are self-cleaning when exposed to rain, and are durable under the most severe conditions.

FEATURES

Sandlime Bricks give new scope and freedom. In addition to the "natural" whites, a wide range of permanent colours is available.

**SANDLIME BRICKS
FOR INDUSTRIAL, DOMESTIC
AND AGRICULTURAL BUILDING**



Buy your bricks from members of
The Sandlime Brick Manufacturers Assoc. Ltd.,
73/78 High Holborn, London, W.C.1.
Tel: HOL 5434.
A list of members and technical
literature can be obtained
from the Secretary.

*The Sandlime Brick Industry is progressive and utilises
continuous research carried out both by individual
manufacturers and by the Sandlime Brick
Division of the Chalk Lime and Allied
Industries Research Association.*

The Brandon Estate at Southwark, where FF Joints have been used to complete the plumbing installation for this 18-storey block of L.C.C. flats.



The **FF** *Joint*

accepted by over 100 Local Authorities
The established development
for all plumbing systems

Literature is available showing the FF Joint's many
applications in all types of plumbing layouts for
multi-storey flats and two-storey houses including
the Single Stack System.

The FF Joint is a Federated Foundries product.

Please write direct to the Technical
Advisory Department at any of the
following suppliers, and order through
your normal trade channels:

Thomas Allan & Sons Ltd., Thornaby-on-Tees.
Grange-Camelon Iron Co. Ltd., Falkirk.
Cameron & Robertson Ltd., Kirkintilloch, Glasgow.
David King & Sons Ltd., Skipton, Yorks.
Walter Macfarlane & Co. Ltd., Glasgow, N.2.
Southern Foundries Ltd., Waddon, Croydon.

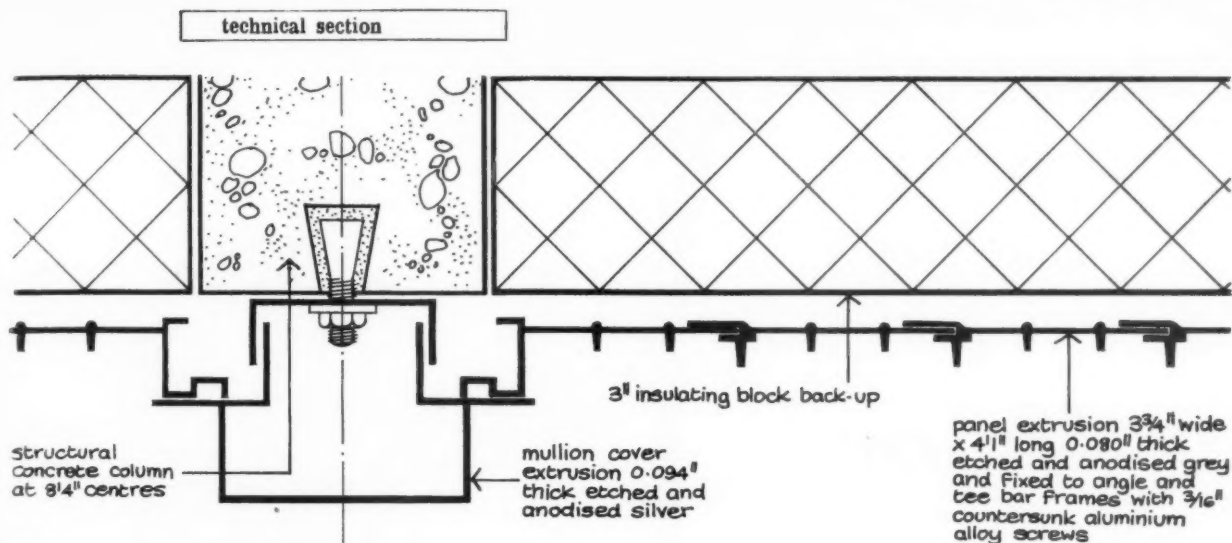


Fig. 1. Extruded aluminium interlocking panels (Architect: Frank Scarlett)

by anodizing or etching* and periodic repainting. Vitreous enamelled aluminium behaves in a similar way to vitreous enamelled steel with the added advantage that rusting is impossible. For this reason it may be drilled and cut after enamelling without fear of corrosion staining, and is, in many ways, an ideal panel material. Anodizing is an electrolytic process which increases the thickness and effectiveness of the hard natural oxide coating to produce a more even coating and a greater resistance to corrosion. Sulphuric acid anodizing is most common and produces a clear film with a matt finish if the metal is etched before treatment. The less-common chromic acid anodizing gives a light grey opaque film.

Anodizing tends to reveal surface irregularities and blemishes rather than conceal them. It costs about 15 per cent more than mill finish and most of this extra cost is for preparation of the surface to remove blemishes and scratches.

After the alloy is removed from the anodizing bath it is slightly porous and able to absorb dye if immersed in a dyeing bath before sealing. Only a very limited range of colours, including black, is available, since for assured light-fastness only inorganic dyes can be used. Reports have been made of satisfactory and non-fading performance for 15 years and more with inorganic dyes, but colours are confined to light gold to brown. Organic dyes, which include reds and blues, tend to fade after about five years.

Because aluminium is a rather soft material, rough handling must be avoided and it is advisable to apply a temporary protective coating. This will also protect it against mortar splashings. Suitable temporary protectives are generally of the strippable lacquer type with a cellulose or vinyl resin base. Alternatively, a permanent clear lacquer such as methacrylate may be used.

The weathering of aluminium is not yet fully understood and there exist many misconceptions about the pro-

tection afforded by anodizing. Exposure to air of untreated aluminium results in the formation of a thin continuous natural oxide film which is self-healing and (unlike rust) is neither progressive nor harmful. In clean rural atmospheres the surface will remain relatively bright for about five years with rain-washing but without manual cleaning. Weathering at first causes local breakdown in the oxide coating at isolated spots, followed by shallow pitting and the surface formation of white to grey corrosion products. Eventually the whole surface becomes roughened and assumes a dull appearance not unlike weathered stone.

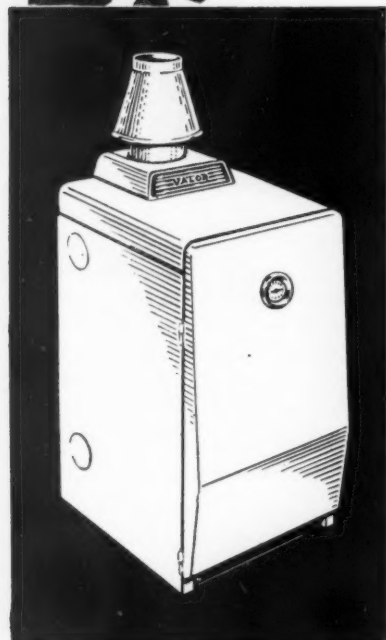
In unpolluted atmospheres aluminium will retain this clean, not unattractive but rather drab appearance indefinitely. The weathering is mainly superficial and does not seriously affect the strength of the component. In marine and industrial atmospheres which are not alkaline the same effect takes place rather more quickly. Its greatest drawback is that the rough surface collects dirt; in industrial and urban areas it becomes black with grime, especially and more rapidly on horizontal surfaces, unless frequent cleaning is carried out.

In rural and, to a lesser extent, marine atmospheres, anodized surfaces, especially if further protected by lacquer, are virtually unaffected and should last almost indefinitely, even without regular maintenance. Industrial and combined industrial and marine atmospheres, however, cause rapid deterioration of the anodic film and, unless cleaned, the surface becomes spotted, grimed and encrusted within five years and is virtually indistinguishable from untreated surfaces. There is little value in anodizing for these conditions, unless regular cleaning is possible.

In dirty atmospheres regular cleaning is necessary to maintain good appearance of both anodized and un-anodized aluminium. Anodized surfaces are slightly easier to keep clean, provided cleaning is regularly carried out, but it is doubted whether this is worth an additional 15 per cent outlay. Neglected anodized surfaces are considerably more difficult to restore than

* See A.D.A. Information Bulletin No. 20, "Painting Practice for Aluminium."

Just one of the
reasons why
more people
are installing
Valor
oil-fired boilers



Valor offers all these distinct benefits

- 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
- Oil Control Valve incorporates an anti-flooding safety device
- 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

MODEL SA 45 has an output of 45,000 B.T.U.'s constant loading suitable for up to nine radiators (220 sq. ft. surface) and 30 gallons of hot water. Maximum fuel consumption, 3 pints per hour.

MODEL SA 35 has an output of 30,000 B.T.U.'s constant loading suitable for up to six 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 two to three radiators (50 sq. ft. surface) and 30 gallons of hot water. Maximum fuel consumption, 1 pint per hour.

For further details please contact :

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

technical section

weathered natural finishes, as the entire anodic film has to be removed.

The frequency of cleaning will vary according to conditions. In the most severe atmospheres either washing down at the same time that windows are cleaned or cleaning every three months will be necessary. In this connection it should be noted that washing window frames at the same time as windows will approximately double the cost of window cleaning. Frequency of cleaning will also depend on the amount of rain-washing to which the metal is subjected. Aluminium protected by overhangs and canopies will roughen and blacken more quickly than rain-washed aluminium.

Regular washing should be done with clean water or with a warm soap solution followed by rinsing with clean water. Infrequent cleaning will require *mild* alkaline cleaners and even steel wool well lubricated with soap solution may be necessary to remove firmly adherent deposits, but great care must be taken to avoid scratching the soft metal or anodic coating. Emery cloth, sandpaper and strong detergents should never be used. Periodic waxing of the cleaned surface with a good quality liquid wax will reduce the frequency of cleaning.

Although aluminium has a high resistance to chemical corrosion in normal conditions it is liable to attack by alkalis and should therefore be protected from damp mortar and plaster. Although electrolytic corrosion is not heavy when used with steel in normal atmospheres it is a good policy to use a protective paint when aluminium is in contact with other materials.

Aluminium alloys are an extremely versatile range of materials which can give excellent service if their disadvantages are recognized. These are mostly connected with maintenance and long-term appearance, and the widespread belief that aluminium is a maintenance-free material is wholly erroneous. With regular cleaning it will maintain a high-quality appearance indefinitely, but with neglect it will, in poor atmospheres, quickly become dull and unattractive. In good atmospheres anodizing is an effective and worth-while protection but it bears repetition that in polluted industrial and urban conditions anodizing is NOT recommended. For this reason the use of large, flat, unpainted aluminium panels in cities may prove unacceptable and require painting. In such conditions, vitreous enamelled aluminium is a highly recommended alternative, or untreated sheets may be textured or ribbed to provide an interest which the uncoloured state of the flat sheet cannot give.

Copper and copper alloys

Copper has had only a limited use as cladding. Professor J. S. Allen has used it to clad the load-bearing brickwork of Durham University Lecture Theatre and Aalto used copper plate as column facings in the Institute of Engineers and Technicians at Helsinki. Its green patina, which can be chemically or electrolytically formed, is highly resistant to corrosion, but water or condensation run-off from copper causes staining of most materials and corrosion of aluminium. Its strength is not very great and copper sheet and plate require adequate support.

Copper alloys such as brass and bronze possess much more mechanical strength than the pure metal, but they are infrequently used for cladding. Aalto has used both plain and corrugated brass for cladding but in practice the distinction between brass and bronze is not well defined. For example, "bronze" windows and the "bronze" cladding panels of the Seagram building are made of Muntz metal which is a 60/40 brass (60 per cent copper, 40 per cent zinc). The convention is, however, well established, so the quotation marks will be dropped and the alloy will be referred to as bronze.

Bronze is a luxury few can afford, as it costs from three to five times as much as steel. Its use in exposed positions in ships in conditions which encourage every possible form of corrosion is an indication that long-term costs may not be exorbitantly high. Its use as cladding has been confined to the Seagram building and Wright's Price Tower, as well as a few uses by Aalto.

Bronze can be extruded, though not economically, in hollow sections. The maximum economical shape for extrusion is that contained within a 6 in. circumscribing circle, although larger sections are possible at inflated cost. Seagram's 6 in. \times 4½ in. I-beams are the largest sections yet extruded in bronze. Bronze weathers to a dark brown-black with a slight green patina. The surface remains smooth and clean under normal conditions with adequate rain-washing.

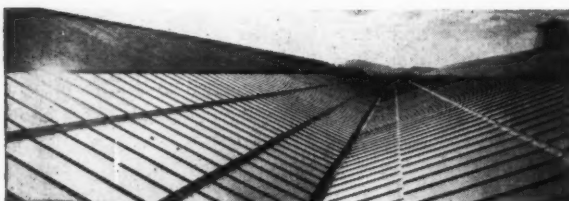
Despite its very high cost there may be a few affluent clients who are prepared, like Seagram, to pay extra for the appearance, weathering qualities and prestige value of bronze cladding. Even so, its use is likely to be very limited and not the sort of construction which architects are often called on to produce. It may be that future use of the copper alloys will be confined to thin gauge sheets bonded to a rigid backing. Used in this way cost may be comparable with aluminium and stainless steel.

what's new about that.....?



Weatherproofing with twin wings . . . oil impregnation? My family had it ages ago . . . Friend goose is right, but Hills turned the principle to practical use 26 years ago. Introduced their patent lead-clothed roof glazing bar with glass bedded on oiled asbestos cord, and twin lead wings bedded down on to the glass. Equally efficient is Hills 'Hilumilux' aluminium alloy bar. Reversible, this is particularly suitable for vertical glazing on high buildings, where it facilitates inside glazing.

More information? Please contact our Technical Department.



The Lilleshall Co. Ltd., Oakengates, Shropshire.



Spondon Power Station.
Architects: Cecil Howitt and Partners, Nottingham.
*In collaboration with the Midlands Project Group of
The Central Electricity Generating Board.*

HILLS (WEST BROMWICH) LIMITED



ALBION ROAD, WEST BROMWICH, STAFFS.
Telephone: West Bromwich 1811 (15 lines).

London: CHAPONE PLACE, DEAN STREET, W.1.
Telephone: GERard 0526, 9.

Branches at: Manchester, Bristol, Newcastle-on-Tyne, Glasgow.

PRIMARY SCHOOL

at ABOYNE LODGE, ST. ALBANS,
HERTS
designed by THE LATE C. H. ASLIN,
for HERTS COUNTY COUNCIL
job architect DON BARON
quantity surveyors GARDINER AND THEOBALD
general contractor Y. J. LOVELL

SIB File No.

(97)

UDC No.

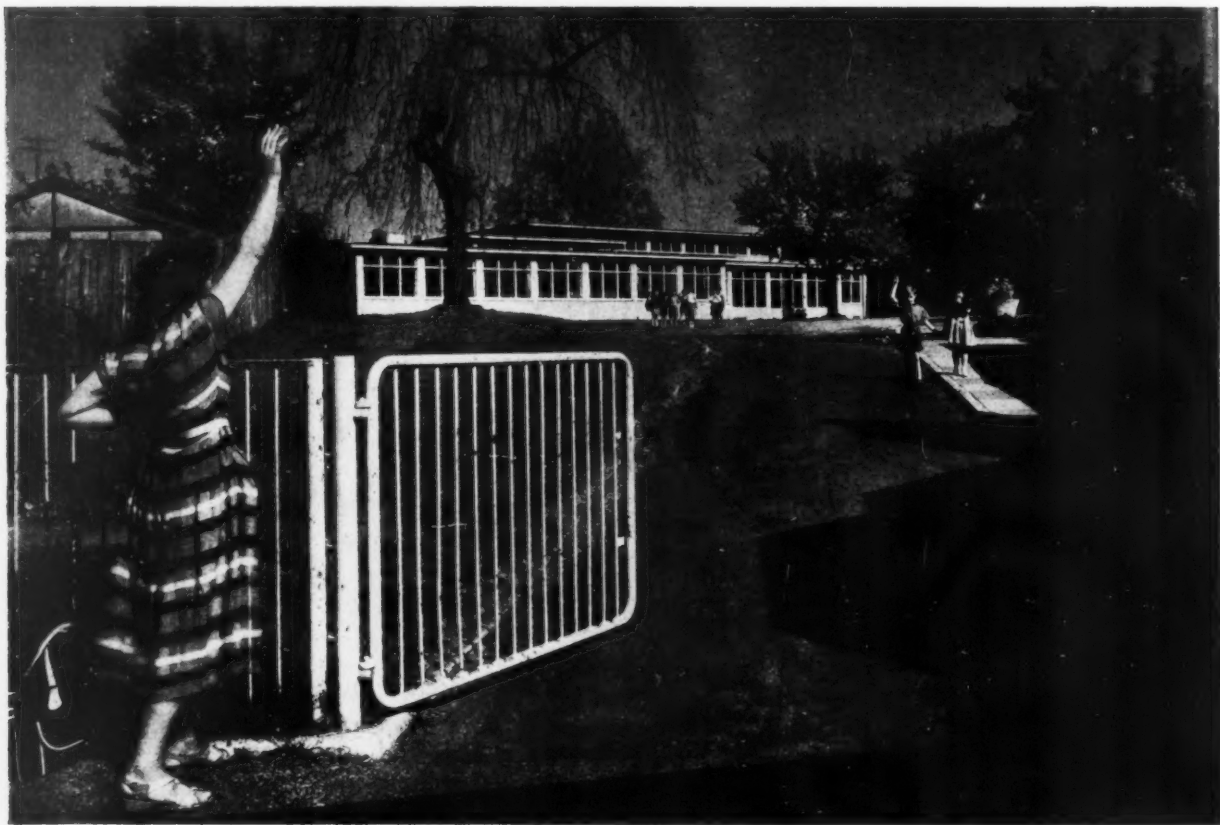
727.1

No buildings since the war have made a bigger impact on architecture in Britain than the very early Hertfordshire Primary Schools (discussed in a series of articles, A.J., May 12, 1955, May 26, '55, August 11, '55, December 22, '55, April 19, '56, and August 2, '56). So this week we revisit one of these, the six-class Infants School at Aboyne Lodge, St. Albans, which has now been in occupation for ten years.

The school seen from the orchard.



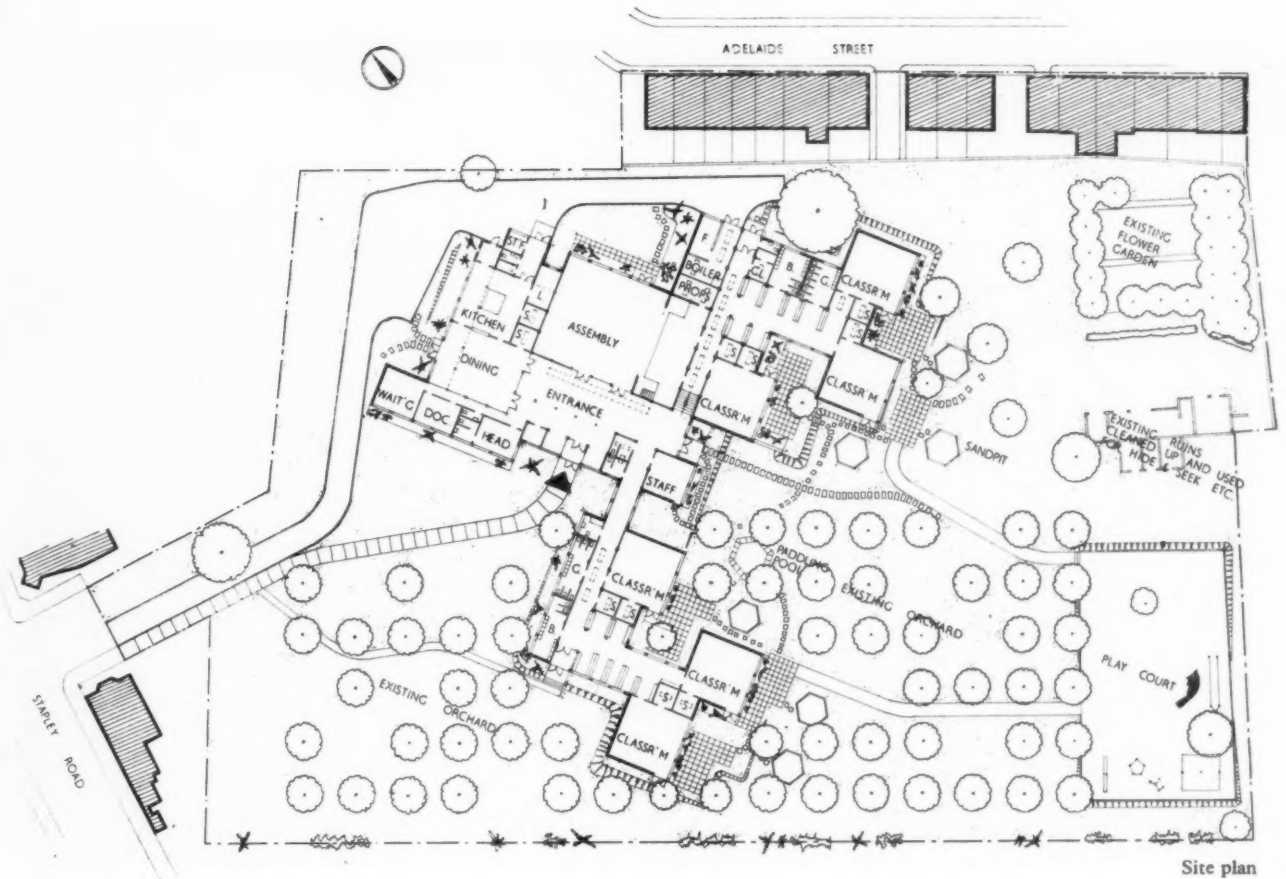
building revisited



"from the entrance gates . . . an assorted repetition of pre-fabricated bits."

"a miscellany of buildings strung across the landscape."





No discussion of post-war architecture in this country gets very far without a mention being made of the early Herts schools. They are cited time and again; to speak of them is a well-worn cliché. But despite all this lip service their true significance is now largely forgotten. No longer are remembered the taste and smell of the revolution they represented—the first great achievement of prefabrication—a system which for the first time offered real flexibility of planning to the architect—an entirely new brief for school design—new thinking in terms of furniture, the use of colour, landscaping, heating—a whole list of remarkable achievements.

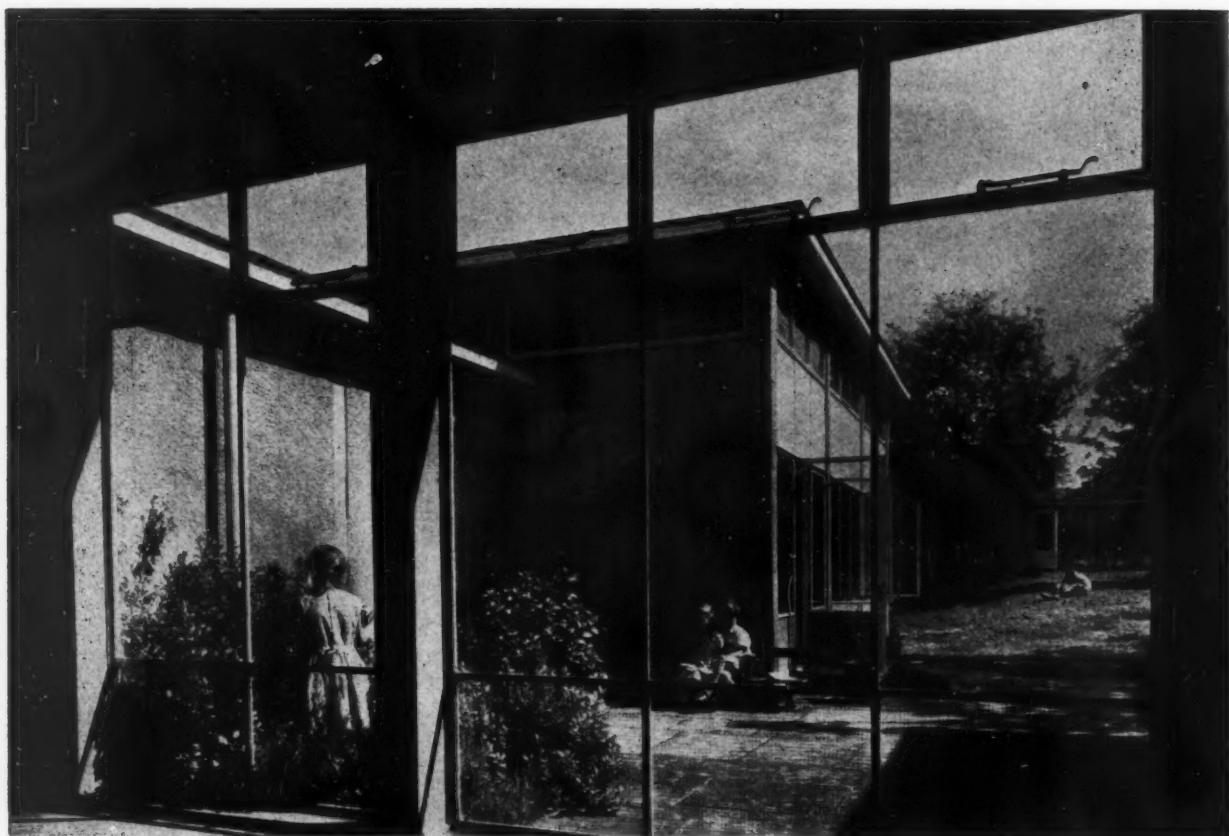
Forgotten, too, perhaps completely, is all the reactionary criticism that greeted their appearance, claiming that they were impermanent and would soon fall down, or at least go very tatty, that quite frankly they were just non-architecture, that the fibrous plaster would not stand up to the job, that to omit dados was asking for trouble, that landscaping was chi-chi and would soon be trampled underfoot by the children, through a formidable range of gloom and disparagement.

Now that there are so many structural systems available to the schools architect it becomes hard for him even to have a faint recollection of the characteristics of the first and original one. Yet to revisit and re-evaluate one of these buildings is highly productive, because they are a yardstick which can be used to measure the advances which have since been made in school prefabrication, and equally to observe the ideas which have since been ignored or forgotten. At the time when this building was designed, the Herts

programme was almost exclusively concerned with primary schools, all carried out in the 8 ft. 3 in. system. Although it is now almost unrecognizable in comparison with its original form, the County has, as a matter of policy, continued each year to use the 8 ft. 3 in. system for at least a portion of their programme, the system undergoing a continual process of refinement and development. This has gone side by side with the use of 3 ft. 4 in., and the large, current programme of F.E. buildings in 2 ft. 8 in., the first of which are about completed. The architects feel strongly that the 8 ft. 3 in. grid fully retains its validity for school purposes, particularly for the relatively simple planning of primary schools. They believe also that there are a number of advantages in their current policy of having the two closely interrelated systems of 8 ft. 3 in. and 2 ft. 8 in. running together side by side. The overriding impression on visiting Aboyne School is that the school retains nearly all the freshness, vigour and directness that gave the original impact to the Herts programme. And the vitality of this highly civilized approach both to education and to design is being perpetuated in the day to day life of the school.

The school, which has now been in use for ten years, is sited in the old part of St. Albans in an established orchard. It is almost entirely hemmed in with existing buildings and the only view the public have of it is from the entrance gates. From here the building, which is at a higher level, does not seem exactly inspiring, and appears little more than an assorted repetition of prefabricated bits, in particular the bulk of the hall at the back almost disappearing and the effect

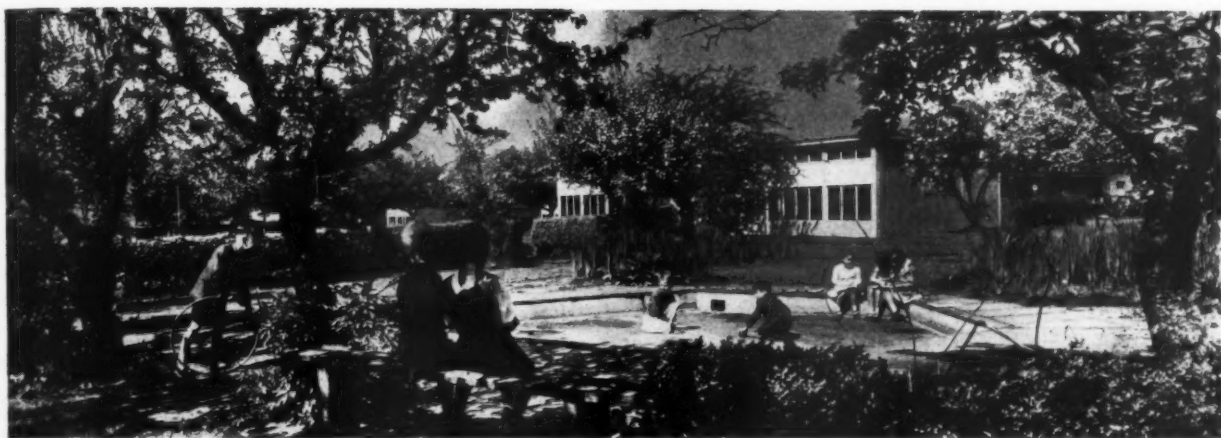
building revisited



"Each class is very definitely its own little private world."

"one minor lapse."





"a delightful play area."



"with Notts schools stanchions are deliberately hidden behind the windows and a variety of claddings."



"Looking frankly odd at Amersham."

created, when visiting the school, is of a not very auspicious beginning or a convincing demonstration of this school's building programme to any member of the public casually passing by.

Equally from the opposite end of the site, looking back at the building through the fruit trees, one could reiterate the criticism already made with regard to many of these schools, and their natural successors produced by the MOE development team that from a distance one can see nothing more than a miscellany of buildings strung across the landscape. But as soon as you move closer its quality begins to be revealed. Firstly, and most strikingly, the idea of treating each classroom as a separate little pavilion becomes apparent, every one carefully sited in relation to the existing levels and planting, staggered on plan to provide individual outdoor teaching spaces, and linked together with circulation and cloakrooms with a lower roof line. Each class is thus very definitely its own little private world, both internally and externally, with small, intimate courtyards opening out onto the greensward beyond. Dominant externally also is the now matured and beautifully maintained planting round the building which includes not only shrubs and one or two additional new trees, but also a considerable amount of herbaceous and biennial plants and bulbs. Much of this success is quite evidently due to the high quality of the original landscape design, and to careful attention to detail in the site layout to ease the job of maintenance, such as putting the paving slabs slightly below the level of adjacent grass, and the narrow strip of gravel round the building,

both to facilitate mowing. Only one minor lapse in this respect occurs, with some steps at a change of level.

In a wider sense, much of the charm of the school results from the basic decision in laying out the site to keep the tarmac play areas well away from the building, so that on the classroom sides this semi-naturalistic setting of grass and trees could be consistently preserved. On the corner of the site, also set away from the building, is a paddling pool. This does not appear to have been used for some time, there being signs that its concrete floor has cracked. Nevertheless, by clumps of planting and hedging, a delightful play area has been created, slightly detached from the rest of the site, and very much in scale with the infant world.

Generally, the building has weathered externally extremely well, there being an almost complete absence of streaking or staining of the concrete cladding, which although of not such a high quality finish as some of the blocks now available, nevertheless retains a quite pleasant, slightly rough texture. This texture is emphasised by the smooth panels facing the stanchions. One might have imagined that on going back to this very early prefabricated system it would be bound to appear slightly clumsy and banal in comparison with some of the more recent ones, such as CLASP or Intergrid. But, for this school at least, this is not the case. This essay in 8 ft. 3 in. design has a directness and simplicity which still manages to evoke the freshness, vigour and excitement of the early work of the Herts group. This has somehow never quite been recaptured since in precisely the same way. One suspects that at least part of the reason is that the fresh

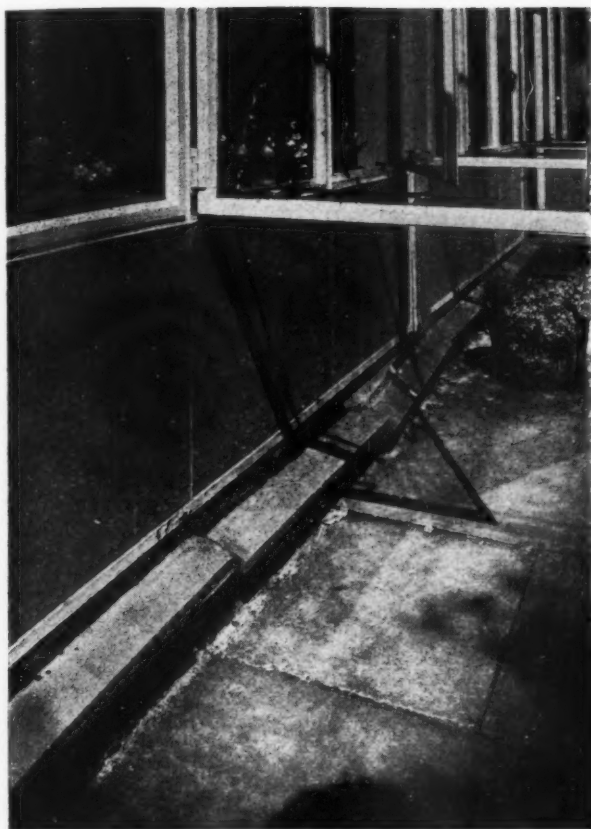
building revisited



"The first impression at the main entrance is of spaciousness."

"the principle of grouping the central spaces together visually."





"... a few plinth blocks have come adrift."



"a forgotten age of opulence."

thinking that lay behind the early Herts schools has never since been matched, so that more recent systems seem distinctly mannered. Comparing it with CLASP (A.J., 30.4.59), for instance, the stanchions here are straightforwardly expressed externally, whereas in the Notts schools they are deliberately hidden behind the windows and a variety of external claddings. Another example is the overhanging eaves, which act here as an eyebrow over the windows and seem a natural element of the design. Somehow or other this feature has been kept as a sort of trade mark of Hertfordshire architects and been applied in some cases rather unhappily, looking frankly odd on, say, multi-storey CLASP buildings, or on the MOE school at Amersham (A.J., 1.7.57). One can think, also, of all the trick elevations which have been produced on schools since this building was designed, 8 ft. 3 in. buildings struggling to look like 3 ft. 4 in., 3 ft. 4 in. to look like 8 ft. 3 in., or of indifferent chequerboard patent glazing, attempting but failing to achieve a Miesian quality. The vitality of this school makes such things look, to say the least of it, rather jaded.

There have been one or two very minor failures in the external cladding. Some of the pointing between the vertical cladding blocks has fallen out, and the bitumen paint on the plinth has peeled, and on the front of one of the classrooms a few of the plinth blocks have come adrift, presumably by frost action. But apart from this the building is all trim and in excellent condition, having been repainted and maintained once since occupation, at the end of the standard

period of five years normal in Hertfordshire.

The first impression at the main entrance is of spaciousness. The entrance hall in most present-day primary schools is reduced to little more than a large draughty lobby, but in this case there is some 1,500 sq. ft. The effect is heightened by having glazed screens to the assembly hall and the dining space, the principle of grouping the central spaces together visually to form one big continuous entity (still currently being exploited) having already been established in the early days of the Herts programme. This spaciousness continues through the 8 ft. wide corridors, which seem to belong, because of their generosity, to a forgotten age of opulence.

The classrooms are something of a contrast: by present-day standards they seem cramped. Better understanding of the educational requirement for primary classrooms, that for much of the time the children are not receiving formal instruction but are split up into small groups doing a wide variety of things, needs more space than is provided by these 580 sq. ft. rooms. The outdoor spaces are fully used at Aboyne for such purposes in fine weather, but when the whole class is in the room the effect is somewhat cramped, there being no bays out of the main teaching area in sympathy with this diversity of activity.

Although the school has only been partially repainted internally, and not received any significant maintenance in ten years of occupation, the general appearance of the internal finishes is excellent, particularly the paintwork on the walls. The visitor has the strong impression that the children take pride in their building, and this is greatly to the credit of the teaching

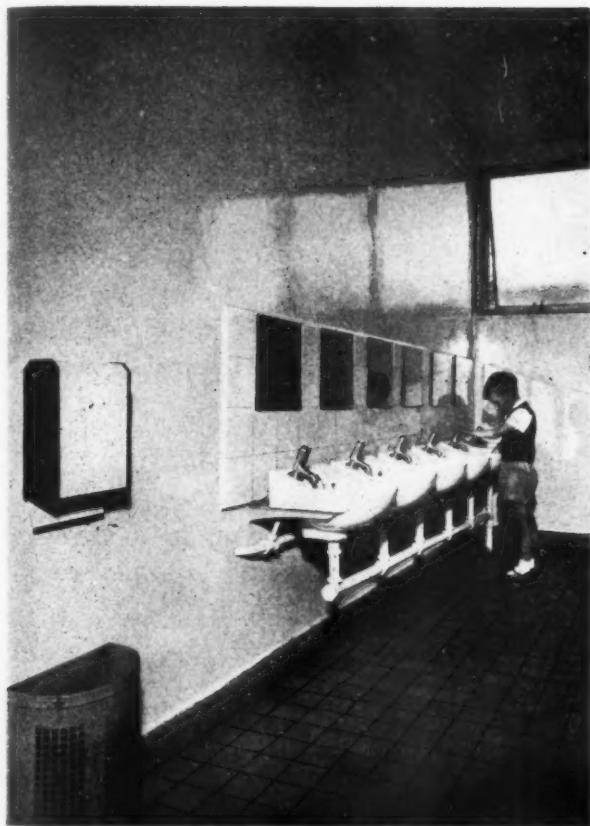
building revisited



"classrooms seem cramped."

"outdoor spaces fully used . . . for painting, shop, sums and library."

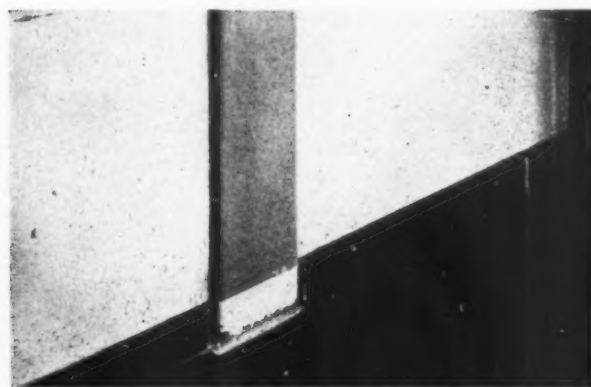




"This cleanliness runs consistently through the whole building."



"The only sign of damage to paintwork is on the metal door frames."



"the fibrous plaster skirting to a column has become detached."

staff and caretaker. In the experience of the County, the very high standard achieved in this case is always dependent in the final analysis upon the combined efforts of head and caretaker. Floor finishes are in excellent condition, largely due to the insistence of the headmistress that all children should change their shoes on entering the school, a good rule, since the floor is an important working surface for small children. This cleanliness runs consistently through the whole building, as for instance, in the boys' lavatory. The only damage done to the paintwork here is a few scratches on the main waste pipe: if this had been set back against the wall, it would not have been possible to stand on it and this damage would not have occurred. One of the few lapses is the waste bins for used paper towels, obviously an afterthought. The only sign of damage to paintwork is where the metal door frames have been chipped, presumably when furniture was being moved.

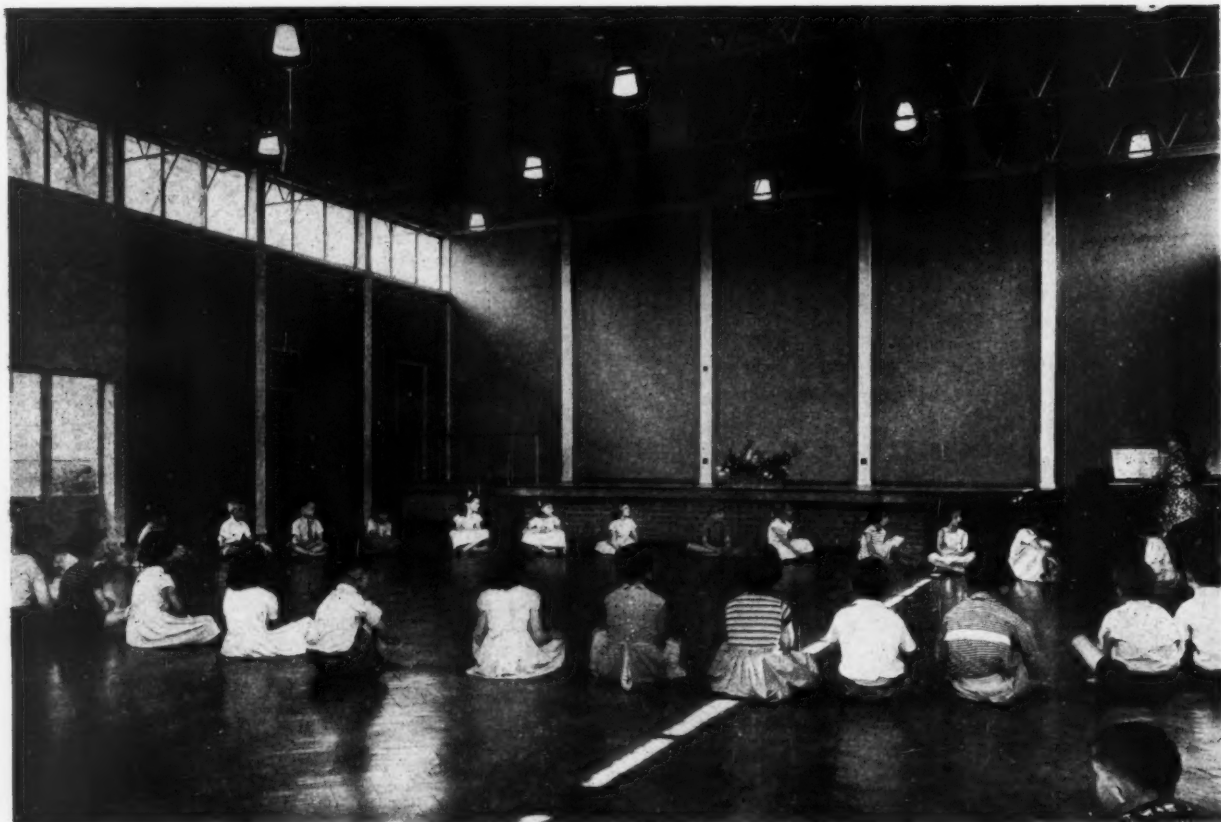
The fibrous plaster wall linings and casings to the stanchions have suffered virtually no damage. In only one case has it given way under impact, on the casing to a column in a corridor, and in a classroom the fibrous plaster skirting to a column has become detached. There is a slight amount of pattern staining on the inside of external walls in one or two places, for instance on the wall at the back of the stage in the assembly hall. In addition there is generally a line of staining over the exposed heating pipes threaded through the beams. These pipes are without doubt the most banal feature of these early schools. This method was, of course, a half-way stage in getting rid of the expensive floor duct, the next development being to suspend the ceiling below the beams,

which became of uniform depth, so as to form a continuous service duct, as at Wokingham, which has remained a constant feature in all subsequent school structural systems.

The general feeling of the interior, with every column expressed by its casing, echoes that of the exterior. The resultant division of the walls into a series of rectangles was, of course, the framework for the experiments with colour in the early Herts schools, which were to change the whole profession's attitude to this medium of design, and to the development of the Archrome and B.S. 2660 colour ranges, specifically for architectural use. The colouring, at least in this school, no longer seems to have the freshness and impact that it originally possessed, probably because one is now so familiar with this technique of panels of strong colour. It remains, however, perfectly in key with its setting, making a valuable contribution to the total environment. In most current systems (again, such as CLASP or Intergrid) the stanchions are covered over and do not appear. This obviously has advantages in the arrangement of pin-up and other elements on the internal elevations. Nevertheless, something has been lost in doing this, in comparison with the early Herts system, which had such a strong consistency internally and externally, created by this clearly expressed structure. Just as with the exterior, to hide the stanchions seems slightly mannered and results in a certain loss of vitality in comparison with these earlier schools.

To balance this architectural reappraisal, comments from the client and also from the headmistress have been obtained. The headmistress, who has held the post since the school

building revisited



"... a slight amount of pattern staining."



"... generally a line of staining over exposed heating pipes."



"a certain loss of vitality."

opened, is evidently proud of her building and well satisfied with the way in which she can operate it. Under close questioning she had only one criticism to offer—that the provision of accommodation for occasional use, especially for medical inspections, is excessive.

The question of maintenance costs of these schools has been studied recently by BRS in conjunction with the Herts C.C., and compared with equivalent pre-war buildings. The results of this survey will be published shortly giving actual figures. In the meantime certain broad conclusions have emerged. Inspection has shown that the schools are generally wearing extremely well. Two minor sources of trouble have been that some of the substitute materials for timber used when it was still scarce have a considerable nuisance value and that a low specification for roof finishes on some of the earlier schools was a mistake. Cost of replacement from both these causes has not, however, been exceptionally high. Normally repaint-

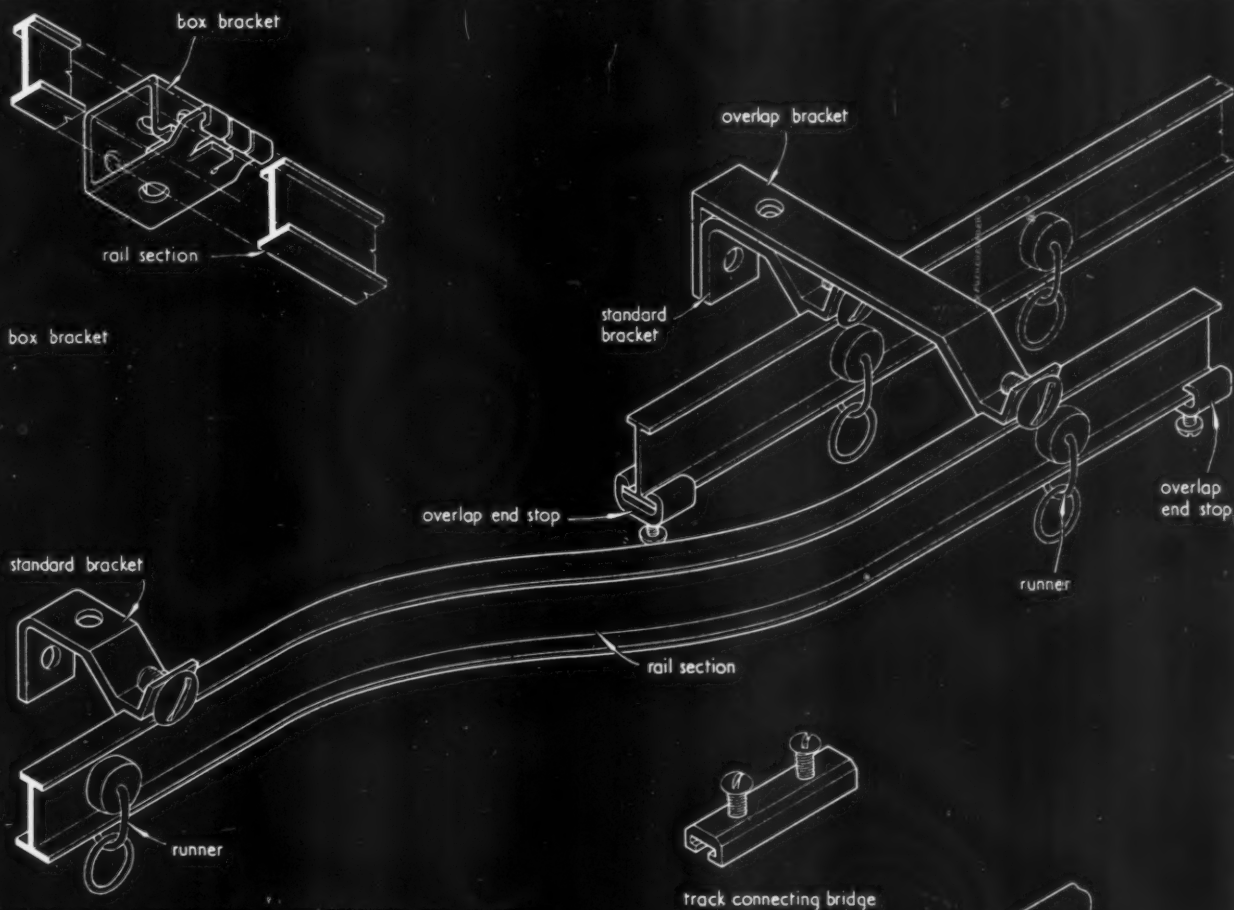
ing is carried out once every five years externally, and once every seven years internally, although the latter is sometimes extended if the existing paintwork is in good condition, as has been the case at Aboyne Lodge. So far the cost of repainting has been less for these schools than for pre-war ones, as have other forms of maintenance, with the exception of heating and ventilation equipment. In the case of the latter, it should be noted that in general the post-war schools, with warm air heaters fed usually from oil-fired boilers, achieve lower running costs than the pre-war ones, and that this saving is greater than the additional maintenance costs.

One final and encouraging conclusion of the Survey is that there is at present no sign of any "buildup" of maintenance costs with time in the case of these schools, such as has occurred with the pre-war buildings. As a result the general picture is that these early post-war Herts schools are costing less to maintain than comparable pre-war ones in the county.

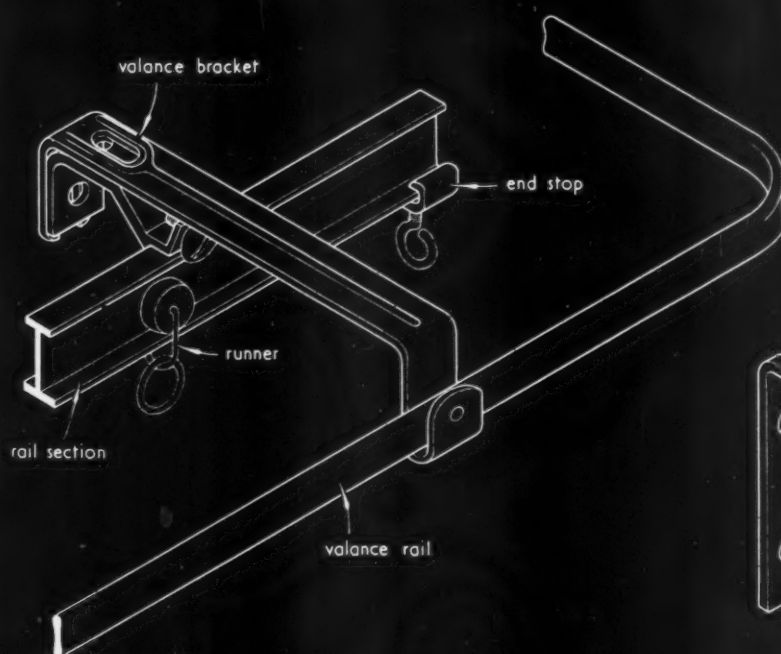
FITTINGS | CURTAIN FITTINGS

44.D2

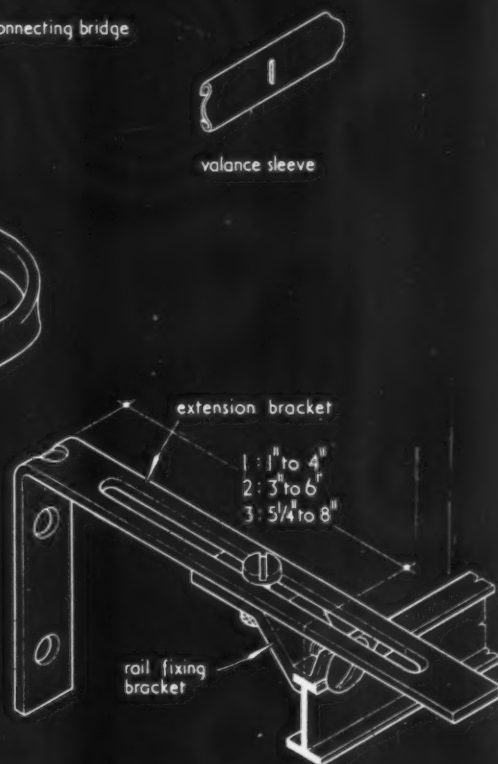
The Architects' Journal Library of Information Sheets 765. Editor: Cotterell Butler, A.R.I.B.A.



ISOMETRIC VIEW SHOWING TREATMENT FOR OVERLAP.



ISOMETRIC VIEW OF VALANCE RAIL ASSEMBLY.



SKETCH OF TRACK EXTENSION BRACKET.

44.D2 · RUFFLETTE · B/L CURTAIN TRACK

This Sheet describes the Rufflette Brand B/L curtain track. The drawing at the top of the face illustrates the main components and the lower ones show a valance rail assembly and extension bracket.

Material and Design

The main components are available in solid brass or aluminium alloy. The design is such that the curtain rail can be taken down intact by releasing the front screws, leaving the brackets in position. The track can be fitted as a straight length or it can be in two or more pieces with overlaps. A valance rail is available with suitable brackets and the curtains can be fitted for cord-operation if required. The track can be fixed to the face of the lintel or under it.

Components

Track section: This is solid brass or aluminium and is supplied in lengths up to 14 ft. 0 in. Brass track is also available in 210-ft. coils.

Fixing brackets: Designed for back or top fixing, the brackets hold the track section by means of a locking screw at the front.

Box bracket: An alternative type of fixing bracket, this is also made for back or top fixing.

Overlap bracket: This is for use where lengths of track are overlapped at the centre and fits over the standard fixing bracket.

Extension bracket: This is used where the track is required to be at a distance from the window.

End stop: The end stop, which is fitted with a screw eye, fits on the end of the track and forms an anchorage for the end of the curtain.

Overlap end stop: This fits on the end of the track at the overlap to prevent the curtain runners from leaving the track at the overlap.

Runners: These are available in nickel-plated brass or nylon.

Valance fittings: A valance rail is available with special brackets to fix over the standard fixing brackets.

Connectors: Two lengths of track can be joined by a connecting bridge: the top flanges are pushed into the bridge and locked by screws. A sleeve for connecting lengths of valance rail is also available.

Cord control sets: Fittings are available for cord-operation of curtains for straight runs or bay windows.

Fixing

The track section may be easily cut to size with a hacksaw and can be bent to shape at overlaps and corners of bay windows. Where one overlap is required the length of track necessary is the width of the window plus 6 in. The length of valance rail required is the width of the curtain track as fixed, plus 6 in. Fixing brackets should be provided at each end and at approximately 1 ft. 3 in. centres intermediately, depending on the length. In fitting the curtain runners, one to every 4 in. of track should be allowed.

Trade Name

These products are manufactured under the trade name ·Rufflette· Brand.

Compiled from information supplied by:

Thomas French & Sons Ltd.

Head Office: Chester Road, Manchester, 15.
Telephone: Blackfriars 1887 (10 lines).
Telegrams: Rufflette Manchester.

London Office: Dundas House, 59, St. James's Street, London, S.W.1.
Telephone: Hyde Park 0093/4.

Canada: Thomas French & Sons (Canada) Ltd., 63, Wellington Street West, Toronto 1.

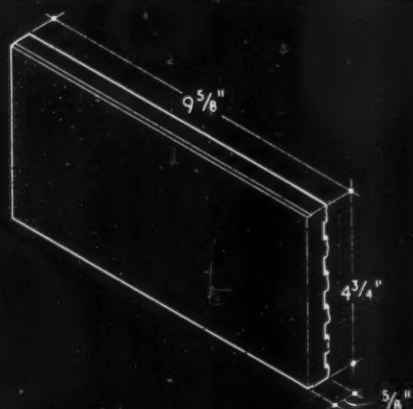
New Zealand: G.P.O. Box 9, Auckland, C.1.

France: 78, Boulevard Malesherbes, Paris, 8e.

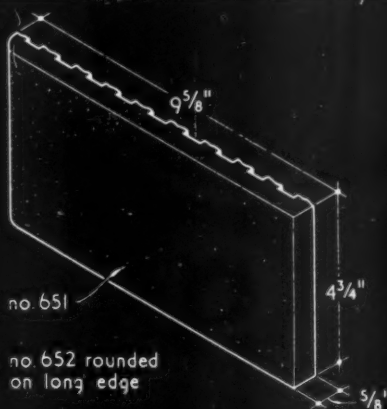
Australia: 65, York Street, Sydney.

WALL TILES | CLAY

The Architects' Journal Library of Information Sheets 766. Editor: Cotterell Butler, A.R.T.B.A.



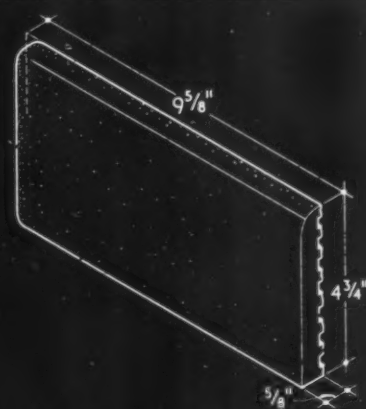
no. 650 (standard tile)



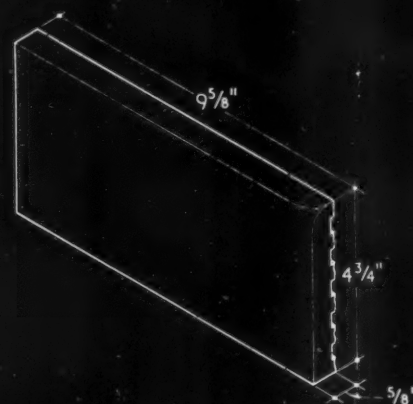
no. 651

no. 652 rounded on long edge

nos. 651, 652

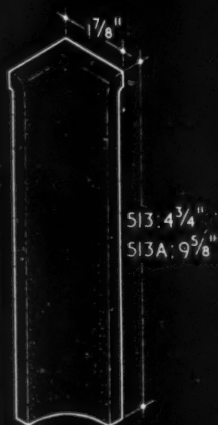


no. 653 (right- or left-handed)

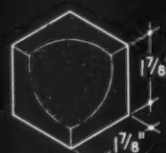


no. 610A (right or left-handed)

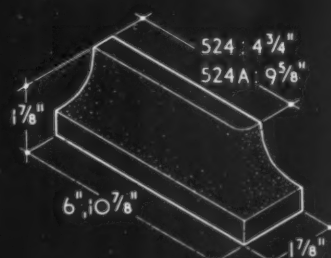
TYPES OF TILE AND FITTINGS.



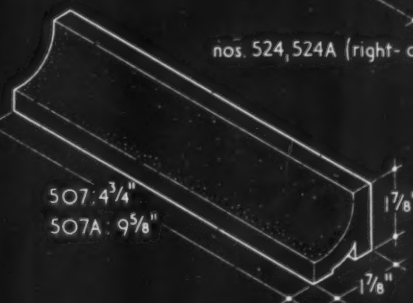
nos. 513, 513A



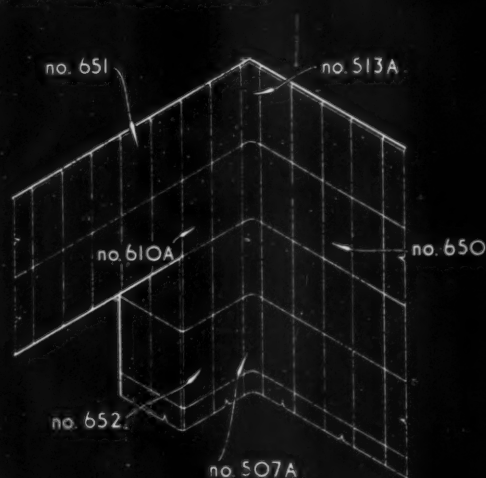
no. 522



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

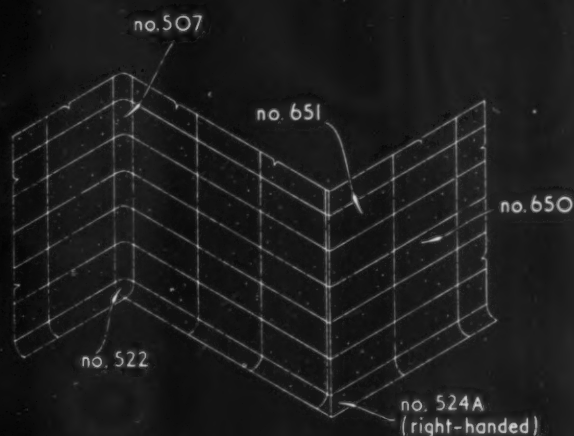


nos. 507, 507A



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 $9\frac{5}{8}$ in. by $4\frac{3}{4}$ in. by $\frac{3}{8}$ in. thick. Tiles $4\frac{3}{4}$ in. by $4\frac{3}{4}$ 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 Limited 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	—	—	2 1½
6	7	3	4	2 6½
7	8	—	—	2 11½
8	9	4	5	3 4½
9	10	—	—	3 9½
10	11	5	6	4 2½
11	12	—	—	4 7½
12	13	6	7	5 0½
13	14	—	—	5 5½
14	15	7	8	5 10½
15	16	—	—	6 3½
16	17	8	9	6 8½
17	18	—	—	7 1½
18	19	9	10	7 6½
19	20	—	—	7 11½
20	21	10	11	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.

working detail

WRITING COUNTER: BANK IN DUBLIN

Fuller and Jermyn, architects (material supplied by Martin Reynolds)

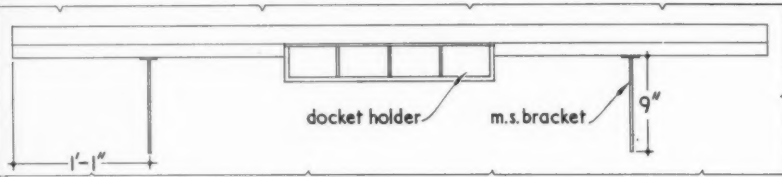


Points to notice about this simple and straightforward solution to the bank writing counter are the docket rack, incorporated beneath the plane of the desk top, the built-in ink-well and pen rack, and the clearance between the back edge of the desk and the wall surface.

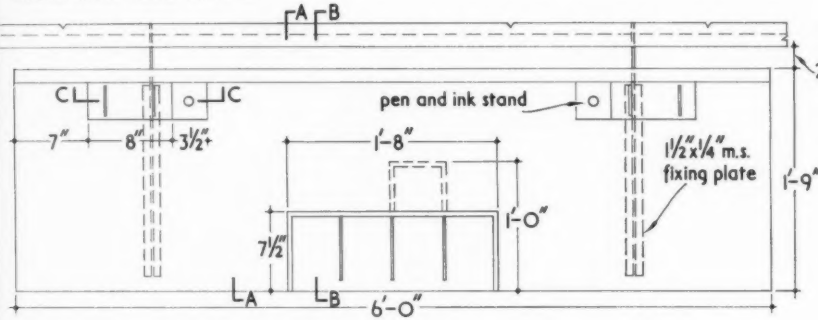
working detail

WRITING COUNTER: BANK IN DUBLIN

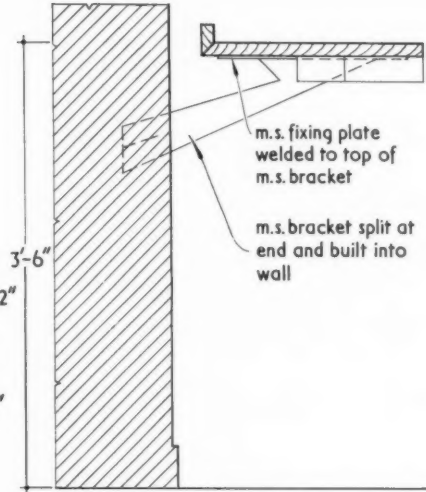
Fuller and Jermyn, architects (material supplied by Martin Reynolds)



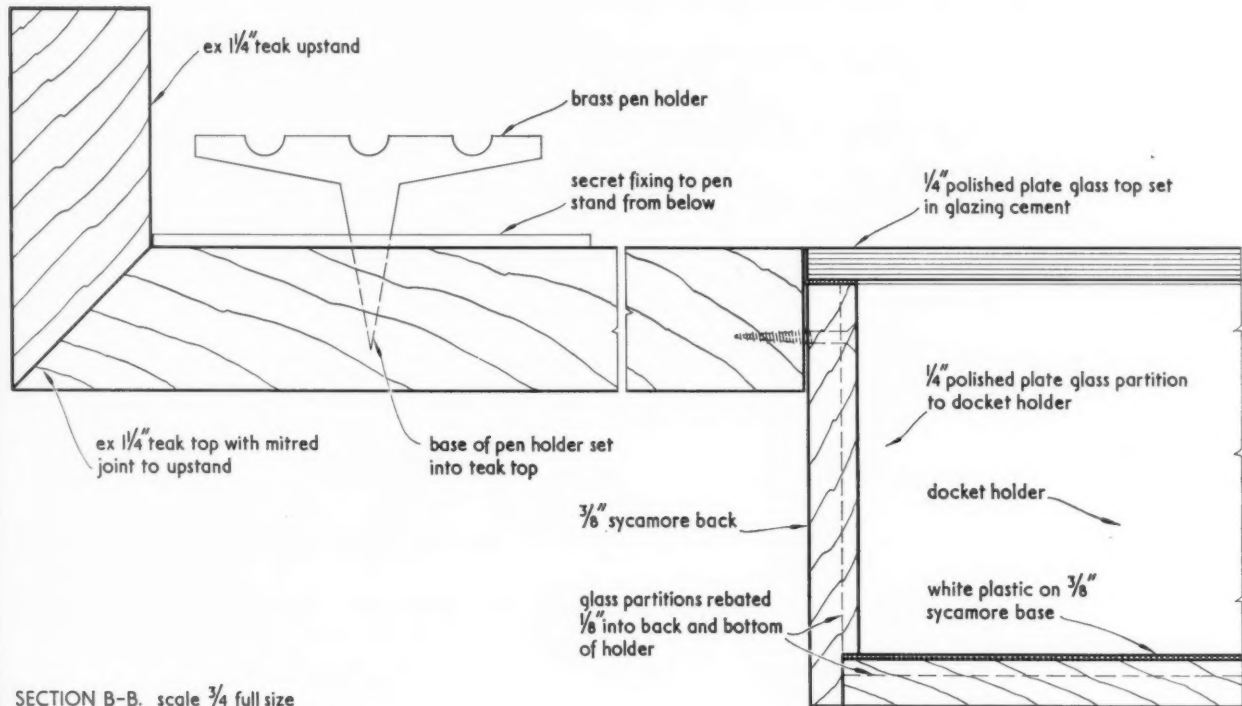
ELEVATION. scale $\frac{3}{4}'' = 1'-0''$



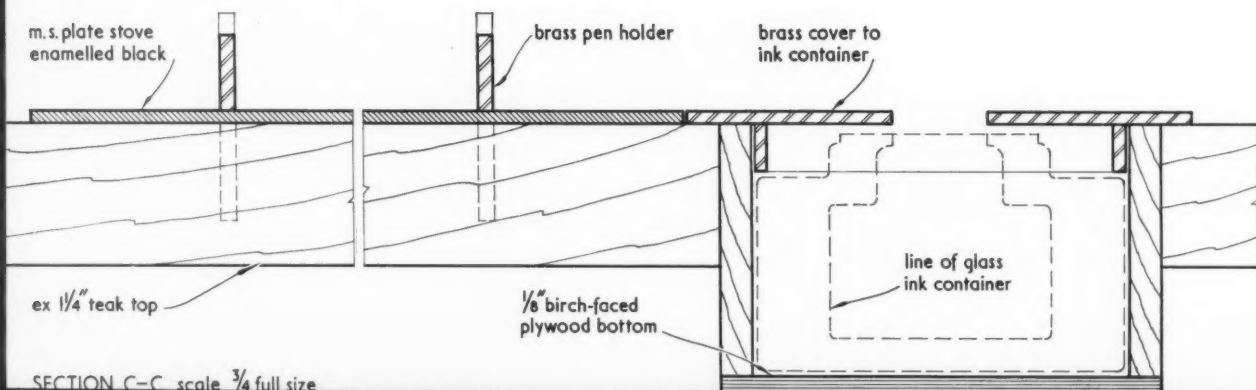
PLAN. scale $\frac{3}{4}'' = 1'-0''$



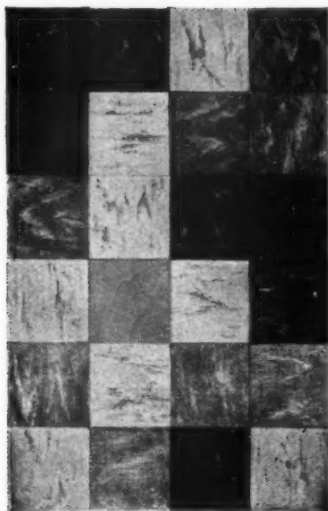
SECTION A-A. scale $\frac{3}{4}'' = 1'-0''$



SECTION B-B. scale $\frac{3}{4}$ full size



SECTION C-C. scale $\frac{3}{4}$ full size



*"Vinylex tiles at the
Shires Restaurant
St. Pancras Station".*

Semtex, manufacturers of a wide range of flooring materials, including Semastick Decorative Tiles, Semflex Tiles, Vinylex Tiles, Dunlop Rubber Flooring and Vertilex Decorative Wall Tiles, will employ their vast resources in taking welcome responsibility for your entire flooring operation. Twenty contracting branches throughout the country will advise readily on all flooring and pre-treatment problems and offer a highly-skilled laying service, providing, in addition, comprehensive facilities for design.

IMAGINATIVE MODERN FLOORING

Semtex Ltd

A DUNLOP COMPANY

SEMTEX LTD • 10 SEMTEX HOUSE • 19/20 BERNERS STREET • LONDON W.1 • TEL: LANGHAM 0401



FOR THE FOYER OF THE MERMAID THEATRE...

*First night excitement—
long run value with **MarleyFlor**
the finest vinyl flooring...*

Hard wearing resilient MARLEYFLOR is vinyl flooring at its best, fully meeting specifications wherever a smooth, colourful, quiet surface is required. Black MARLEYFLOR with the added interest of a white vinyl seaming strip.

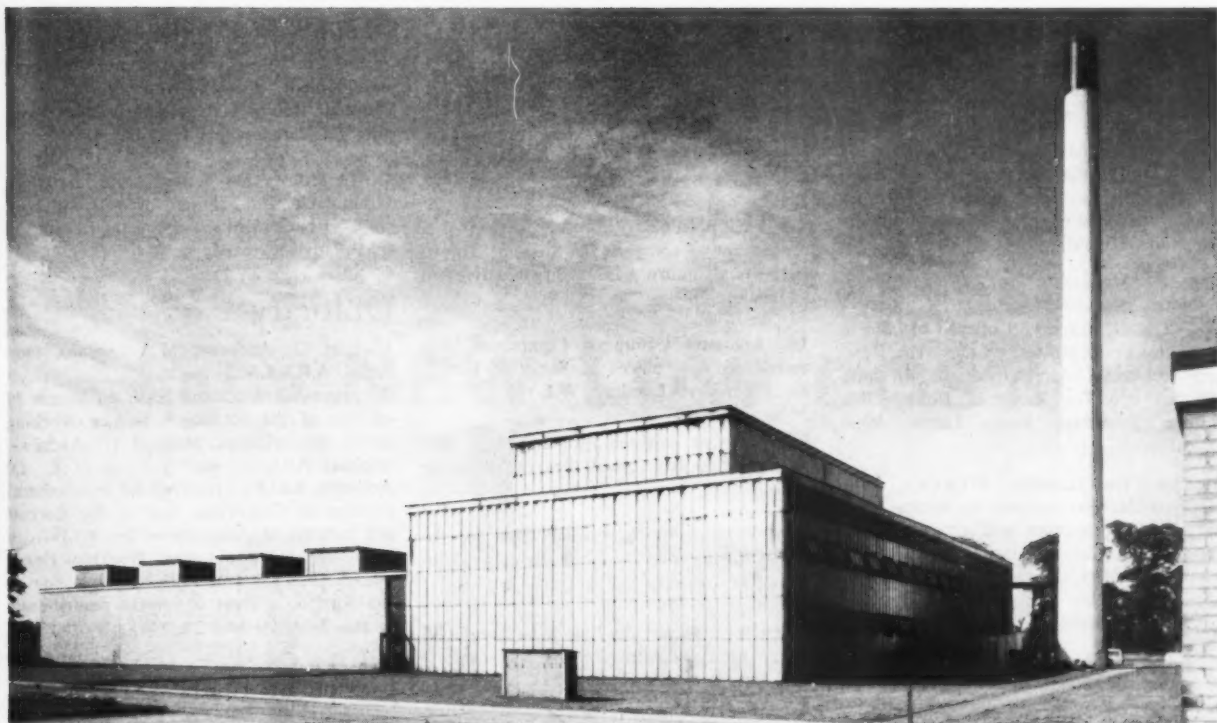
Architects: DEVEREUX & DAVIES F/FRIBA
Flooring: Black super gauge MARLEYFLOR

MARLEY · SEVENOAKS · KENT · Sevenoaks SS25S
London Showrooms · 251 Tottenham Court Road · W1

M

This
kind
electr
to d

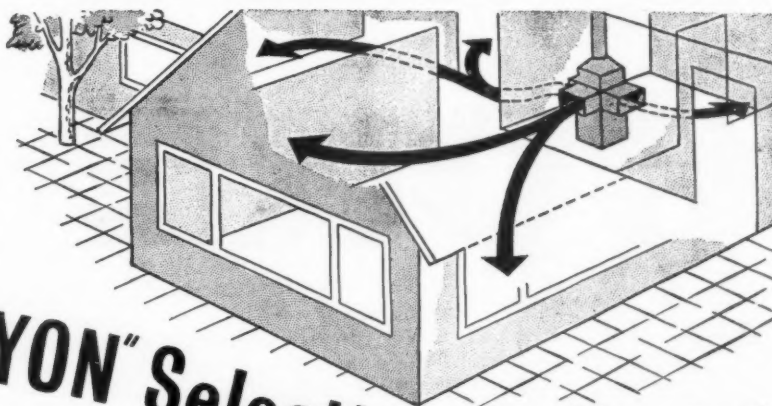
FACTORY AT BASILDON



This box-like structure with the tall chimney, recently erected at Basildon, is a simple container for one of the most modern plants of its kind in Europe—the new Ship Carbon Co. factory, producing 5,000 tons of carbon black a year, for the use of tyre manufacturers and electrodes for arc lamps. The building was designed by Shires and Reddick, and the North Thames Gas Board designed special equipment to deal with poisonous by-products of the process.

RAPID HEATING

is just one of the good reasons why more and more architects have discovered the many technical and practical advantages of the



SUGG "HALCYON" Selective Air Heater



Illustration of Halcyon Model F.45 shown with the ducting removed.

A TEMPERATURE RISE OF UP TO 20°F.

CAN BE SUPPLIED TO AN AVERAGE ROOM IN ABOUT 10 MINUTES.

This "warmth where you want it" equipment presents no difficulties in installation, by simple duct system, suitable for houses, bungalows and flats. It is compact, easy to control and economical to maintain. The "HALCYON" time-switch can be set to operate automatically at any required time.

CAPITAL COST UNDER £80

Choose "HALCYON"—for a new high standard of near-central domestic heating. Thousands already in use.

Literature and full technical details available from

WILLIAM SUGG & CO. LTD. 67-73 REGENCY STREET, LONDON, S.W. 1 Tele: VICTORIA 3211

Announcements

PROFESSIONAL

William Fulton, Dip. Arch. (Dunelm), A.R.I.B.A., has opened an office at 88, Borough Road, Middlesbrough, and will be pleased to receive trade catalogues.

Dennis E. Pugh has changed the name of his practice to Dennis E. Pugh & Associates and the office has been moved to Nicholas House, River Front, Enfield, Middlesex (telephone Enfield 5272).

Alan F. Meldrum, A.R.I.B.A., has been appointed Resident Architect at Fourah Bay, The University College of Sierra Leone, by Frank Rutter, F.R.I.B.A. The Resident Architect's address from the 4th June will be: c/o The Registrar, Fourah Bay College, Freetown, Sierra Leone, West Africa.

Priestman and Lazenby, F/A.R.I.B.A., have dissolved their partnership by mutual consent. H. D. Priestman will practise under his own name at 101, Spring Bank, Hull (telephone 36879/8), and A. Lazenby will practise under his own name at 20, Albion Street, Hull (telephone 20127).

Edward F. Massey, A.R.I.B.A., has changed the name of his practice to Massey & Massey. The firm will remain at the same address, 18, Museum Street, Warrington.

Lanchester & Lodge, 10, Woburn Square, London, W.C.1, have taken M. R. Ferguson, A.R.I.B.A., into partnership.

TRADE

George Kent Ltd. have appointed John F. Willsher, General Works Manager, to the board of directors.

Scaffolding (Great Britain) Ltd. have moved their Sheffield depot to new premises at Petre Street, Sheffield, 4 (telephone: Sheffield 388212).

The Cellactite Co. Ltd. have appointed a representative company in Sweden. This is Henry Wallenburg & Co., Birger Jarlsgatan 4, Stockholm.

The Lomount Group of Companies have moved to new offices at Sackville House, 40, Piccadilly, London, W.1.

Lewis Berger & Sons Ltd. announce that Faber Birren has joined them as a colour consultant.

J. M. Anderson is now sales agent for the Stella Lamp Co. Ltd. in Scotland and Northern Ireland.

Sharp Bros. & Knight Ltd. have appointed N. A. Ellis a director of the company.

Ames Crosta Mills & Co. Ltd. now operate an after-sales service scheme for their equipment throughout the United Kingdom.

British Resin Products Ltd. have appointed G. F. Prescott as a director of the company.

D. J. Mackridge & Partners have now moved to 72, Newman Street, Oxford Street, W.1 (telephone Langham 3911/3).

Wates Ltd. have created a new property development division with offices at 5, Cophall Buildings, Cophall Avenue, London, E.C.2 (telephone National 8755).

J. W. Millray has retired from the Shap Granite Co. Ltd., though he will still continue to be a member of the board and act in an advisory capacity.

Obituary

Michael G. Andrews, M.A.(Cantab), Dip. Arch., A.R.I.B.A.

We regret to record the death on March 29 of one of the JOURNAL's former Working Detail prizewinners, Michael G. Andrews. Michael Andrews was the son of C. D. Andrews, F.R.I.B.A., received his architectural training at Cambridge and at the Bartlett and became an Associate of the R.I.B.A. in 1959. He twice obtained Working Detail awards, in 1957 and 1958, and was one of the JOURNAL's most successful contributors in this field. He was 27.

Correction

We regret that the Working Detail published 28.4.60 (Glazed Wall: Technical School in Derby) was incorrectly numbered as Walls and Partitions: 92. It should be renumbered Walls and Partitions: 95.



COKE

for clean cheap heat

Gas coke is the cheapest of the smokeless fuels.

Gas coke is high in useful efficiency—more heat for your money.

Gas coke can be used on existing solid fuel boilers.

Units fired by other fuels may be easily converted.

There is a Coke Service Department at each Area Gas Board where expert advice on smokeless heat problems is readily available. In addition there are a number of technical booklets available showing how you can modernise your heating methods and save money.

No. 1 — Coke-fired domestic appliances and their application

No. 2 — Coke-fired central heating plant

No. 3 — Coke-fired small steam-raising plant

No. 4 — Coke-fired semi-producer furnace for drying and process heating plant

No. 5 — Coke-fired crop drying plant

No. 6 — Coke-fired glass house heating and soil warming equipment

Obtain copies of these books from your Area Gas Board or from

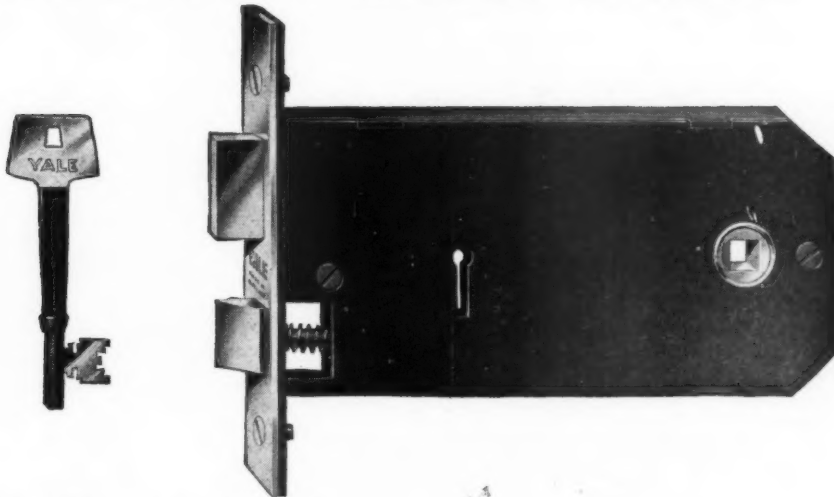
**THE GAS COUNCIL, COKE DEPARTMENT,
1 Grosvenor Place, London, S.W.1**

NEW!

A COMPLETE RANGE OF

3 LEVER LOCKS

at a NEW LOW COST

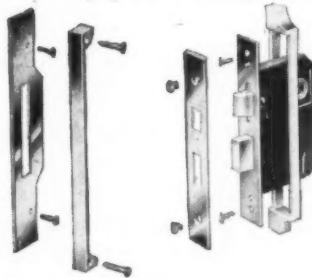


- 144 differs off levers alone (standard).
- 350 differs off levers (if required).
- 3,500 differs available off levers and wards.
- Follower holes brass bushed.
- Forend—armoured brass upper and steel lower.
- Deadlock bolts reinforced with hardened steel pins.
- Key—in line with "contemporary" design, the key is light and attractive—of nickel-plated steel, with nylon-covered shank to give durability and self-lubrication at the point of contact with the lock. Conforms with British Standard 2088 ("Performance Tests for Locks": Tests 7c (II) and 7d).

This new range of 3-lever mortice locks enables you to specify greater security at a most moderate cost. The range—which includes both horizontal and upright type locks, two deadlocks and a sliding door locking latch—covers every need for a mortice lock.

Master keying. The locks can be master keyed in suites to include sub-masters, sub-grand masters and grand masters . . . and because all differs come from levers alone, a greater degree of security is assured.

Literature. If you have not already received your copy of the booklet giving full specifications, write to the address below.



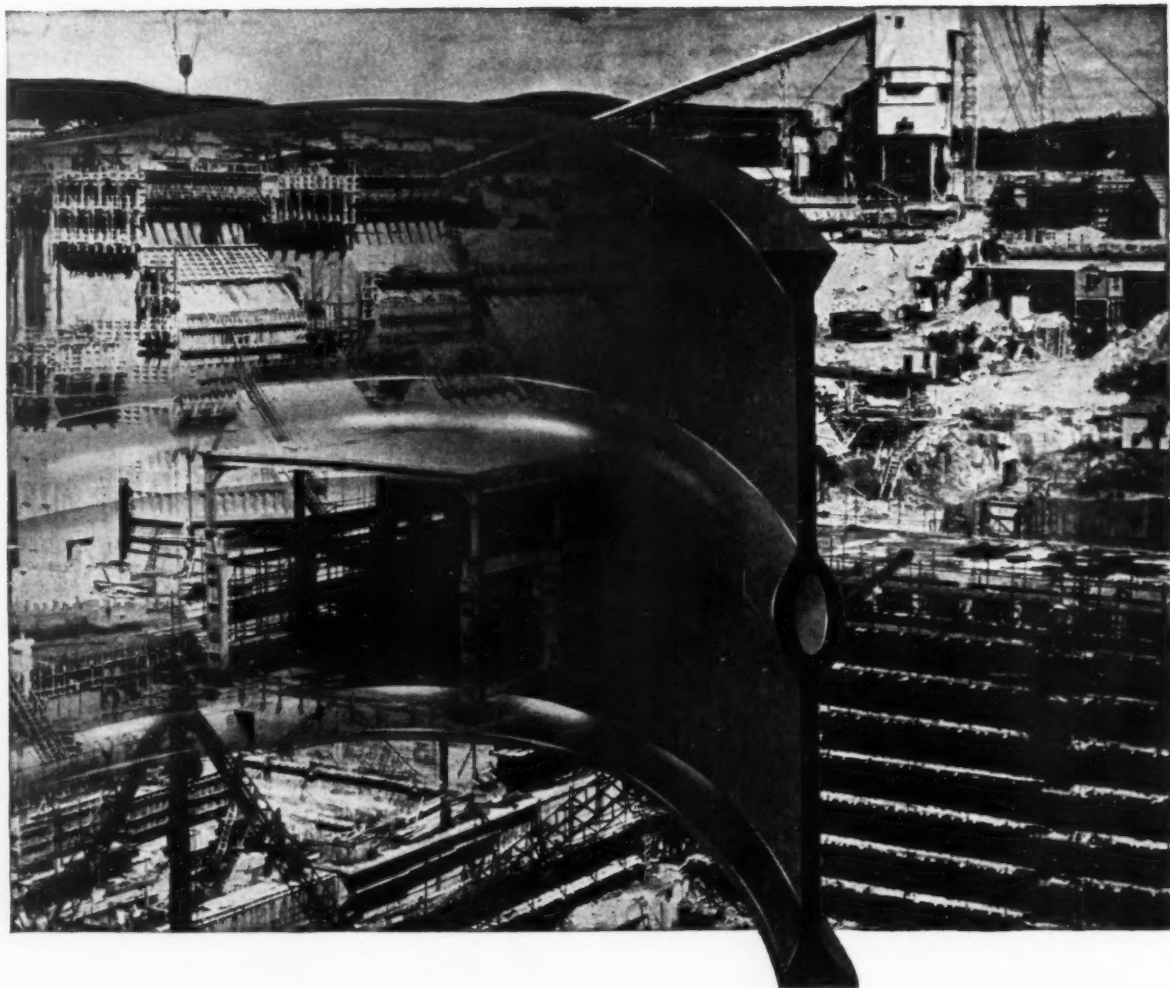
THE YALE REVERSIBLE REBATED FOREND SET

This set enables Yale 3-Lever Mortice Locks and all other standard Yale plain forend mortice locks to be converted into fully rebated locks. The set is completely reversible for left or right hand, inward or outward opening doors.

Where there's a door there's a need for



THE YALE & TOWNE MANUFACTURING COMPANY • BRITISH LOCK AND HARDWARE DIVISION • DEPT. A.3 • WILLENHALL • STAFFS



In dams of this type—the very hub of extensive hydro-electric schemes—waterstops have a triple function to perform: seepage must be rigorously combatted, movement of concrete mass must be allowed for and future repairs obviated by the waterbars being resistant to corrosion.

As in the case of the dam shown here, Expandite waterstops, whether Rubber or Polyvinyl Chloride, have proved to be unsurpassed in performance where problems such as these have to be taken into consideration. Expandite have also developed an extremely economical Hydrofoil (PVC) having a unique profile: various widths are available.

These form only a section of the complete range of Expandite Products, sufficiently varied to solve joint-filling or sealing problems that occur in any form of constructional undertaking.

The Expandite Technical Service Department offers advice—without any obligation—to architects, civil engineers and builders on all questions of ‘joints-that-move!’

ANOTHER JOINTING PROBLEM SOLVED

**EXPANDITE
LIMITED**

Specialists in the manufacture and use of Joint-Fillers, Sealing and Waterproofing Compounds, Concrete Additives, Anti-Corrosion Treatments and Mechanical Appliances.
CHASE ROAD, LONDON, N.W.10. TELEPHONE: ELGAR 4321 (14 lines)
Northern Depot, Trafford Park Road, Manchester 17. Eire: Expandite (Ireland) Limited,
Greenhills Road, Walkinstown, Dublin.

ASSOCIATES AND DISTRIBUTORS THROUGHOUT THE WORLD

Pyrestos is unique

THE ONLY
WOOD FIBRE
INSULATION
BOARD

FLAME-PROOF



Factory under erection, Colnbrook,
Contractors: Breezecraft Ltd. of Staines.



Meeanee & Hyderabad Barracks, Colchester.
Main Contractors: Farrans Ltd., Upper Brook Street,
Colchester.

Board Processors Ltd

Leyborne Wharf, Horton Bridge Road, West Drayton, Middlesex.
Telephone: (WE 3) 4021 (7 lines)

THROUGHOUT
ITS
THICKNESS.

PERMANENT FIRE
PROTECTION PLUS
INSULATION.

The triple action of PYRESTOS-FLAME-PROOF, HIGH THERMAL and ACOUSTIC VALUE-makes the ideal board for ceilings and wall cladding, partitions, etc.-where thermal and sound insulation must combine with safeguard against fire risk. Decay and termite proof.

NOW AVAILABLE
with a high grade light reflecting surface-PYRESTOS WHITE.

Thickness: 9/16" 11/16" and 13/16" up to 12' x 4'

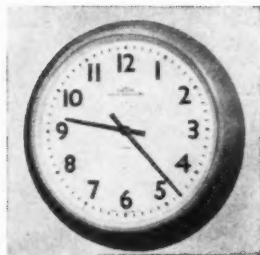
Immediately available from stockists throughout the country.

Complies fully with the requirements of the THERMAL INSULATION (Industrial Buildings) Act, 1957.

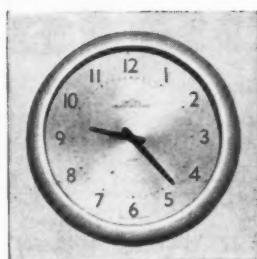
Further details, samples and prices etc. available on request.



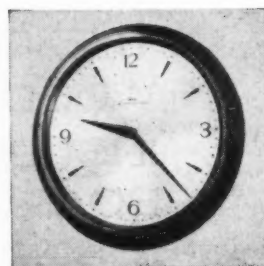
Pyrestos is a registered trade mark



Melton/Fleet



Mayfair/Farnham

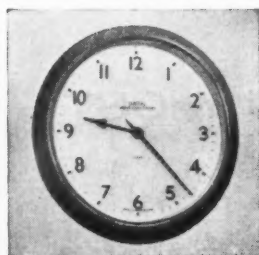


Malvern/Fern

A CERTAIN STYLE

... distinguishes E.C.S. Wall Clocks. Designed to blend with modern building technique and decoration, their elegant symmetry of line adds an air of grace wherever they appear. All the models shown are available in a number of sizes and can be supplied for operation direct from normal A.C. mains or from the E.C.S. Master Clock.

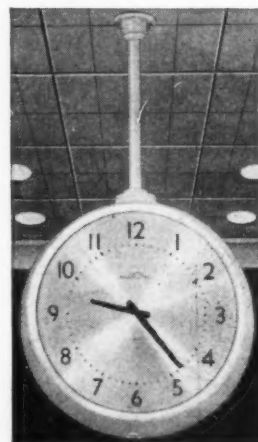
E.C.S. wall clocks have been approved by the Council of Industrial Design and are included in 'Design Index'—a further indication of the high standard of design and dependability maintained by E.C.S.



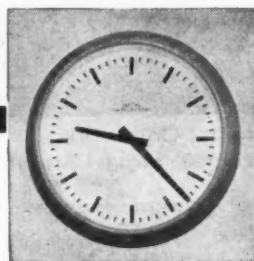
Medway/Fife



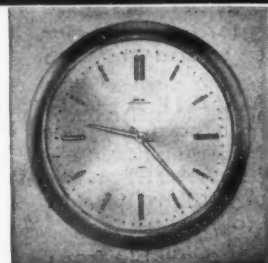
Monarch/Flint



Double-Sided Suspension



Mostyn/Filey



Fulmar

The two latest additions to this distinguished range. Gilt anodised cases with raised gilt batons and tapered hands.

Falcon



'M' Series (e.g. Mayfair) Surface Mounted
'F' Series (e.g. Farnham) insertion type

ENGLISH CLOCK SYSTEMS

179-185 GREAT PORTLAND STREET LONDON, W.1.
Branch Offices and Showrooms in Birmingham Manchester Glasgow & Belfast

A branch of the Clock and Watch Division of **SMITHS** S. Smith & Sons (England) Ltd.

**Specify
Asbestolux...
the non-combustible
asbestos
insulation board
backed by
advisory services**



**HEAT LOSS
ANALYSIS
SERVICE**

**ACOUSTIC
CONSULTANT
SERVICE**

**DESIGN
ADVISORY
SERVICE**

These facilities are at your disposal, to enable you to make the best use of Asbestolux.

For this purpose the services of a number of independent consultants have been retained by Cape Building Products.

Please write for further details.

CAPE ASBESTOLUX

THE NON-COMBUSTIBLE ASBESTOS INSULATION BOARD



Manufactured by CAPE BUILDING PRODUCTS LIMITED • COWLEY BRIDGE WORKS • UXBRIDGE • MIDDLESEX
Telephone: Uxbridge 4313 Telex: 23471/UXB

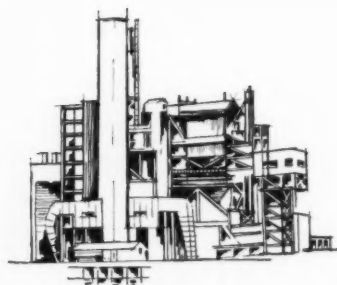
Also at Manchester, Birmingham, Glasgow, Newcastle

A subsidiary of The Cape Asbestos Company Limited
AX49/G



Tantallon Castle

Occupied by the Douglas family for over 3 centuries it is situated on a high, wind-swept promontory opposite Bass Rock on the East Lothian coast. One of the grandest and most rewarding of all Scottish castles, its walls, 50 feet high and 12 feet thick, withstood siege and shot by James IV and V in the 15th and 16th centuries.



Castles in the Air...

An old castle or a modern steel structure sooner or later reveal; the constant wear and tear of the elements—erosion, corrosion, in the salt laden air of the coast or the sulphurous atmosphere of the industrial city.

You may not possess a castle in the air but if the reality of corrosion in industrial plant is *your* problem write to us for details of how DRYGALV Cathodic Protection and DRYNAMELS Maintenance Paints can considerably help your maintenance programme.

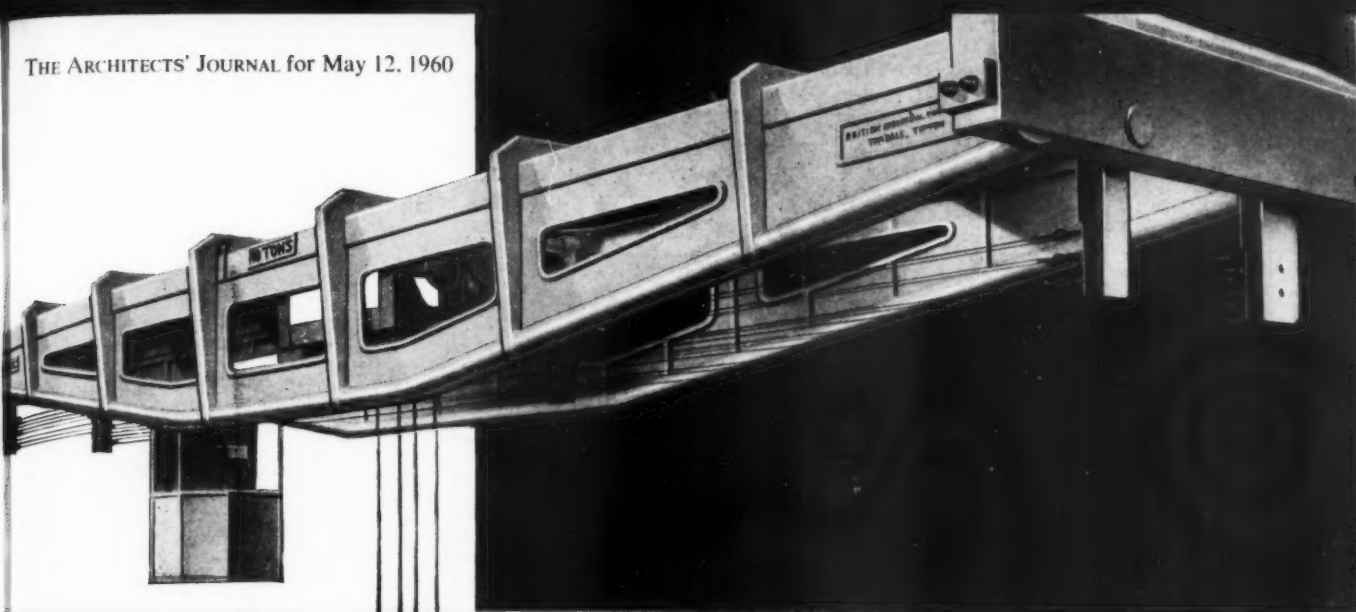
*Stop corrosion
positively with*

DRYNAMELS
MAINTENANCE PAINTS



DRYNAMELS LIMITED HALL GREEN BIRMINGHAM 28

BUSINESS S LOOKING UP -WITH REEL OVERHEAD



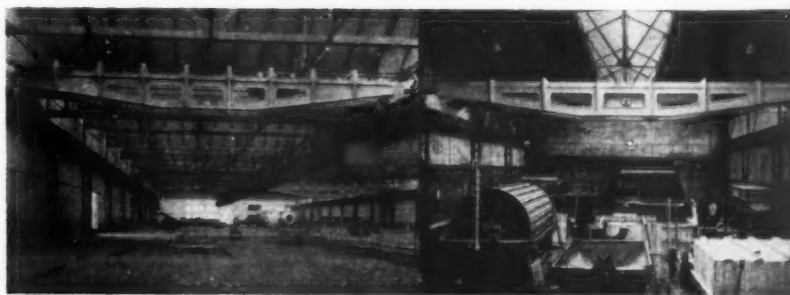
Manufactured under licence from
Ferrand & Frantz Ing. Villeurbanne.
British Patent No. 705, 146.

The remarkable performance of REEL overhead cranes has been proved conclusively on hundreds of installations. The new approach to overhead crane design has put REEL well ahead. Conventional boxed lattice frames have been replaced by clean-lined girders providing greater strength and lightness, with a consequent saving in power consumption. REEL Cranes can be carried to within two or three inches of the roofwork and are in capacities to suit your individual requirements. *Full information on request.*

THE BRITISH

"REEL"

OVERHEAD CRANE

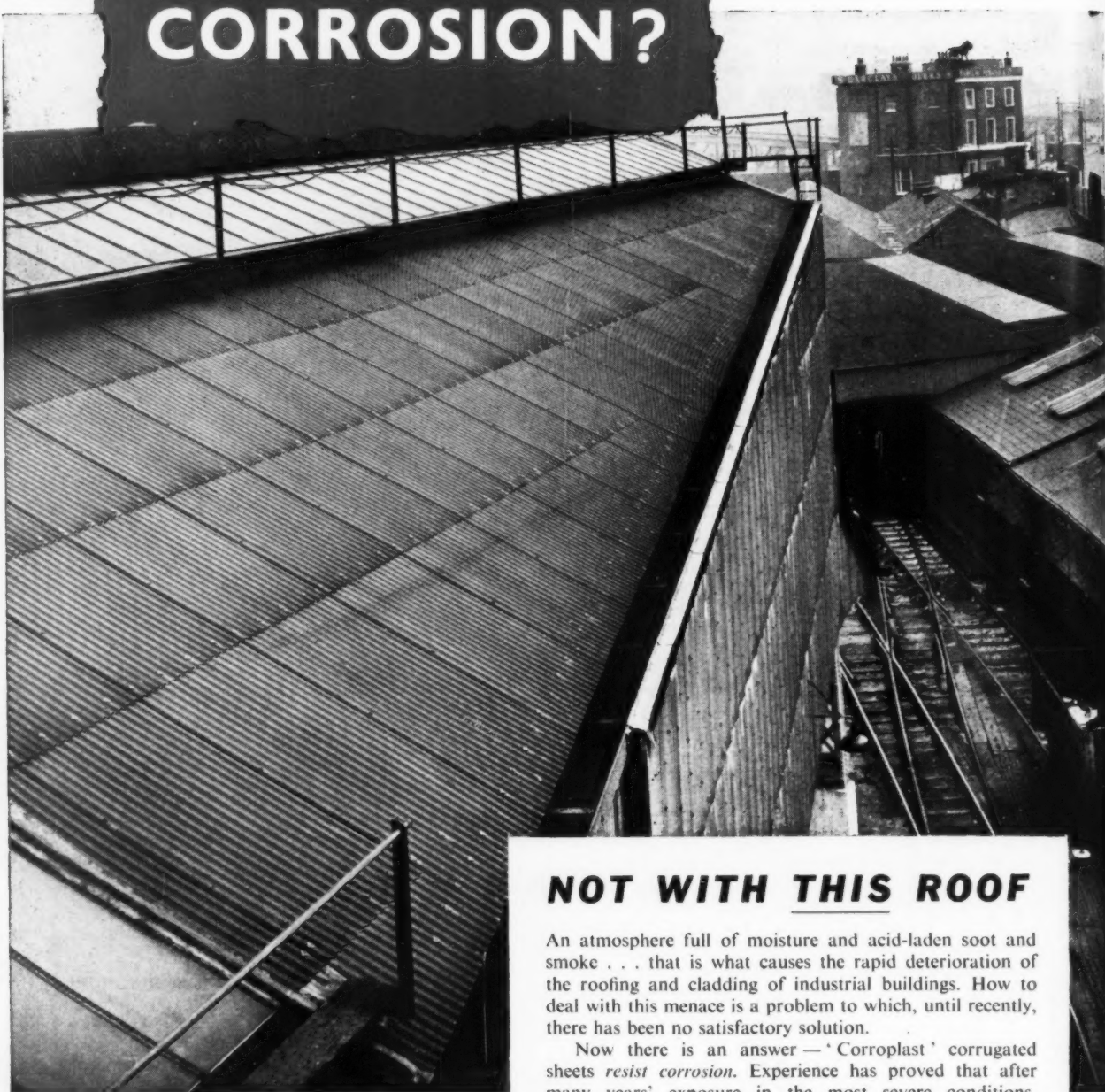


BRITISH INDUSTRIAL

ENGINEERING COMPANY (STAFFS) LIMITED

CORONATION WORKS · HAINGE ROAD · TIVIDALE TIPTON · STAFFS. TEL: TIPTON 1222/3/4

CORROSION?



FOR CONTEMPORARY CLADDING TOO

'Corroplast' is also ideal as side-cladding for contemporary buildings, giving a most colourful and attractive appearance. Available in three integral shades, or in a range of stove-enamelled finishes.

NOT WITH THIS ROOF

An atmosphere full of moisture and acid-laden soot and smoke . . . that is what causes the rapid deterioration of the roofing and cladding of industrial buildings. How to deal with this menace is a problem to which, until recently, there has been no satisfactory solution.

Now there is an answer — 'Corroplast' corrugated sheets *resist corrosion*. Experience has proved that after many years' exposure in the most severe conditions, 'Corroplast' sheets do not deteriorate.

These strong, rigid, laminated plastic sheets are economical, too. They last longer than any other sheets, need no maintenance, and are free from breakages in transit.

For roofing and cladding where corrosion is worst, always specify . . .



CORROPLAST

CORRUGATED LAMINATED PLASTIC

Write or phone to:

HOLOPLAST LIMITED SALES OFFICE, 2 CAXTON STREET, LONDON, S.W.1 TEL: ABBEY 4866

for want of 10 minutes....



.... a factory was lost!

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

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

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

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



20

**ATTRACTIVE
SHADES**

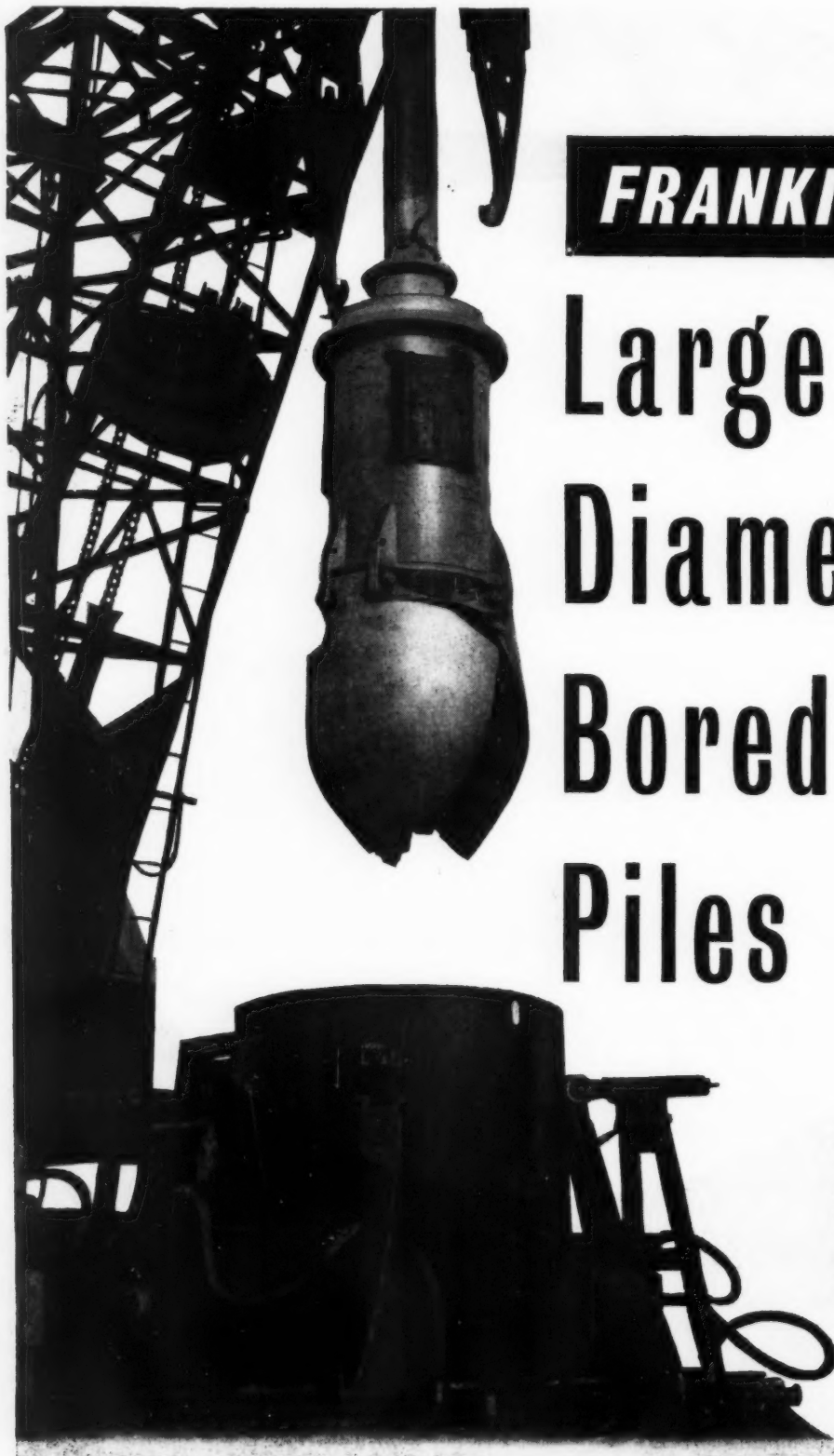
TREROCK is the only
Flame Retardant Paint
which also gives a full
decorative effect.

TREROCK

FLAME RETARDANT PAINT

limits the Fire Hazard

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



FRANKIPILE

Large Diameter Bored Piles

YOUR ENQUIRIES
ARE INVITED AND
WE WILL SEND
LITERATURE
UPON REQUEST

FRANKIPILE LIMITED • 39 VICTORIA STREET • LONDON • SW1

TELEPHONE: ABBEY 6006/9

PULLING TOGETHER

Every successful job depends on good team work,

Architects, Builders and Sub-contractors working in close co-operation from start to finish. Such co-operation

can only be based on confidence, and you *must* be certain that your sub-contractors will deliver material

exactly when and where you want it. We take particular pride in the speed and reliability of the

SIEGWART service, and in knowing that so many Architects and Builders now take this for granted. We are

also proud to be consulted so often about complicated flooring problems. Our technical advice, based on

over forty years experience, is always given freely and without obligation.

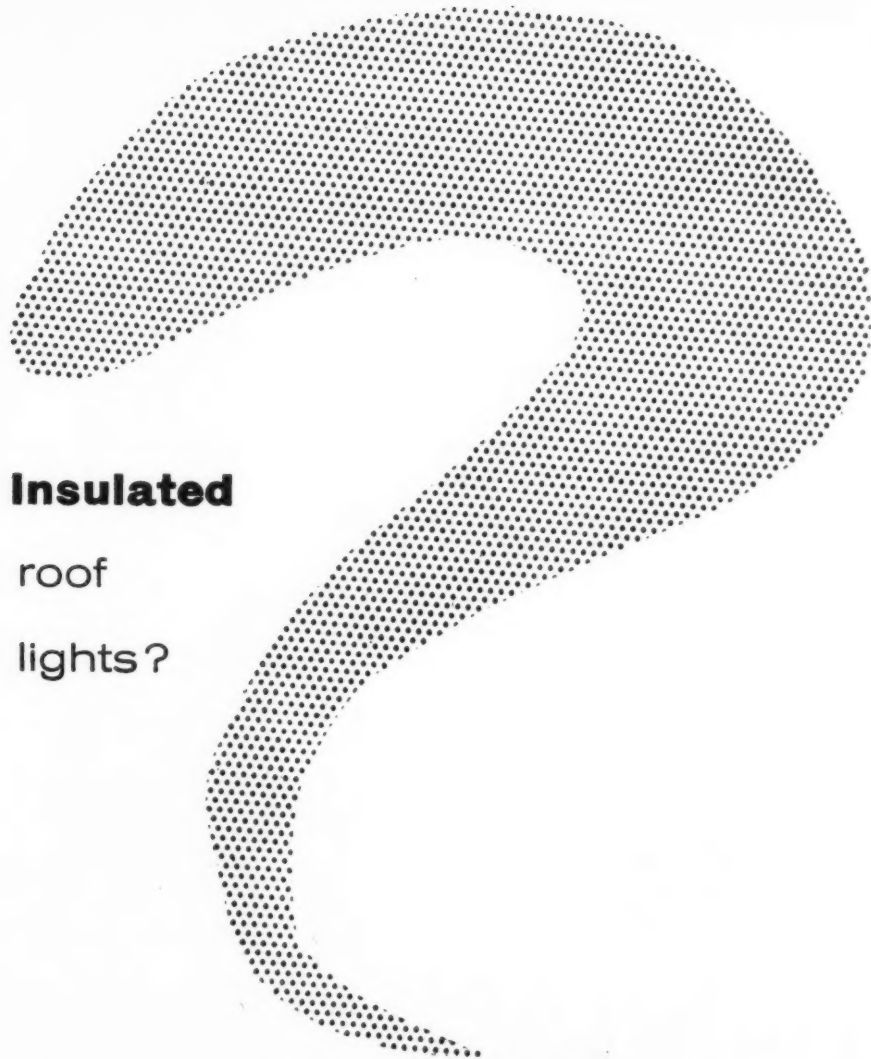
SIEGWART PRECAST FLOORS AND ROOFS

Our Associated Company, S.P.C. Ltd., has been formed to give a complete service in concrete.

It will be pleased to quote for the design and erection from foundations of all R.C. structures.



SIEGWART FLOOR CO. LTD., Gable House, Rickmansworth, Herts. Telephone Rickmansworth 2268
Berkeley House, Hagley Road, Birmingham 16. Telephone Edgbaston 3960
Carlton House, Blythswood Square, Glasgow, C.2. Telephone City 5156

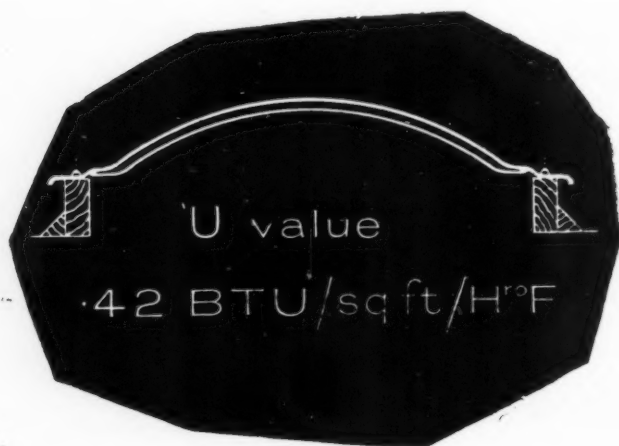


Insulated
roof
lights?

then specify
'CORDAR'
P E R S P E X
double skin domes

Patents pending

ALSO AVAILABLE IN SINGLE SKIN
A LARGE RANGE OF SIZES IN SQUARE,
RECTANGULAR OR CIRCULAR SHAPES



WRITE TODAY FOR FULL DETAILS:—

CORDAR LIMITED

34 DEAN STREET • NEWCASTLE UPON TYNE 1

For roof waterproofing—provides a firmly-adhered, flexible and impervious coating. Applied cold and reinforced to withstand normal movement. Simple to apply and satisfactory in any climate.

For industrial floor surfacing—Flintkote floors are ideal for tough traffic conditions; remarkable wear resistance and durability, dustless, non-slip, self healing, applied cold.

For wall and general waterproofing—to seal surfaces against water and moisture penetration. Can be decorated.

For protection of iron and steelwork—gives lasting protection, inside or out.

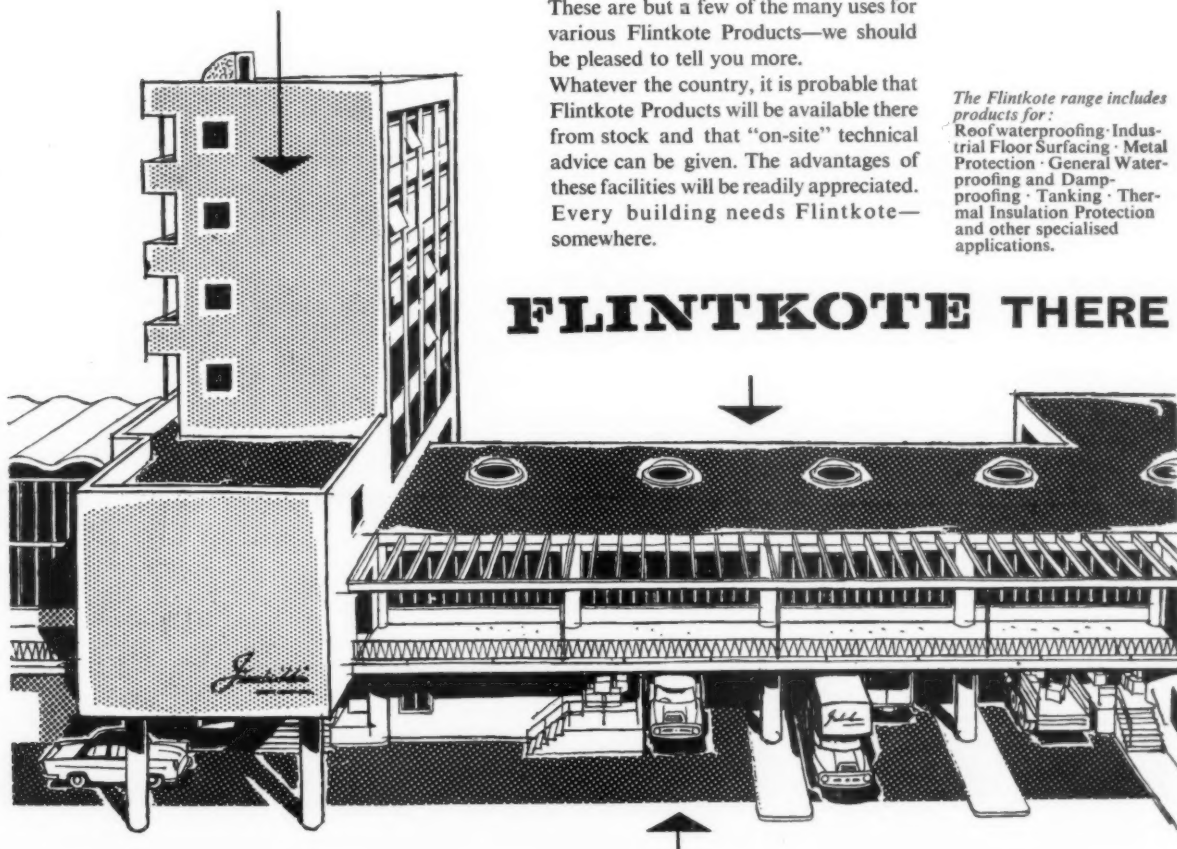
FLINTKOTE HERE

These are but a few of the many uses for various Flintkote Products—we should be pleased to tell you more.

Whatever the country, it is probable that Flintkote Products will be available there from stock and that "on-site" technical advice can be given. The advantages of these facilities will be readily appreciated. Every building needs Flintkote—somewhere.

The Flintkote range includes products for:
Roof waterproofing · Industrial Floor Surfacing · Metal Protection · General Waterproofing and Damp-proofing · Tanking · Thermal Insulation Protection and other specialised applications.

FLINTKOTE THERE

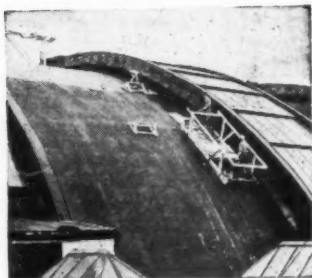


... FLINTKOTE

REGD

ALMOST EVERYWHERE

Large garage for buses and cars belonging to OSLO SPORVEIER, where 2,500 square metres of roof have been treated with Flintkote material since 1958. The remaining areas are to be treated later.



THE FLINTKOTE COMPANY LIMITED
Adam House · One Fitzroy Square · London W.1
Telephone: EUSton 7224

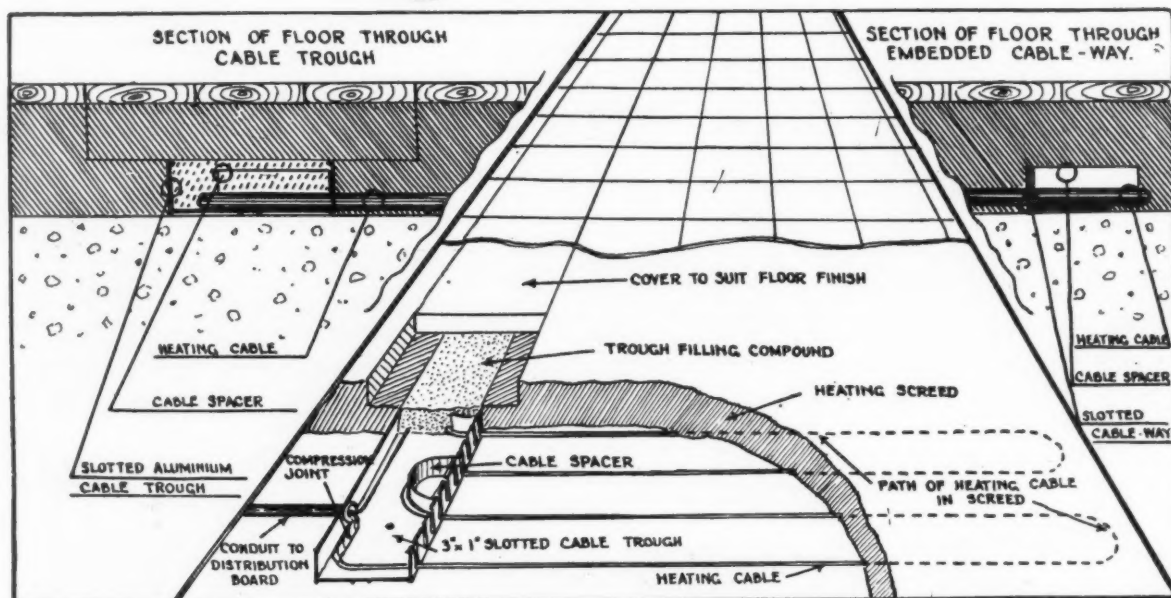
F/4.

ANNOUNCING THE NEW THERMODARE



The Sign of Good Heating

Embedded-Rewireable
UNDERFLOOR HEATING
*at a price that makes solid-in
 systems a thing of the past*



The illustration shows the simplicity of this new design. Aluminium ducts provide variable spacing and easy maintenance throughout the life of the building. The well-known Thermodare rewireable heating cables are used and the floor can be finished to the customer's requirements.

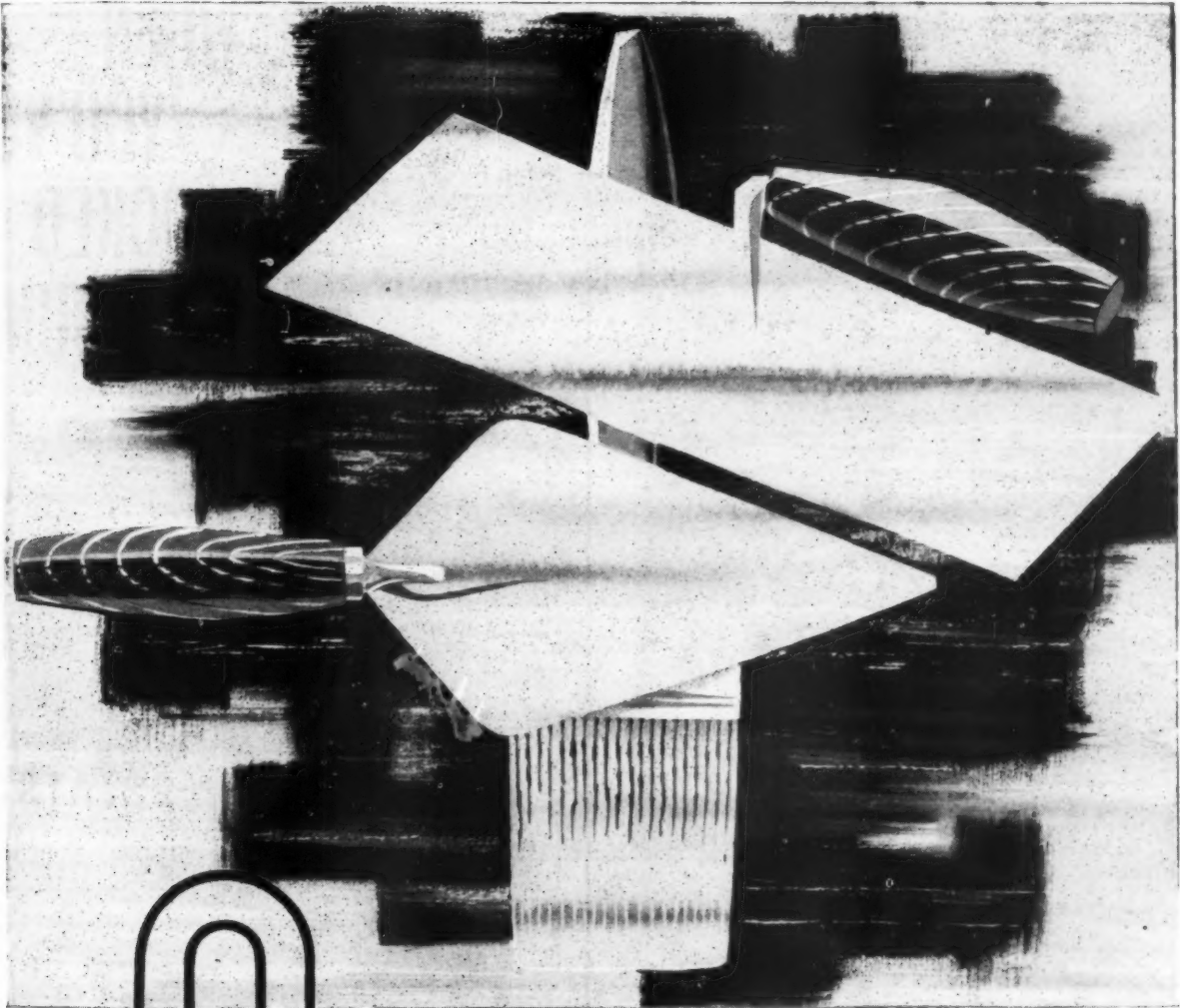
The completely new Thermodare Underfloor Heating System offers all the advantages of a rewireable installation at a cost little more than the average solid-in system.

This very low cost combined with free accessibility makes the Thermodare *embedded-rewireable* system the automatic choice for today's underfloor installations. It gives an even, comfortable temperature in every part of the area. Advice on complete systems, installations and running costs is freely available. The time to call in Thermodare is in the earliest days of the planning stage. Make use of the full technical services offered by writing to the address below.

THERMODARE (Great Britain)



YORK MANSION, 94/98 PETTY FRANCE, LONDON, S.W.1.
 Telephone: ABBey 6586/8/9



THERE ARE DIFFERENT **CEMENTONE PRODUCTS**

including decorative finishes and cement additives. Technical advice or information is available on request.

Joseph Freeman
Sons & Co Ltd
Cementone Works
London SW18
Phone: VANDyke 2432



Cementone No 1	Permanent Colours for Cement
Cementone No 2	Waterproofing Powder
Cementone No 3	Transparent Waterproofer
Cementone No 5	Concrete Floor Binder
Cementone No 6	Waterproof Flat Finish
Cementone No 7	Flat and Gloss Finishes
Cementone No 8	Concrete Hardener
Cementone No 9	Waterproof Stoneface Composition
Cementone No 10	Surface Tinter



Oh!

THEY ARE AIR DRIED



1, 2, 4 and 8-man models are available.

The Spiral Tube "Air Towel" has been awarded the Certificate of the Royal Institute of Public Health and Hygiene for Hygienic Merit.

Industrial managements' problem of drying hands, whether by a few employees or several thousand, is one which the Spiral Tube "Air Towel" can take right off your hands! No more dirty, towels to spread infection. No soggy paper towels littering washrooms. Hands held over the "Air Towel's" stream of hot air are dry in seconds, and refreshingly soft and smooth. Economical, too, for it operates from firm's own steam or H.P. Hot Water supply. Models available dealing with up to 16 to 20 persons per minute. It's a robustly constructed self-contained unit, easily installed and trouble-free in service.



Patent No. 809266. Regd. Trade Mark No. 742754

Write NOW for fully illustrated literature to:—

AIR TOWEL DIVISION (Dept. A. J.). THE SPIRAL TUBE & COMPONENTS CO. LTD, OSMASTON PARK ROAD, DERBY. Tel: DERBY 48761

Head Office: Abbey House, 16 High Street, Watford. Tel: WATFORD 26781-2



WHEN YOU'VE LOOKED AROUND

You'll put in. . .

Pullin precision thermostats—a brand new range of controls for heating and cooling, specially designed by the makers of the now famous "PULLIN PLUG-STAT" in co-operation with an internationally established designer.

Precision

PULLIN THERMOSTATS

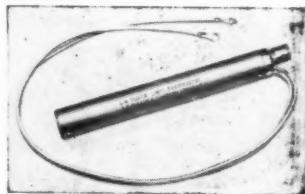
Most Recent Addition

to this impressive range is the L4 Floor Limit Thermostat, specially developed as an accurate temperature limiting device for under-floor heating installations. It is specifically designed to control the surface temperature of the floor to within an accuracy of plus or minus one degree.

Floor Limit Thermostat

(L4)—It is cylindrically shaped so that it can be easily positioned in a conduit on a plane with under-floor heating elements. It is provided with two leads with a choice of length and accurately controls the flow of current to the heating elements when connected in series in conjunction with the Pullin A2 Room Thermostat. The L4 is sealed against dust and moisture, and once set and installed, it requires no further attention.

Already widely acclaimed are the A2 Room Thermostats, for heating or cooling control, attractively styled in tough grey plastic finish with a temperature range of from 30° to 90° F. (or Centigrade equivalents). Available with or without an intermittent Neon Indicator Light, Control Lock or "OFF/AUTO" Switch. Rated at 0-250 volts, 20 amps A.C., non-inductive, 5 amps, A.C. at 0.7 P.F., or 0.5 amps. D.C.



ROOM THERMOSTATS.

Two models available, the A2/W and A2/WNL. Precision built to critical specifications and designed to control electric underfloor heating, storage heaters, tubular heaters, warm air systems, etc.



REVERSE ACTION THERMOSTATS

The two models A2/RA and A2/RANL have a proven record after extensive testing. Designed to meet the demand for cooling applications in industry and agriculture, they are accurate to the finest limits.



Think of Precision Thermostats—Think of R. B. Pullin

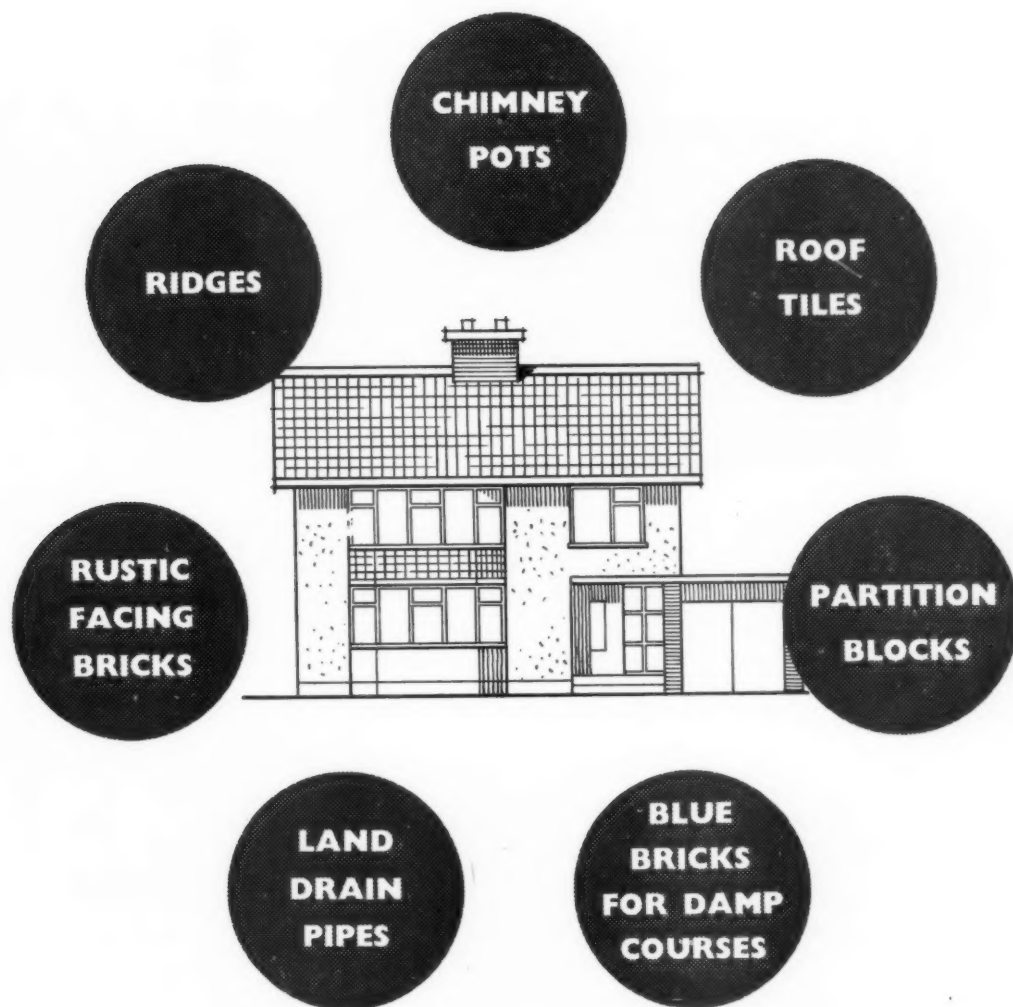
Write for technical leaflets to:

R. B. PULLIN & COMPANY LIMITED, THERMOSTAT DIVISION, PHOENIX WORKS, GT. WEST ROAD, BRENTFORD, MIDDLESEX

Tel: ISLeworth 1212

Cables: Pullinco Wesphone London

BRICKS AND TILES +



BY HAUNCHWOOD
of course!

Clay products by HAUNCHWOOD in the specification ensure durability plus immediate and long term economy. Architects, Builders and Engineers rely on HAUNCHWOOD for precision and quality. Enquiries invited — standards or specials.

Telephone : Nuneaton 3419 : In association with G. W. Lewis' Tileries Ltd.

HAUNCHWOOD BRICK & TILE CO. LTD., STOCKINGFORD, NUNEATON

RINGELMANN ZERO IS YOUR NUMBER

WITH THE

OLDBURY
chain grate
STOKER

Developed in 1942 for versatility in burning the widest variety of solid fuels, efficiently, smokelessly, the Oldbury Stoker anticipated the Clean Air Act by 16 years.

It is your guarantee of absolutely smokeless combustion—RINGELMANN O—with full boiler output, no matter what fuel hazards may develop in the future.

Send for Publication No. 1618/2

EDWIN DANKS & CO. (Oldbury) LIMITED

OLDBURY near BIRMINGHAM. Telephone: (Stoker Division) Brierley Hill 7731
London • Birmingham • Cardiff • Glasgow • Leeds • Manchester • Newcastle on Tyne



**National
Provincial
Bank Ltd.,**
CHEAPSIDE, E.C.2.

Waring & Gillow supplied the panelling, doors and counters for this important new branch, as well as special furniture for the Manager's Office.

Architect: B. C. Sherren F.R.I.B.A.

WARING & GILLOW LTD

MAKERS OF FURNITURE & PANELLING TO ARCHITECTS' OWN DESIGNS
Contract Department, 164-182 Oxford Street, London, W.1 (Tel: MUSeum 5000)
FACTORIES AT LONDON, LANCASTER AND LIVERPOOL



DREADNOUGHT

ROLLING SHUTTERS

were also chosen for

FOUNTAIN HOUSE

London, E.C.1

Fountain House is one of the highest office blocks in London, with a magnificent panoramic view of the whole city and surrounding countryside as far as the Epsom Race Course. Naturally, it was essential that a building of such height and magnitude should have more than adequate protection against fire. It was for this reason that no less than twenty-six DREADNOUGHT Fireproof Rolling Shutters were installed.

Architect: Messrs. City of London Real Property Co. Ltd. 16 Mark Lane, London, E.C.3.

DREADNOUGHT FIREPROOF DOORS (1930) LTD

26, VICTORIA STREET, WESTMINSTER, S.W.1

Telephone: ABBey 1411

Agents: M.A.C. Engineering (Bristol) G.P.O.
Box 60, Avon Works, Winterstoke
Road, BRISTOL.

South Wales (Fire Protection)
Engineers Ltd., Pomeroy Works,
Bute Docks, CARDIFF.

Messrs. F. & M. Fairman, Central
Chambers, 93 Hope Street,
GLASGOW.

K.W. Kidson Esq. Normanhurst Chambers,
St. James Road, DUDLEY.

ACME

—FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

ACMEPAVING SOFTWOOD END GRAIN PAVING for factory floors

ACMETYLE SUPER P.V.C. TILES

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

ACME FLOOR RENOVATION SERVICE

Technical Brochures gladly sent on request.

ACME

**FLOORING & PAVING
CO.(1904) LIMITED**

RIVER RD., BARKING, ESSEX

RIPpleway 2771 (P.B.X.)

New techniques* achieve-

-SMOKELESS COMBUSTION OF BITUMINOUS COAL

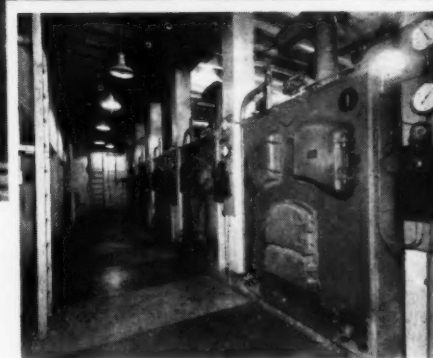
The boiler plant for these flats erected for the Leicester City Council consists of five Ideal sectional boilers fired by Iron Fireman under feed stokers. Since the stokers were modified by application of our Over-fire Air Jet System five years ago, almost completely smokeless combustion of bituminous coal has been achieved. The use of cheap small coal in smoke control areas is, therefore, permissible and a number of stokers thus modified are in operation in many of our industrial centres.



Iron Fireman

FIRST AND FOREMOST
Automatic Coal Stokers

* Our special Air Jet System can be applied to existing installations. Consult us for the cheapest method of firing boilers for steam or water



ASHWELL & NESBIT LTD.

BARKBY ROAD, LEICESTER

LONDON WC1—12 Great James St. BIRMINGHAM 4—12 Whittall St. MANCHESTER 13—182 & 184 Oxford Rd.
LEEDS 6—32 Headingley Lane. GLASGOW C3—15 Fitzroy Place, Sauchiehall St. BELFAST—14 Corporation St.

SUPERFOLD

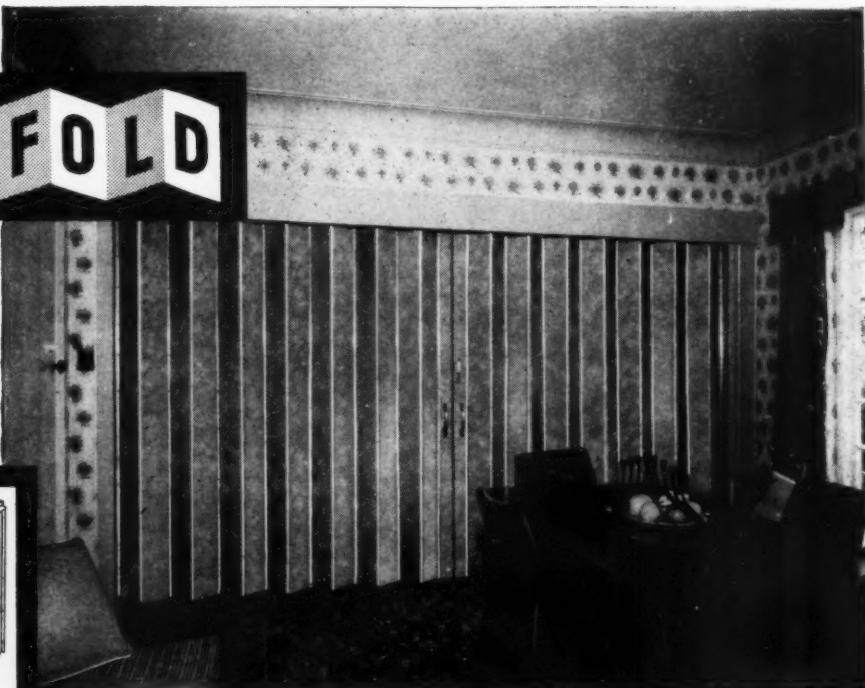
PARTITIONS FOR LONG LIFE

You can specify Superfold in the knowledge that in-built quality based on sound design will give lasting trouble-free service.

A.A. pickets on which door is built.

16⁵ G.M.S. hinge plates.

Leathercloth both sides.



CHOSEN BY ARCHITECTS—DESIGNED BY ENGINEERS

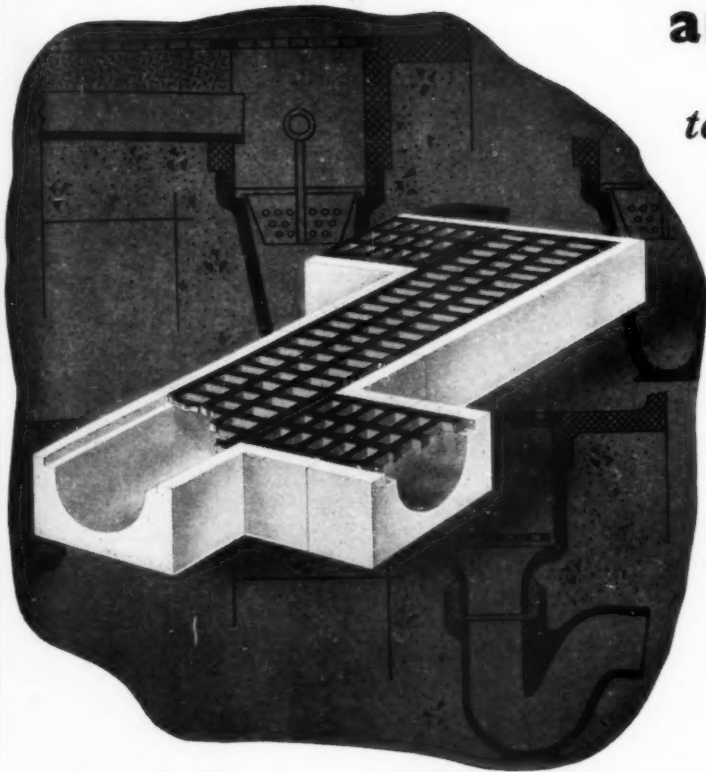
For schools, public and institutional buildings and for the discerning householder, Superfold provides all the answers. For full description and illustrations see our latest colour folder AJ.349—please write for a copy.

BOLTON GATE CO. LTD • BOLTON • LANCs.

Branches at: Belfast, Birmingham, Bristol, Cardiff, Dublin, Liverpool, London, Manchester, Newcastle-upon-Tyne.

The Problem of Channels and their Gratings

*tackled with down to earth
efficiency*



Channels and Fittings complete with
Gratings and Frames detailed and
selected to suit lay-out.

Assembled at one source and delivered
ready for installation

Detailed Layout Drawings submitted to suit
requirements

Illustrated Brochures sent on request

BROADS

4, SOUTH WHARF, PADDINGTON, W.2.
Tel: PADDINGTON 7061 (20 LINES)



LATTICE BEAMS

AND OF COURSE STANCHIONS

These beams are widely used in the modern planning of
factories, school classrooms, offices, canteens, etc.,
where spans of 20ft. to 40ft. are encountered.
They are most economic for all light roofing, combine
well with the many prefabricated slabs which span
directly between supporting joists.

Our Beam system gives
a maximum of standardiza-
tion to obtain economy
and yet at the same time
allows complete freedom to
architectural planning.



SOMMERFELDS

LTD.

Our Structural Design Office are pleased to advise and quote for
THE COMPLETE STEELWORK OF ANY PROJECT.

Please write for full details and data sheets.

Head Office: WELLINGTON SHROPSHIRE ENGLAND Tel: Wellington 1000
London Office: 167 VICTORIA ST LONDON S.W.1. Tel: Vic 8843 & 1000



ellular concrete blocks
are ideal building
material



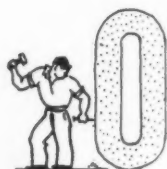
asy to transport, handle,
drill, cut, saw, chase,
lay and plaster



ightweight and load-
bearing with good
insulation qualities



onstant quality and
dimensions of these
factory made
products



ffers every advantage to
the discerning
architect



ow is the time to specify
for your future
projects

Density—50 lbs./cu. ft.
Crushing Strength —
600/800 lbs./sq. in.
Thermal Conductivity 'K' =
1.2 BTU/sq.ft./hr./°F/inch
Moisture Movement—.05%
Drying Shrinkage — .05%
Fire Resistance — Satisfies
B.S. 476; Part 1 for 4 hours

For further
information, samples
and prices :

CELCON LTD.

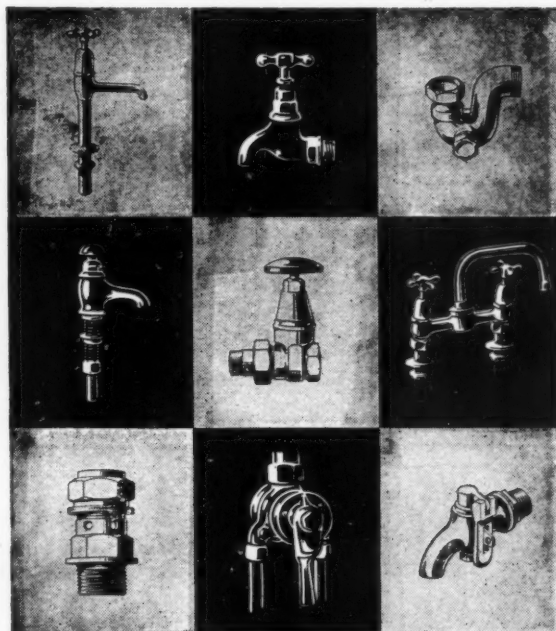
Universal House • 60 Buckingham Palace Road
Tel : SLOane 0234/7 London S.W.1

Peglers

THE RELIABLE SPECIFICATION

TOP QUALITY...LOW COST...WIDEST RANGE!

By always specifying Peglers plumbing fittings you can keep costs down and yet be sure you have made the best possible choice. A Pegler fitting can always be relied upon for performance and high quality finish. Prices are so remarkably low as Peglers employ the most modern large-scale production methods. High quality...low cost...widest range!—three good reasons for specifying plumbing fittings by Peglers, the largest manufacturers of plumbers' and engineers' brasswork in the British Commonwealth.



PEGLERS TRAPS, WASTES AND TAPS The Pegler range includes fittings for every possible purpose. Take taps for instance. These range from standard domestic screw-down bib and pillar cocks to the most highly specialised types, including those with special bottling noses, non-concussive self-closing types and special hairdressers' fittings.

'PRESTEX' COMPRESSION JOINTS 'Prestex' compression joints cost less than any comparable fittings and can help you to reduce housing costs considerably wherever copper or polythene tubes are used in plumbing installations. They are simply and quickly handled and fitted—only a spanner is needed to fix them—and they can be made and re-made using the same copper cone.

ARE YOU USING PEGLERS HANDY 'GROUP SPECIFICATION' METHOD, FOR PLUMBERS' BRASSWORK?

Peglers have published a handy manual which groups matching fittings under a single key number thus helping to greatly simplify your specification work. Write for it now and...



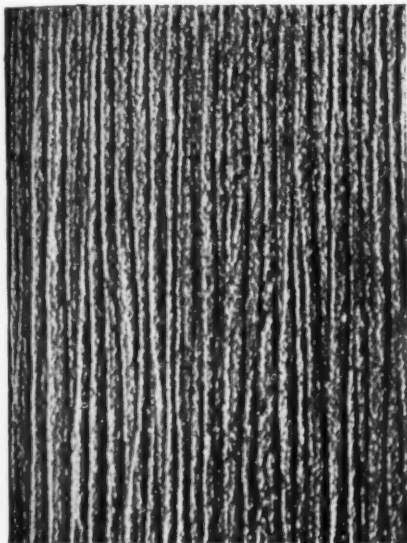
**SEND ALSO FOR YOUR COPY
OF THE NEW ENLARGED
'PRESTEX' CATALOGUE.**

PEGLERS LIMITED • DEPT AJ • BELMONT WORKS
DONCASTER.

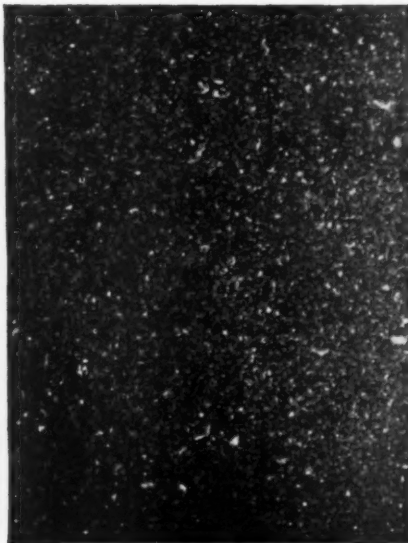
Also at: 28 THORP STREET, BIRMINGHAM 5.
London Office and Warehouse: Prestex House, Marshalsea Road, SE1

TGA G22

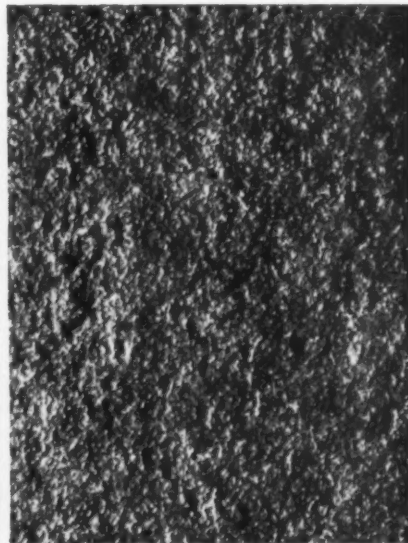
KIRKSTONE GREEN SLATE



Frame Sawn Finish



Fine Rubbed Finish



Riven Finish

KIRKSTONE Green Slate for Wall Cladding, Cills, Coping, Flooring, Paving, etc.

The slate from our quarries has been used for these purposes for over 50 years, and our accumulated experience is offered to Architects in the service of our Technical Staff and illustrated literature.

SERVICE IN SLATE

KIRKSTONE GREEN SLATE QUARRIES Ltd.

AMBLESIDE, WESTMORLAND

TEL: AMB 3270

British Standards

B.S. 1097 1418

DAMP-PROOF COURSING

provide for the inclusion of

Trinidad
LAKE ASPHALT

A valuable component of good mastic, on account of its remarkable consistency.

Further particulars on request from

**PREVITÉ
& CO. LTD.**

CAPEL HOUSE, 54 NEW BROAD
ST., LONDON, E.C.2.
Telephone: LONDON Wall 4313



**Beautiful
parquet
by
Inghams**

THE MODERN
FLOOR
SHEATHING

POINT ONE

18 in. by 18 in. die squared mounted mosaic panels of 64 blocks for fixing to any floor.

Dawn

Individual pieces 9 in. by 2½ in. for laying in any pattern on wood or hardboard.

SPECIFY PARQUET BY INGHAMS IF YOU REQUIRE :-

ELEGANCE:-

Natural solid timber—choice of decorative, durable hardwoods.

DURABILITY:-

Wear is taken by a tough easily maintained plastic finish. Point One panels can be supplied with this already applied.

ECONOMY:-

Low cost sub-floors only necessary. Flexibility of parquet allows it to "flow" over sub-floors not perfectly level. Special adhesives ensure rapid and easy laying. Easily cut to fit and needs no final sanding.

HYGIENE:-

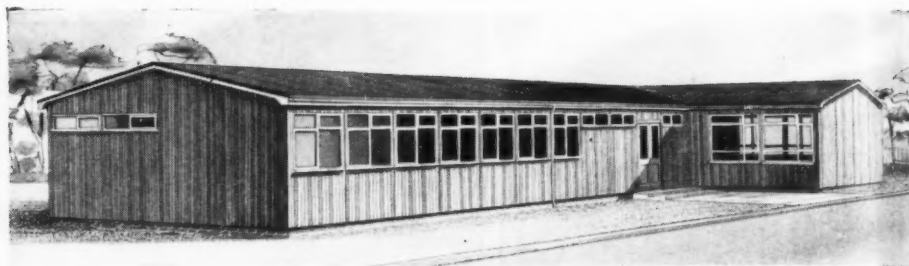
The tough plastic finish is resistant to most solvents, weak acids, etc. The ingress of dirt is prevented thereby permitting hospital cleanliness. The non-slip characteristics have obvious advantages.

Please write for full details to:-

R. E. INGHAM & CO. LTD. (Dept. A.J.), BURTON LEONARD,

Telephone: Bishop Monkton 316. HARROGATE, YORKS.

PLANNED EXPANSION



The special requirements of Local Authorities are the subject of careful study by Panel-Lastic Construction Co. Ltd., who have a large range of prefabricated buildings which incorporate very many variations in modern interior planning, so that any special need is almost certain to be met without delay. There is a special section dealing with the Education Programme, now nationally stepped up. The buildings illustrated could be erected with phenomenal speed and have a high thermostatic rating and a very high daylight factor.

★ Designs are available for the following :—

Canteens
Dormitories
Drawing Offices

Fruit Packing Stations
Gymnasiums
Industrial Offices

Laboratories
Pavilions and Dressing Rooms
Public Halls

Recreation Rooms
Schools
Tropical Buildings

For full details of buildings available for immediate assembly, with architects drawings and specifications write to:

PANEL-LASTIC Construction Co. Ltd.

Belvedere Works · Railway Terrace · Feltham · Middlesex · Telephone : Feltham 5761

Well worth considering

- STAIN PROOFING AND PRESERVING STONE MASONRY FACINGS
- CEMENT ADDITIVE FOR BONDING
- METAL PRIMING AND COLOUR COATING FOR IRON AND STEELWORK
- PRESERVING ASBESTOS-CEMENT
- BONDING AND HARDENING CONCRETE FLOORS
- DAMP PROOF MEMBRANES
- ROOF WATERPROOFING
- REMEDYING DAMP WALLS
- WATER STORAGE TANKS

WITH

Calcium plumbate; zinc chromate-iron oxide; asbestos-cement primers. High gloss non-bituminous protective coloured coatings (alkyd resin media). Bituminous black and coloured coatings. Mastic and semi-mastic sealing compounds. Silicone water repellents.

RITO, RITOLASTIC & ROMANITE *Products*

Send for descriptive Literature

Manufacturers ANDREW MAXWELL DIVISION (The Liverpool Borax Co. Ltd.)
Maxwell House, St. Paul's Square, Liverpool 3.

OFFICE PLANNING

—A SUBJECT

FOR AN EXPERT

As an architect designing and planning office buildings, you are no doubt often presented with such questions as "are you sure the working space provided can accommodate sufficient staff and equipment" and "will the equipment that you specify provide maximum efficiency in the space available?" As you know, floor space is an expensive item of overheads and must be utilised as efficiently as possible.

Naturally, it is unreasonable to assume that you are, or should become, an expert on office planning.

It is here that the knowledge, accumulated by Shannon consultants over many years of studying the marriage of function and design in office planning, can be of assistance to you.

Out of this experience, Shannon have produced their '846' unit furniture which combines these essential qualities; functional design based on concentrated Time and Motion Study coupled with the warmth and dignity of choice woods and the introduction of contemporary colours.

Before you are next confronted with an office planning problem of this nature, make sure you know what '846' planning can do and how attractive it looks. A fully trained Shannon consultant will advise you without charge or obligation, as a part of a service which has benefited the efficiency of many of today's finest office buildings.

Make sure that you have a copy of our booklet on record. If you have not already received a copy, attach the coupon to your letterheading and one will be sent to you by return.

THE SHANNON LIMITED

64 Shannon Corner, New Malden, Surrey

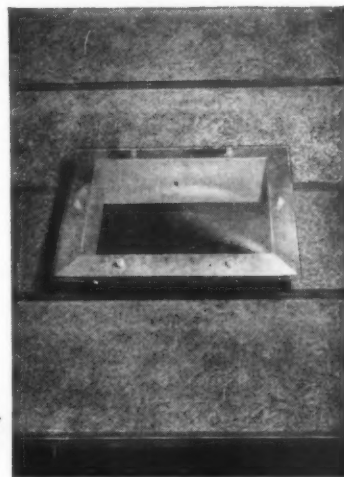
Please send me a copy of your booklet on Office Planning with '846' unit furniture. Mark it for the attention of:



Shannon Systems

O & M TO BRITISH BUSINESS

Seven symbols of progress



C.R.D.L.

C.R.D.L. is the symbol of a problem solved: the provision of adequate daylight over all areas of a building. Architects have sometimes been faced with costly beam trimming, cutting of roof insulation and decking, and the provision of heavy curbs; but these complexities disappear when C.R.D.L. is specified.

C.R.D.L. is the Thermacoust Prefabricated Dome Light which is supplied built into any of the five main types of Channel Reinforced Roofing Slabs. Total weight is less than a normal slab; width and tolerances are identical; and it is installed in the same simple fashion and is then ready for any normal roof finish. Any number may be fixed at minimum 4'0" centres in one direction by minimum 6'0" centres in the other.

The light opening is 1'9 1/2" x 2'4" internally; insulated curbs prevent condensation; the dome of clear "Perspex" or drip-proof material is raised slightly above the curbs to provide ventilation.

Please write for full particulars.

THERMACOUST LTD

ROOFING SLABS

20 ALBERT EMBANKMENT LONDON SE11

Telephone Enquiries (Southern)—London: RELiance 7281

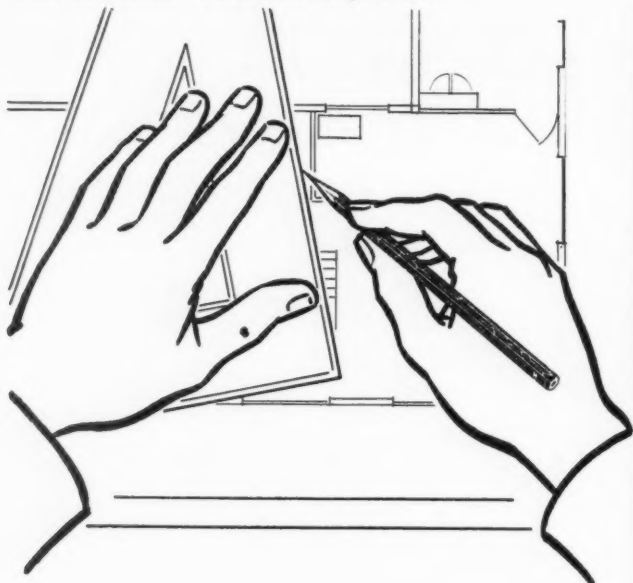
Telephone Enquiries (Northern)—Doncaster 54138 Ex. 25

When supported on inverted "T" or Thermacoust purlins no special fixing arrangements are required. Flat-top purlins or R.S.J.'s call for Type 1 site fixing clips.

Slabs may also be provided with any of the exclusive range of Thermacoust Pre-Clips for fixing copper, SNAPRIB aluminium, slates or tiles.



A member of the Cementation Group of Companies



"To a chap like me—
and I'm proud of my work—my pencil's
my living.
The pencils I use have to stand up to fast
hard work, their grading's got to
be absolutely spot on—not almost
or nearly but bang on the dot every
time.
The leads must hold their points
and flow smoothly throughout a long line—
no crumbling or 'clinkers' mark you!—
and if I erase a line it must go cleanly—
there's no 'furrow' left in my paper
so you won't find ghost lines in prints
made off my drawings. As a matter of
fact you can tell from a print when it is
my drawing—the print's always first class."

"What pencils do I use?"

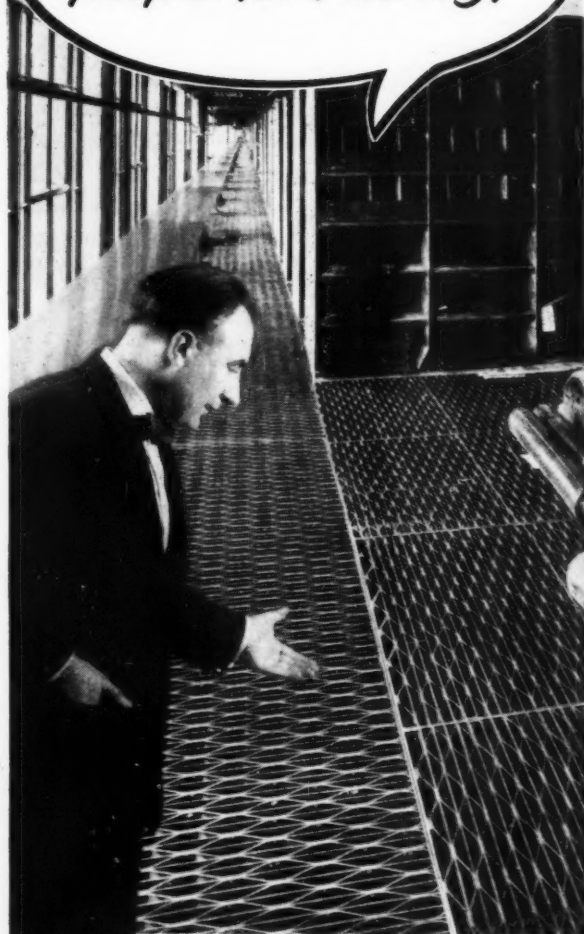
"Venus drawing pencils of course, the
ones with the crackle finish!—how else do
you think I keep up my high standard?"

VENUS
DRAWING
PENCILS

**VENUS Drawing pencils are made in 17 accurate
grades from 9H to 6B.*

THE VENUS PENCIL CO., LTD., LOWER CLAPTON RD., LONDON, E.5

*STEELWAY are
certainly the right
people for flooring!*



STEELWAY specialise in the design
and construction of Floorways,
Walkways and Stairways; purpose
made to fit your particular
requirements or plans.

consult

STEELWAY
LIMITED
WOLVERHAMPTON

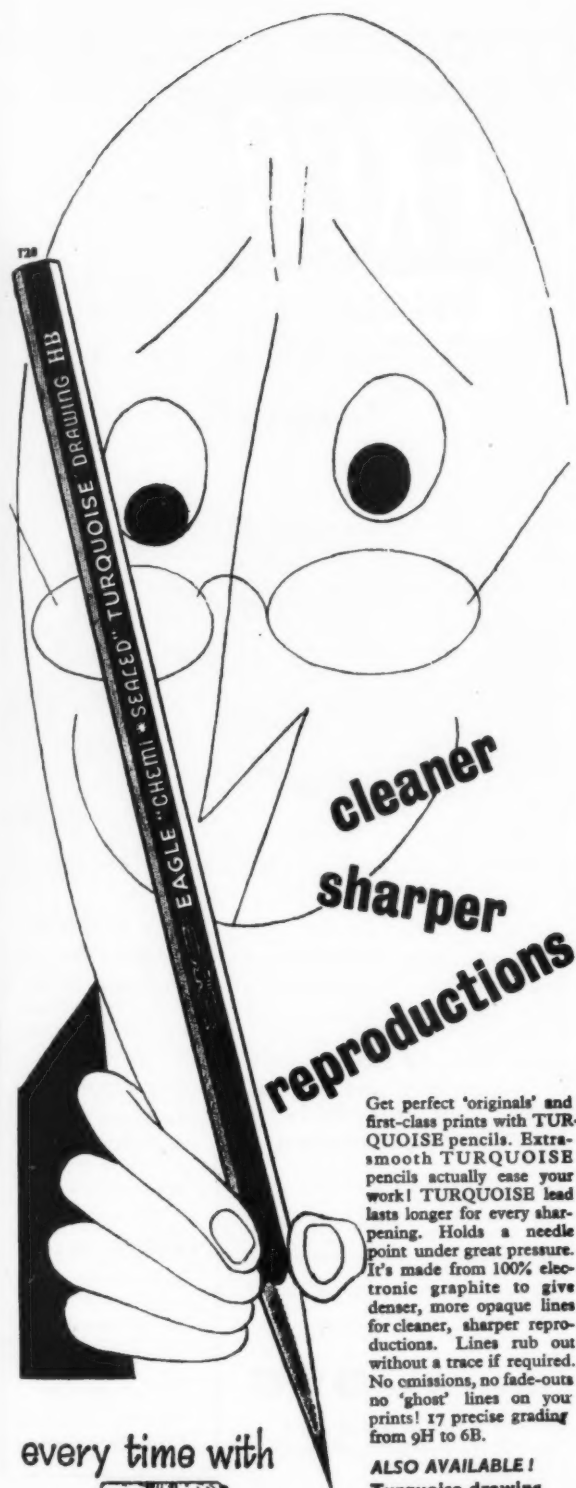
**for complete installations in
Steel or Aluminium Alloy**

QUEENSGATE WORKS, WOLVERHAMPTON

TEL : 21633 (2 lines)

London Office: 25 Hanover Square, W.1. Tel: Mayfair 8783 & 8788

Glasgow Office: 74 York Street, C.2. - Tel: Central 3467



**cleaner
sharper
reproductions**

Get perfect 'originals' and first-class prints with TURQUOISE pencils. Extra-smooth TURQUOISE pencils actually ease your work! TURQUOISE lead lasts longer for every sharpening. Holds a needle point under great pressure. It's made from 100% electronic graphite to give denser, more opaque lines for cleaner, sharper reproductions. Lines rub out without a trace if required. No omissions, no fade-outs no 'ghost' lines on your prints! 17 precise gradings from 9H to 6B.

ALSO AVAILABLE!
Turquoise drawing leads 2B to 6H

every time with



**TURQUOISE
pencils**

9d each
8/3 per dozen

EAGLE PENCIL COMPANY, ASHLEY ROAD, TOTTENHAM N.17

**EVERYBODY
KNOWS A
STELRAD!**



What a Corker!



In the building programme of New Zealand Stelrad radiators are prominently featured. They have been specified for many different buildings, and include both wall and column types. The Stelrad range covers every building need from angled wall radiators to column radiators curved for bay window fixing. The dimensions and heat emissions of each type and size are clearly set out in our catalogue to assist you in your calculations. May we send you the latest edition?

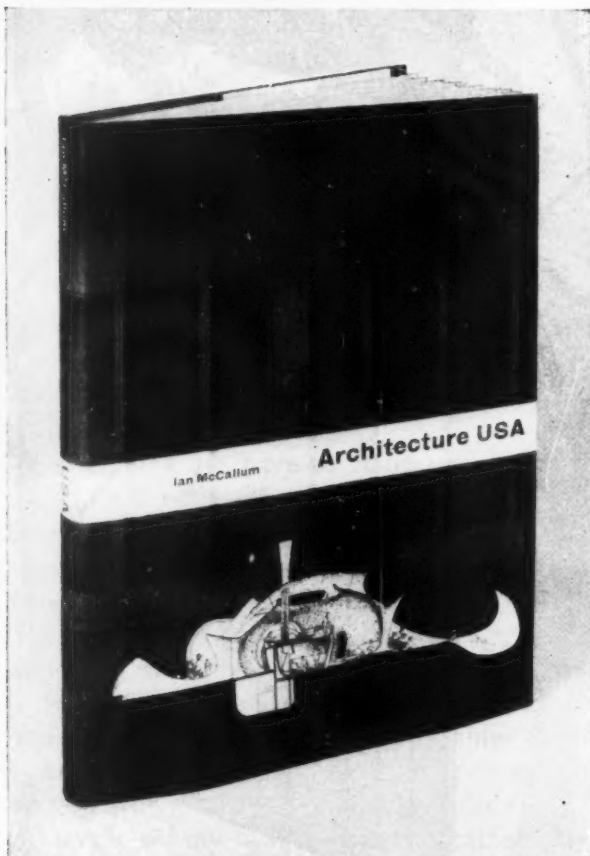
**STEEL RADIATORS
LIMITED**

BRIDGE ROAD, SOUTHALL, MIDDLESEX.

Telephone: SOUthall 2603

Architecture USA by Ian McCallum

SINCE 1950 AMERICA, a land of opportunity and a land of achievement, has attained a dominant place in world architecture. But it has remained largely unknown territory for want of a book that sets out to map the whole field.



Architecture USA remedies this omission by surveying the field in breadth and depth, studying not only the major architects in America today, but also their antecedents—the great pioneers and the social and historical developments that have carried their ideas to fruition. Here, in close enough juxtaposition to make comparisons possible and influences clear, are H. H. Richardson and Louis Sullivan and Frank Lloyd Wright, the pioneers of the Middle West; Greene and Greene and William Maybeck, pioneers of the West Coast; Raymond Schindler, Richard Neutra, Gropius, Breuer, Mies van der Rohe, the Europeans who have made an heroic contribution to US architecture; Edward Stone, Philip Johnson, Charles Eames, Buckminster Fuller, Paul Rudolph and others who have helped to make modern American Architecture both modern and American.

In **Architecture USA**, Ian McCallum has combined first-hand experience with extensive research to draw a group portrait of the most stimulating assembly of architectural minds in the world today.

Size 11½ × 8½ ins., 216 pages, with 474 halftones and 90 line illustrations and a bibliography. 63s. net, postage 1s. 9d.

THE ARCHITECTURAL PRESS, 9-13 Queen Anne's Gate, SW1

Published in USA by REINHOLD PUBLISHING CORPORATION, New York; and in AUSTRALIA and NEW ZEALAND by HORWITZ PUBLICATIONS, Sydney.

modern practical



The famous Ekco 'Belvedere' is a toilet seat of the highest quality—good looking, practical, and completely hygienic. It carries a 10 year guarantee and is available in 16 permanent and stainless colours. The 'Belvedere' is the ideal toilet fitting for new houses.

- * Lid completely encloses seat
- * Fitted with non-porous 'screw-in' rubber buffers
- * All fittings chromium plated
- * Available with straight or cranked pillar hinges
- * Easily and quickly installed

RETAILS FROM **61/6**

We shall be pleased to send you a brochure of the complete range of Ekco Quality Toilet Seats.

Also available:

EKCO 'SLIMLINE'

Design Award winner in warm-to-the-touch polythene. A choice of 6 delightful colours.

EKCO 'JUBILEE'

Designed to meet popular requirements. In 16 permanent colours. 10 year guarantee.

EKCO 'CAMELOT'

A lightweight seat providing a high-quality finish at reasonable cost. 7 colours.

Also shown in the illustration above is the EKCO linen bin/stool.

EKCO

**PLASTICS
TOILET WARE**

EKCO PLASTICS LTD • SOUTHEND-ON-SEA • ESSEX

WPS 481

CLASSIFIED ADVERTISEMENTS

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

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

AIR-MAIL SERVICE available on request.

In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

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

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/494/5a), County Hall, S.E.1. 9076

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/527/5a), County Hall, S.E.1. 9077

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 placing according to experience. Applications should be addressed to the City Architect and Planning Officer, 20, Trongate, 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

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 13th May, 1960.

J. HENWOOD JONES,
Clerk of the Council. 9016

Council Offices,
Alfred Squire Road
Wednesfield,
Staffs. 9016

BOROUGH OF HORNSEY

TWO ARCHITECTURAL ASSISTANTS required. Salary Grade A.P.T. IV/V (£1,065 to £1,375, plus London weighting). Commencing salary according to age and experience.

The Council have a varied and interesting programme including a New Central Library, Public Mortuary and housing work in connection with a Redevelopment Area and there are prospects of employment for a considerable period.

Application forms from Borough Engineer & Surveyor, Town Hall, Crouch End Broadway, N.3, to be returned by noon on Friday, the 20th May, 1960.

W. B. MURGATROYD,
Town Clerk. 9963

Town Hall,
Hornsey, N.8. 9963

BOROUGH OF SOLIHULL

APPOINTMENT OF ASSISTANT ARCHITECT

Applications are invited for a post as an Assistant Architect in the Borough Surveyor's Department at a salary in accordance with A.P.T. Grade IV (£1,065-£1,220 per annum), commencing according to experience and qualifications.

Solihull has a population of approximately 90,000 and is still developing rapidly, there being a large programme of varied schemes in hand.

Housing accommodation will be provided as soon as possible and half removal expenses paid.

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

Applications, giving full particulars as to age and qualifications and 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 23rd May, 1960.

W. MAURICE MELL,
Town Clerk. 9969

The Council House,
Solihull.

27th April, 1960.

CITY OF WORCESTER

PROPOSED GIRLS' GRAMMAR SCHOOL AND
PROPOSED TEACHERS' TRAINING COLLEGE

APPOINTMENT OF CLERKS OF WORKS

Applications are invited for these two temporary appointments from men who have had considerable experience in the building trade. Work on both projects has very recently commenced and is expected in each case to take approximately two years to complete.

The salary for the appointments is £1,000 per annum.

The successful candidate will be required to undergo a medical examination.

Applications, stating age, qualifications and experience, and giving the names of two referees, are to be addressed to the City Engineer and Surveyor, 22, Bridge Street, Worcester, so as to reach him by 17th May.

BERTRAM WEBSTER,
Town Clerk. 9962

Guildhall,
Worcester.

27th April, 1960.

BOROUGH OF MANSFIELD

APPOINTMENT OF ARCHITECTURAL

ASSISTANT

(Special Grade £785-£1,070).

Applications are invited for the above vacancy in the Borough Engineer and Surveyor's Department.

Applicants should be qualified in accordance with paragraph (ix) (c) of the scheme of conditions of service; commencing salary will depend on experience. House on service tenancy may be rented if required. It is the Corporation's wish that the person appointed should live within the Borough.

Applications, stating age, marital status, training, past and present appointments with salary, and experience, together with the names of three referees, should be sent to the Borough Engineer and Surveyor, Carr Bank, Mansfield, to arrive not later than Monday, the 16th May, 1960.

A. C. SHEPHERD,
Town Clerk. 9994

Carr Bank,
Mansfield.

15th May, 1960.

METROPOLITAN POLICE

RECEIVER'S OFFICE

requires

SANITARY ENGINEERING DRAUGHTSMEN for interesting and varied work in connection with Police Housing and Non-housing Building Programmes. £570 p.a. at age 21 rising by annual increments to a maximum of £900 p.a. Starting pay according to age. Maximum age entry point—£785 p.a. (age 28).

Applicants to have Ordinary National Certificate as a minimum qualification. Previous experience on similar work would be considered an advantage.

Apply in writing to: Room 578 (AJ), Receiver's Office, New Scotland Yard, S.W.1. 9997

BEESTON AND STAPLEFOLD URBAN
DISTRICT COUNCIL

JUNIOR ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment in Grade II (£765-£880), the commencing salary to be according to experience. Applications, accompanied by two testimonials, should be forwarded to the Housing Architect, Town Hall, Beeston, Nottingham, not later than 17th May, 1960.

H. D. JEFFRIES,
Clerk of the Council. 9972

Town Hall,
Beeston.

15th May, 1960.

BOROUGH OF BACUP

APPOINTMENT OF ARCHITECTURAL

ASSISTANT

Applications are invited for the above appointment in the Borough Engineer's Department. Salary will depend upon age and experience in accordance with the National Scale to a maximum of £1,070 per annum for a qualified Assistant.

Housing accommodation will be available, if necessary.

Conditions of appointment and application form obtainable from me. Closing date 21st May, 1960.

A. D. BOND,
Town Clerk. 9996

Municipal Offices,
Bacup.

15th May, 1960.

ADMIRALTY—NAVY WORKS DEPARTMENT

ARCHITECTURAL AND CIVIL

ENGINEERING ASSISTANTS

Vacancies exist in Navy Works Department Drawing Offices for Architectural and Civil Engineering Assistants as shown. Posts are non-pensionable. Opportunities for transfer to Established Staff will occur.

ENGINEERING ASSISTANTS.

Vacancies exist at Pinner (Middlesex), Portsmouth, Devonport, Liverpool, Chatham, Rosyth, Greenock, Macrihanish and Glen Douglas, and occur at establishments elsewhere in the United Kingdom from time to time.

Applicants must be competent Draughtsmen and experienced designers in one or more of the following types of civil engineering works:— structural steelwork; reinforced concrete; dock and harbour works; airfield construction; oil fuel schemes; roads, rail services and water supplies. O.N.C. or equivalent qualification. For the posts at Macrihanish and Glen Douglas preference will be given to candidates with surveying and setting out experience.

ARCHITECTURAL ASSISTANTS.

Vacancies exist at Pinner (Middlesex) and Portsmouth. Applicants must be competent Draughtsmen and will be required for work with Professional Architects on the preparation of designs for a wide range of new works, including new housing designs and estate layouts; all forms of accommodation; specialised technical buildings and industrial buildings in H.M. Dockyards. Preference given to candidates studying for professional qualifications.

Salary (National Rate—subject to slight variation dependent on location): starting from £550 p.a. (at age 21) to £760 p.a. (28 and over); maximum of scale—£875 p.a. Opportunities occur for promotion to leading grade—salary maximum £1,025 p.a. National Rate.

Five-day week. Annual leave 18 days rising to 22 after 10 years.

Consideration will be given to successful candidates being granted assistance to obtain professional or technical qualifications.

Candidates, who must be British subjects, are invited to apply, in writing (giving details of experience), to Director General, Navy Works, Admiralty, Chamberlain Way, Pinner, Middlesex.

Interview will be arranged locally. 9851

COUNTY BOROUGH OF SOUTHAMPTON

BOROUGH ENGINEER AND SURVEYOR'S

DEPARTMENT

Applicants are invited for the following appointments:—

(i) ASSISTANT QUANTITY SURVEYOR. Applicants must be chartered quantity surveyors, preferably with experience in municipal housing including multi-storey flats and shopping centres.

(ii) ASSISTANT ARCHITECT. Applicants must have passed Parts I and II of the R.I.B.A. Final examination and have had experience in housing design and construction and estate layout, preferably with a municipal authority.

Salaries for the above appointments within the grading for Special Classes of Officers (£785-£1,070) according to experience and qualifications (a commencing salary of £950 is envisaged).

(iii) ARCHITECTURAL ASSISTANT, A.P.T. Grade II (£765-£880). Applicants are required to have passed the Intermediate R.I.B.A. examination or its equivalent at one of the recognised schools of architecture, and preferably have had experience in local government housing.

The appointments are subject to N.J.C. conditions of service.

Housing accommodation available in approved cases and approved removal expenses reimbursable up to a maximum of £50.

Apply on application forms obtainable from the Borough Engineer and Surveyor, Civic Centre, Southampton, returnable by Monday, 16th May, 1960. 9984

WORCESTERSHIRE COUNTY COUNCIL

COUNCIL ARCHITECT'S DEPARTMENT

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

Forms of application and further particulars should be obtained from L. C. Lomas, F.R.I.B.A., County Architect, 14, Castle Street, Worcester, not later than 20th May, 1960. (Y.266.) 9961

LLANELLY RURAL DISTRICT COUNCIL

COUNCIL ARCHITECT'S DEPARTMENT

Applications are invited from suitably qualified persons for the post of ARCHITECTURAL

ASSISTANT within A.P.T. Grade I (£610-£765).

The applicants should have been trained in a suitable office, and have experience in design of houses, surveying and levelling, and preparation of layouts for housing schemes.

N.J.C. Service Conditions. Post pensionable.

Medical examination.

Application, in plain envelope endorsed "Architectural Assistant," to be made to the Clerk of the Council, Castle Buildings, Llanelly, Carm., to reach him not later than Thursday, the 26th May, 1960. 9939

THE UNIVERSITY OF LIVERPOOL

DEPARTMENT OF BUILDING SCIENCE

DIPLOMA IN BUILDING SCIENCE

A full time course consisting of lectures, laboratory and drawing office work, leading to the Diploma in Building Science will be offered by the University in Session 1960-61. The course will extend over three terms commencing in October, 1960. Applications for admission are invited from persons of graduate status in Civil Engineering, Architecture or Building. Further particulars may be obtained from the Registrar, The University, Liverpool, 3. 1000

APPLIED LETTERS

All sizes, types and materials for internal or external use. Illuminated letters and box signs. Brochures sent on request.

WARD & CO. (LONDON) LTD.

6 - 12 WILDER ST. BRISTOL 2. TELEPHONE BRISTOL 21536

for BUILDING DECORATING MAINTENANCE and REPAIRS

'phone Waterloo 5474

W. & M. NEGUS LTD.
Station Works,
KING JAMES STREET, S.E.1
and DOYLE ROAD,
SOUTH NORWOOD, S.E.25.
(Addiscombe 3427)

NEGUS
of SOUTHWARK

Garages by MARLEY

Made of high grade reinforced concrete with asbestos cement roofing, these garages are strong and proven. Of unsurpassed appearance and spacious dimensions, they are fire and rot proof and virtually maintenance free.

All the necessary components are supplied for assembly by unskilled labour. Alternatively they can be supplied and erected by Marley experts. Prices from £58 cash or attractive credit terms.

All garages may be extended in length by multiples of 1' 4"



MARLEY MINOR

Width 7' 10"
Lengths 11' 2" to 19' 5"

MARLEY MEDIUM

Width 9' 2"
Lengths 14' 1" to 22' 4"



MARLEY MAJOR

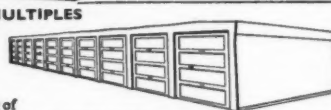
Width 11' 10"
Lengths 14' 1" to 22' 4"

MARLEY MAGNA

Width 13' 2"
Lengths 14' 1" to 22' 4"

MARLEY MULTIPLES

Width 8' 6"
Lengths 15' 8" and 17' 3" Choice of up-and-over doors, or traditional timber.



TILED ROOF GARAGES

Width 9' 2"
Lengths 14' 1" to 22' 4"



MARLEY CONCRETE COAL BUNKERS

In 6, 9, 11, 18, 22, 27, 33, 36 and 44 cwt. capacities. Prices from £4 15 0 plus carriage

Write to Dept. A30 at your NEAREST Works for illustrated brochures.

MARLEY CONCRETE LIMITED

Peasmarsh, Guildford, Surrey
Shurdington, Nr. Cheltenham
Waterloo, Poole, Dorset

Guildford 69171
Shurdington 334/5
Broadstone 696

Our London Showrooms are at 251 Tottenham Court Road, W.1
Showgrounds at Cheltenham, Poole and Guildford

criterion of quality....

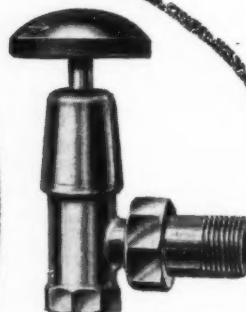


GATE VALVE

No. 64 Cast Gunmetal Gate Valve in sizes 1/2 in. to 4 in. inc.

'CRESCENT' designed brass fittings

Open the way to steady profit flow by stocking CRESCENT Brass and Gunmetal fittings. Made to uncompromising standards the CRESCENT range meets the latest requirements in domestic and industrial applications. Write for full details . . . to-day!



RADIATOR VALVE B.S.S. 2767

No. 99 Chromium Plated Easyclean Angle Radiator Valve in 1/2 in., 3/4 in. and 1 in. sizes.

JOHN WEBB & CO. LTD.

Crescent Works, Hockley, Birmingham, 19
Telegrams: "Cobweb" Birmingham Telephone: Northern 3904 (5 lines)
Telex No. 33-468 Starline Birmingham
London Depot and Warehouse: 13 Gt. Guildford St., S.E.1. Waterloo 7473
Branch Works: Monusk Works, Brynmawr, Breck.



INDUSTRIAL ORTHOPAEDIC SOCIETY THE MANOR HOUSE, HOSPITAL NORTH END ROAD GOLDERS GREEN, N.W.11.

An experienced CLERK OF WORKS of proved ability required for extension project. Anticipated starting date June 1960. Contract period about two years.

Write giving full details of experience, salary requirements, availability and references to:—

W. F. PENDRILL,
General Secretary.

The Manor House Hospital,
Golders Green, N.W.11.

1092

METROPOLITAN BOROUGH OF BATTERSEA

Applications are invited for the following appointments to the permanent staff:—

(a) ASSISTANT BUILDING SURVEYOR,
A.P.T. II (£765—£880 per annum).

(b) JUNIOR ASSISTANT BUILDING SURVEYOR,
A.P.T. I (£610—£765 per annum).

London weighting (£30 per annum at age 26 and over) is payable in addition for each appointment. The commencing salary in each case will be according to qualifications and experience. Applicants for appointment (a) should have passed the Intermediate Examination of the Royal Institution of Chartered Surveyors (Building Sub-division). The appointments are subject to the Local Government Superannuation Acts, 1937-53. Further particulars and forms of application obtainable from the Borough Engineer and Surveyor, Town Hall, S.W.11. Closing date 23rd May, 1960.

9895

HUYTON-WITH-ROBY URBAN DISTRICT COUNCIL

ARCHITECTURAL AND HOUSING DEPARTMENT

Applications are invited for posts in the above Department as follows:—

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

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

Candidates for post (a) should be associate members of the R.I.B.A. and candidates for post (b) should have passed the Intermediate Examination of the R.I.B.A.

The work of the Department consists of a large Housing and Capital Works programme.

The appointments will be subject to the Local Government Superannuation Acts and the National Conditions of Service, and will be terminable by one calendar month's notice in writing on either side.

Applications, stating age, qualifications and experience, together with the names of two persons to whom reference can be made, should reach R. T. Chappelle, A.R.I.B.A., Architect and Housing Director, Archway Road, Huyton, not later than Monday, 23rd May, 1960.

Canvassing disqualifies.

D. WILLGOOSE,
Clerk of the Council.

Council Offices,
Derby Road,
Huyton.

9912

RICKMANSWORTH URBAN DISTRICT COUNCIL

APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above permanent appointment in the Engineer and Surveyor's Department. Salary on Grade A.P.T. II (£765—£880).

Applicants must be experienced in the preparation of plans and specifications with particular reference to the design of Council Houses. Applicants must state whether they wish the Council to provide housing accommodation and any such request will be considered. Applications endorsed "Architectural Assistant," giving the names and addresses of two referees, to be delivered to the undersigned.

C. G. RANSOME WILLIAMS,
Clerk of the Council.

Council Offices,
Rickmansworth,
Herts.

1121

WESSEX REGIONAL HOSPITAL BOARD

Applications are invited for the following posts in the Board's Architect's Department to deal with a substantial expansion of its hospital building programme:—

(a) ASSISTANT REGIONAL ARCHITECT (£1,775 × £50 (1) × £75 (2) × £100 (1)—£2,075), to be responsible for work on major schemes and if necessary to act as liaison to firms of private Architects commissioned by the Board.

(b) PRINCIPAL ASSISTANT ARCHITECT (£1,665 × £50 (1) × £75 (2) × £85 (2)—£2,035).

(c) SENIOR ASSISTANT ARCHITECTS (£1,300 × £50 (5)—£1,600).

(d) ASSISTANT ARCHITECTS (£905 × £35 (1) × £45 (6) × £50 (2)—£1,310).

Applicants must be Registered Architects. Previous hospital experience is not essential as the successful candidates for the senior posts will be given the opportunity of attending a postgraduate training course at the R.I.B.A. from the 11th to 16th July, 1960, followed by other courses later in the year.

The work offers excellent opportunity for gaining experience in the whole field of hospital architecture and covers all stages from sketch plans to the supervision of construction. The proposed expansion of the Board's building programme ranges from major adaptation schemes to comprehensive new hospital projects and includes all types of medical ancillary departments and domestic buildings.

(e) PRINCIPAL ASSISTANT ENGINEER (£1,655 × £50 (1) × £75 (2) × £85 (2)—£2,035).

(f) ASSISTANT ENGINEERS (MECHANICAL) (£910 × £35 (1) × £40 (2) × £45 (5) × £50 (7)—£1,600).

Candidates for post (e) must be Corporate Members of the Institution of Mechanical Engineers. For posts (f) preference will be given to applicants who are Corporate Members of the Institution of Mechanical Engineers and the starting salary for candidates holding this qualification will be £1,160 per annum. Applications will be considered from Members of the Institute of Heating and Ventilating Engineers but the maximum will be restricted to £1,400 per annum. For Graduate Members of the Institution of Mechanical Engineers the maximum is £1,205 per annum.

These appointments offer an excellent opportunity for gaining experience in the installation of mechanical engineering services in new hospital buildings or the replanning of existing services for major adaptations.

Applications stating age, qualifications and experience, with names of three referees to the Secretary, Highcroft, Romsey Road, Winchester, by the 25th May, 1960.

1122

BOROUGH OF WATFORD

Watford is a pleasant, thriving town in South West Hertfordshire, in the Green Belt and with easy access to the open country. Although within easy reach of London it has a distinct civic consciousness and cultural, educational, shopping and transport facilities are excellent. The Corporation has a large number of projects in hand and envisaged, including Swimming Bath, Library extensions, multi-storey buildings, Flatted factories and housing and expansion of the Borough Engineer, Surveyor and Architect's Department is contemplated to handle these schemes. Applications are invited from suitably qualified candidates for:—

(a) ASSISTANT ARCHITECT. Salary within Grade A.P.T. IV (£1,065—£1,220 per annum). (b) ARCHITECTURAL ASSISTANTS. Salary within Grades A.P.T. I, II, III (£765—£1,065). (c) ARCHITECTURAL ASSISTANT. Salary within Grades A.P.T. I, II (£610—£765). The Assistant appointed to post (a) will be a Section Leader and will carry a considerable amount of responsibility. Commencing salaries will be commensurate with experience and ability and housing accommodation will be provided for those requiring it. Applications to be sent to the undersigned not later than 31st May, 1960.

F. C. Sage, A.M.I.C.E., M.I.Mun.E., Reg. Architect, Borough Engineer, Surveyor and Architect, Town Hall, Watford, Herts.

1126

COUNTY BOROUGH OF SOUTH SHIELDS ASSISTANT ARCHITECTS

Applications are invited for Assistant Architects in the Borough Engineer's Department. Salary will be in accordance with Grades A.P.T. I/SS (£610—£1,070). Placing within these grades will be in accordance with experience.

Housing accommodation may be made available to successful applicants if necessary.

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

Application forms can be obtained from the Borough Engineer's Department, Town Hall, South Shields and should be returned by 10 a.m. on Thursday, 9th June, 1960.

R. S. YOUNG,
Town Clerk.

9991

AYCLIFFE DEVELOPMENT CORPORATION APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment at a salary within Grade A.P.T. III of the Whitley Council for New Towns Staff scale of salaries, according to qualifications and experience. The salary ranges from £880 p.a. to £1,065 p.a.

Appointment subject to N.J.C. Conditions, superannuation, medical examination and to one month's notice, in writing, on either side.

Housing accommodation, if required.

Applications stating age, qualifications and experience, together with the names of two referees to arrive not later than Saturday, 21st May, 1960.

A. V. WILLIAMS,
General Manager.

Churchill House,
Newton Aycliffe,
Nr. Darlington.

1125

COUNTY BOROUGH OF SOUTHPORT

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

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

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

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

(d) TEMPORARY TOWN PLANNING ASSISTANT, Special Grade, salary £785—£1,070. Applicants should be capable, with minimum supervision, of undertaking the first review of the Town Development Plan which includes:—

Land Use Survey of the Borough, Preparation of Maps and Tables, Revision of Written Analysis and Written Statement.

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

Note:—Successful applicants for Temporary Posts (d) and (e) will be required for at least two years.

Application forms may be obtained from the Borough Architect and Town Planning Officer, 29, 105, Lord Street, Closing date for the receipt of applications is 28th May.

1095

WEST SUFFOLK COUNTY COUNCIL

Applications are invited for the post of SENIOR ASSISTANT ARCHITECT within Grade "A" (£1,175—£1,390).

N.J.C. Service Conditions; post pensionable; medical examination.

Application forms obtainable from the County Architect, 13, Westgate Street, Bury St. Edmunds, to be returned as soon as possible.

1097



REAR VIEW → **HOOD**

OUTLET

SECTION OF FIRE-PLACE, showing Hood and Outlet assembled together.

IS BEST QUALITY FIREBRICK MATERIAL

GUTLET

- Predetermines entrance to flue.
- Restricts throat to correct size.
- Correctly splayed throat aperture.
- Smoke passes unimpeded into flue.

HOOD

- Seals off fireback to lintel.
- Resists heat to back of surround.
- Shelf remains cool.
- Eliminates smoke pocket.

Write for Fully Illustrated Leaflet Stocked by Leading Merchants Everywhere

BOWENS (REFRACATORIES) LIMITED

CLATTERSHALL FIRECLAY & BRICKS, STOURBRIDGE.
Tel.: BRIERLEY HILL 78101-78102.

For Smooth Entrances...

... If all "exits and entrances" were made through doors hung on Baldwin Cast Iron Hinges the world would be a quieter place.

BALDWIN BUTT HINGES are smoother in action and last longer, because the solid drilled knuckles give large bearing surfaces and can never unwrap.



See the name **BALDWIN** on every hinge. Illustrated list of full series on request from Sole Makers.

BALDWIN
CAST IRON BUTT HINGES

ARCHIBALD KENRICK & SONS LTD., WEST BROMWICH, STAFFS.

**BOROUGH OF GOSPORT
JUNIOR QUANTITY SURVEYOR**

Applications are invited for the above appointment, Grade A.P.T. I (£610-£765 per annum). The successful applicant would be required to assist in the preparation of Bills of Quantities, Valuations and measurement of works in progress and settlement of Final Accounts.

The appointment is superannuable, subject to the National Scheme of Conditions of Service, a medical examination, and one month's notice on either side.

Applications giving age, full details of experience and the names of two referees should be forwarded to the undersigned, to be received by not later than first post Tuesday, the 24th May, 1960.

EDWARD ADDENBROOKE,
Town Clerk.

Town Hall,
Gosport.
5th May, 1960. 1123

LANARK COUNTY COUNCIL

ARCHITECTURAL ASSISTANTS (Qualified A.R.I.B.A.) required for County Architect's Department with headquarters at Motherwell, on the following J.I.C. Salary Scales: Admin. "D" £1,040-£1,120; Professional Assistant, £795-£1,075. Placing on both scales may be given according to qualifications and experience. Employment offers wide scope in development of modern building programme.

Medical examination. Superannuation. No canvassing.

Applications stating age, qualifications and experience, together with names and addresses of three referees, should be lodged with County Clerk, P.O. Box No. 1, Glasgow, within 14 days of advertisement. 1093

**PADDINGTON BOROUGH COUNCIL
BUILDING SURVEYING ASSISTANT**

(£650-£805 A.P.T. I)

Starting salary according to qualifications and experience which should include repair, adaptation and conversion of civic and residential properties. Candidates should be capable of preparing plans, specifications, costs. Five-day week. Applications stating age, qualifications, present and past appointments, names of two referees, should reach me by 23rd May, 1960 (quoting A.475).

W. H. BENTLEY,
Town Clerk.

Town Hall,
Paddington, W.2. 1091

**METROPOLITAN BOROUGH OF HAMPSHIRE
Require PERMANENT MAINTENANCE OFFICER** in Housing Architect's Department. Salary A.P.T. I/II (£610-£880 plus London weighting). Candidates must have sound knowledge of Building Construction, experience in Preparation of Specifications for Maintenance Works and have passed an Examination of an Appropriate Institute. No housing provided. Applications giving experience, previous appointments and names of two referees to Town Clerk, Town Hall, Havestock Hill, N.W.3, by May 20, 1960. 1087

**FAREHAM URBAN DISTRICT COUNCIL
(Population 58,000. Area 12,000 Acres)**

ARCHITECTURAL ASSISTANT

Applications invited for above appointment in Architects' Section of Engineer and Surveyor's Department. Salary Grade A.P.T. I (£610-£765). Candidates must have suitable experience and a sensitive approach to modern design and have passed the Intermediate R.I.B.A. examination or its equivalent at one of the recognised schools of architecture.

Appointment is superannuable and subject to the National Scheme of Conditions of Service, a satisfactory medical examination, and one month's notice on either side.

Applications stating age, qualifications and experience and past and present appointments, to Engineer and Surveyor, Westbury Manor, West Street, Fareham, Hants, by 31st May, 1960.

B. W. RANDS,
Clerk to the Council.

"Merton,"
5, Grove Road,
Fareham, Hants. 1082

**HOSPITAL BUILDING PROGRAMME
REBUILDING OF ST. THOMAS'S HOSPITAL
ARCHITECTS**

(a) **SENIOR ASSISTANT ARCHITECTS**, salary scale £1,300 x £65 to £1,600 plus £50 London weighting.
(b) **ASSISTANT ARCHITECTS**, £905 x £35 (1) x £45 (6) x £50 (2) to £1,310 plus £40-£50 London weighting.

Opportunities occur for young, imaginative architects to assist in carrying out the design and construction of a complete new 800-bed teaching hospital. Working drawings for Stage 1 are now under way and planning studies for Stage 2 will be commencing shortly.

Applicants for (a) should be qualified members of the R.I.B.A. with experience in preparing and supervising work on medium sized projects. For (b) preference will be given to qualified architects who have recently completed a full-time course at a recognised School of Architecture.

Previous hospital experience is not essential. Applications should be returned to me within two weeks indicating post applied for and giving particulars of education, qualifications and experience, together with the names of two referees.

W. FOWLER HOWITT, A.R.I.B.A.,
Architect to the Board of Governors.

45, Lambeth Palace Road,
London, S.E.1 1090

SALOP COUNTY ARCHITECTS' DEPARTMENT

Applications are invited for the following appointments to the established staff:-

(a) **SENIOR ARCHITECTS**, A.P.T. Grade V (£1,220-£1,375 p.a.). Applicants must be Associate R.I.B.A.

(b) **ARCHITECTS**, Special Grade (£785-£1,070 p.a.). Applicants must have passed the Final or Special Final Examination of the R.I.B.A. or equivalent at a School of Architecture.

(c) **ASSISTANT ARCHITECTS**, A.P.T. Grade II (£765-£880 p.a.). Applicants should have passed the Intermediate R.I.B.A. Examination. Opportunity for promotion when fully qualified.

Commencing salaries for posts (b) and (c) will depend on ability and experience. N.J.C. Conditions. Five-day week. A disturbance allowance or weekly separation allowance may be paid to married men taking up these appointments. Conditions of service and application forms obtainable from Ralph Crowe, A.A.Dipl., A.R.I.B.A., A.M.T.P.I., County Architect, Column House, London Road, Shrewsbury. Closing date 31st May, 1960. 1089

**CITY ARCHITECTS' DEPARTMENT
MANCHESTER**

Applications invited for appointment of **SENIOR ASSISTANT ARCHITECT/GROUP LEADER**, permanent. Salary A.P.T. V, £1,220-£1,375 per annum. Candidates must be architects of some experience, have high ability in design, be capable of taking charge of large contracts and of controlling a group of assistant architects. Five-day week. Housing accommodation for a limited period may be provided. Removal expenses allowed. Forms of application from City Architect, Town Hall, Returnable by 23rd May, 1960. 1071

**BOROUGH OF ENFIELD
BOROUGH ENGINEER & SURVEYOR'S
DEPARTMENT**

**APPOINTMENT OF
ARCHITECTURAL ASSISTANT**

Applications are invited for the above appointment at a salary in accordance with Grade A.P.T. II of the National Scheme of Conditions of Service (£765-£880 per annum) with the additional appropriate London weighting.

The commencing salary will be fixed at a point within the Scale commensurate with qualifications and experience.

Application forms obtainable from Mr. H. D. Peake, M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, 7, Little Park Gardens, Enfield, Middx., should be returned to the undersigned by the 31st May, 1960.

CYRIL E. C. R. PLATTEN,
Town Clerk.

Public Offices,
Enfield, Middx. 1068

**CITY OF LEICESTER
CITY ARCHITECTS' DEPARTMENT**

Applications are invited for the following appointments:-

(a) **ASSISTANT ARCHITECT**, Grade A.P.T. IV (£1,065-£1,220).
(b) **ASSISTANT ARCHITECT**, Housing Section, Special Grade (£785-£1,070).
(c) **ASSISTANT QUANTITY SURVEYORS**, Grade A.P.T. IV (£1,065-£1,220); Special Grade (£785-£1,070).

(a) The post will be concerned with research and development of C.L.A.S.P. building and will involve work in co-operation with other local authorities.
(b) The work of the Housing Architects includes re-development of central areas.
(c) Applicants should be A.R.I.C.S. and have had considerable experience in the preparation of Bills of Quantities, Final Accounts and Valuations. Previous local government experience not essential. House accommodation at an economic rent will be provided if necessary.

National Conditions of service apply.

Applications, together with the names of two referees, should reach the undersigned not later than Monday, 23rd May, 1960.

J. H. LLOYD OWEN,
City Architect.

10, Loseby Lane,
Leicester. 1084

**BOROUGH OF EDMONTON
BOROUGH ARCHITECTS' DEPARTMENT**

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

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

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

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

TOWN PLANNING ASSISTANT, Salary within Grade A.P.T. I, £610-£765 plus London weighting.

Applications on forms obtainable from the Town Clerk, Town Hall, Edmonton, N.9, must be delivered by the 16th May, 1960. 9965

UNIVERSITY OF OXFORD

Applications are invited for the following appointments:-

(a) **ASSISTANT ARCHITECT** (commencing salary up to £1,200). Applicants must be qualified with several years' experience.

(b) **ARCHITECTURAL ASSISTANTS** (commencing salary up to £765). Applicants must be of Intermediate standard with several years' experience.

(c) **ARCHITECTURAL ASSISTANTS** (commencing salary up to £610). Applicants must have had several years' experience and be competent draughtsmen.

Only those keenly interested in progressive design need apply.

Write for further particulars and form of application to The Surveyor to the University, The Malthouse, Tidmarsh Lane, Oxford. 1005

AIR MINISTRY require Junior and Senior WORKERS UP in Quantities Division in London.

Must be fully experienced and competent to work on 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 25) to £900 and (Senior) £794 (at age 25) to £1,055. 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. 9542

design
in
*stone

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

* **HIGH FELL** Westmorland Green Slate
ORTON SCAR Limestone

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

BBC requires Architectural staff in London for work in connection with studios, office blocks, transmitting stations, etc. Candidates should have an interest in contemporary design and a sound knowledge of construction. (a) ARCHITECTURAL ASSISTANT salary in scale £935-£1,185 p.a. Applicants should have Final R.I.B.A. with two years' office experience. (b) ARCHITECTURAL ASSISTANT, salary in scale £800-£1,025 p.a. Applicants should be students R.I.B.A. with two years' office experience. Requests for application forms to Engineering Recruitment Officer, Broadcasting House, London, W.1, quoting ref. EX.60.20.A.J. 1049

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. The salary scale is under immediate review.

Apply to City Architect and Planning Officer, 20, Trongate, Glasgow, C.1, giving details and names of referees. 9998

COUNTY BOROUGH OF WALLASEY APPOINTMENT OF ASSISTANT ARCHITECTS AND ARCHITECTURAL ASSISTANTS (Amended Advertisement)

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

- ASSISTANT ARCHITECTS, Grade A.P.T. V (£1,220-£1,375).
- ASSISTANT ARCHITECTS, Grades A.P.T. IV/V (£1,065-£1,375).
- ASSISTANT ARCHITECTS, Special Grade (£735-£1,070).
- ARCHITECTURAL ASSISTANTS, Grades A.P.T. I/II (£610-£880).
- ASSISTANT ARCHITECT, Temporary, at a salary to be determined within the range of £1,300-£1,500. This appointment will be for a period of two years and for specified works.

For appointments (a), (b), (c) and (e), applicants must be Fellows or Associates of the R.I.B.A. and for appointment (d), applicants must have passed the Intermediate R.I.B.A. examination. Commencing salaries will be according to capabilities and experience and in connection with (a), (b) and (c) favourable consideration will be given to the provision of housing accommodation if required. Forms of application may be obtained from the Borough Architect, Town Hall, Wallasey, to whom they should be returned by the 23rd May, 1960.

A. G. HARRISON,
Town Clerk. 1040

DEVON COUNTY COUNCIL COUNTY PLANNING DEPARTMENT

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

- PLANNING ASSISTANT SPECIAL SCALE (£785-£1,070).

The post is in the Eastern Divisional Office at Exeter. Applicants should be A.M.T.P.I. Persons having a degree in Geography or Economics and some experience in a Planning Department will be considered also.

The post is classified as an essential car user.

- PLANNING ASSISTANT, A.P.T. I (£610-£765).

The post is at Headquarters in the Development Plan Section, which also deals with Redevelopment Schemes and other projects. Good draughtsmanship essential.

In approved cases, loans for house purchase and removal expenses are available, also lodging allowance of 50s. per week for married officers whilst seeking accommodation.

Forms of application, giving further details and returnable by Wednesday, 1st June, 1960, from:—County Planning Officer, "Bellair," Topsham Road, Exeter. 1039

BOROUGH OF WREXHAM ENGINEER & SURVEYOR'S DEPARTMENT

Applications are invited for the following appointments:—

- TWO ARCHITECTURAL ASSISTANTS.

Salary Specialist Grade (£785-£1,070 per annum). Candidates must have Intermediate A.R.I.B.A. or equivalent.

(b) ONE ARCHITECTURAL ASSISTANT, Salary range A.P.T. Grade II (£765-£880 per annum). Candidates must have Intermediate R.I.B.A. or equivalent.

Housing accommodation provided if required, and the Council will be prepared to consider essential user or casual user car allowance, also removal expenses.

Forms of application and particulars obtainable from the Borough Engineer, 31, Chester Street, Wrexham.

Applications to be returned to the undersigned by not later than Monday, 23rd May, 1960.

PHILIP J. WALTERS,
Town Clerk. 1037

Guildhall,
Wrexham.
April, 1960.

PEAK DISTRICT NATIONAL PARK

Applications are invited for the appointment under N.J.C. service conditions of JUNIOR PLANNING ASSISTANTS, A.P.T. Grade I (£610-£765) in the office of the Peak Park Planning Board at Bakewell. The posts offer a wide range of interest both in the field of general planning and in national park activities.

Forms of application and further particulars from the Planning Officer, Aldern House, Bakewell, Derbyshire. Applications to be received by 23rd May, 1960. Canvassing disqualified. 1001

WARWICKSHIRE COUNTY COUNCIL COUNTY PLANNING DEPARTMENT

Applications are invited for the following appointments:—

- PLANNING ASSISTANT, Special Grade (£785-£1,070 per annum).
- PLANNING ASSISTANT, Grade A.P.T. I/II (£610-£880 per annum).

The posts are in the Development Plan Section and are superannuable and subject to the National Scheme of Conditions of Service. Consideration will be given to the granting of financial assistance towards removal expenses.

For Post (1) the applicants must be professionally qualified and must be prepared to provide and maintain a motor car for which allowances will be paid on the National Scale.

For Post (2) applicants must have passed or be exempt from the Intermediate Examination of a professional Institute.

The successful candidates will be stationed at Warwick and the commencing salary in each case will be according to experience and qualifications.

Applications together with the names and addresses of two referees should be sent to J. J. Brooks, County Planning Officer, Northgate, Warwick, not later than Wednesday, 18th May, 1960.

Canvassing will be a disqualification.
L. EDGAR STEPHENS,
Clerk of the Council. 1038

Shire Hall,
Warwick.

AMENDED ADVERTISEMENT EASINGTON RURAL DISTRICT COUNCIL CHIEF ASSISTANT ARCHITECT

Applications are invited from persons with good general experience and who have passed the Final examination of the R.I.B.A. for the above mentioned appointment.

Salary Grade V (£1,220-£55-£50 (2)-£1,375).

Assistance will be given to find housing accommodation.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and to the successful applicant passing a medical examination.

Applications on forms which may be obtained from the undersigned must be received by Monday, 30th May, 1960.

T. AGAR,
Clerk of the Council. 1036

Council Offices,
Easington,
Co. Durham.

2nd May, 1960.

CITY OF BIRMINGHAM PUBLIC WORKS DEPARTMENT

Mechanical and Public Lighting Section
Applications are invited for the post of PRINCIPAL ASSISTANT ENGINEER (Mechanical, Heating and Ventilation).

Salary in accordance with salary scales for senior officers—Grade "B" £1,305-£1,485 per annum.

Applicants must be Associate Members of the Institution of Mechanical, Electrical or Heating and Ventilating Engineers or hold the Higher National Certificate in Mechanical or Electrical Engineering (with five years' experience).

The duties of the post include the design of mechanical and heating services and installations in civic buildings, municipal offices, multi-storey flats, car parking garages, fire and police stations, schools, baths, salvage destructor plants, pump stations, etc.

Candidates must have had experience in the design, specification and supervision of contracts associated with the above work and be experienced in the supervision and control of staff.

The appointment is permanent, superannuable and subject to a medical examination.

Applications endorsed "Principal Assistant Engineer" stating qualifications, age and experience, together with the names of two referees, should reach the undersigned not later than the 28th May, 1960.

Canvassing disqualified.

HERBERT J. MANZONI,
City Engineer and Surveyor. 1063

Civic Centre,
Birmingham, 1.
2nd May, 1960.

BOROUGH OF TWICKENHAM

Applications are invited for the following posts:—

- ONE SENIOR ASSISTANT ENGINEER (A.P.T. IV, £1,065-£1,220).
- ONE JUNIOR ASSISTANT ENGINEER (A.P.T. I, £610-£765).
- ONE ASSISTANT ARCHITECT (A.P.T. II, £765-£880).

Posts (a) must have passed the Final and (b) and (c) the Intermediate examination of their appropriate technical institute. All plus London weighting allowance. Application forms obtainable from Borough Engineer, Municipal Offices, Twickenham, to be returned by 20th May, 1960.

W. H. JONES,
Town Clerk. 1062

LONG EATON URBAN DISTRICT COUNCIL ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment in Grade A.P.T. II (£765 to £880 per annum).

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects, and have had practical experience of housing and general municipal work.

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

Applications, stating age, training and experience, with names and addresses of two referees, to be sent to the undersigned by Thursday, 26th May, 1960.

FRANCIS TURNER,
Engineer & Surveyor. 1063

Town Hall,
Long Eaton.

BOROUGH OF BURY ST. EDMUNDS APPOINTMENT OF ASSISTANT ARCHITECT SPECIAL GRADE

Applications are invited from Qualified Architects for the above superannuable post in the Department of the Borough Engineer and Surveyor at a salary within the special grade (£785-£1,070).

Duties will include the design of new houses and other buildings; and the maintenance and upkeep of other Corporate property. Consideration will be given to the provision of housing.

Applications endorsed "Assistant Architect" and stating age, whether married, qualifications and experience, together with the names of three referees, to be delivered to the Borough Engineer and Surveyor, Mr. G. S. Standley, A.M.I.C.E., M.I.Mun.E., at the address below not later than 25th May, 1960.

RICHARD R. HILES,
Town Clerk. 1060

Borough Offices,
Bury St. Edmunds.

CITY OF OXFORD CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT ARCHITECTURAL ASSISTANTS (Grade Special Classes/ A.P.T. IV according to experience)

Applications are invited for the above posts in this Department, which has a very full programme of interesting work in hand, including redevelopment schemes, in addition to its normal programme.

A high standard of design and a keen interest in contemporary architecture are required, together with a sound knowledge of building construction. Assistants are encouraged to control their own contracts from sketch design stage onwards.

Candidates must be members of the Royal Institute of British Architects.

Housing accommodation will be made available if required.

Further particulars and forms of application may be obtained from E. G. Chandler, A.R.I.B.A., M.T.P.I., City Architect and Planning Officer, Town Hall, Oxford. Closing date 30th May, 1960.

HARRY PLOWMAN,
Town Clerk. 1117

Town Hall,
Oxford.

3rd May, 1960.

CITY OF NOTTINGHAM APPOINTMENT OF CITY ARCHITECT

The Corporation is considering the establishment of an Architectural Department and the appointment of a City Architect who will be responsible for the Corporation's Architectural and Building work.

Architects of experience are invited to apply. If an appointment is made it will be at a salary of £3,340 rising by one increment of £115 and two further increments of £110 to £3,675 per annum, and the gentleman appointed will be required to contribute to the Corporation's Superannuation Scheme and to pass a medical examination.

Applications accompanied by the names of three persons to whom reference can be made must be delivered to me not later than the last post on Monday the 13th June in an envelope endorsed "City Architect."

T. J. OWEN,
Town Clerk. 1116

The Guildhall,
Nottingham.

11th May, 1960.

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 operated.

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. 1115

Town Hall,
Leyton, E.10.

11th May, 1960.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

REGIONAL ARCHITECT'S DEPARTMENT
Due to an expansion in the hospital building programme the undermentioned permanent appointments are being made:—

- (i) ASSISTANT ARCHITECTS—
£905 × 35(1) × 45(6) × 50(2) £1,310 p.a.
- (ii) QUANTITY SURVEYING ASSISTANT—
£625 × 30(8) × 35(1) £900 p.a.
- (iii) SURVEYOR'S CLERK—
£500 × 25(8)—£700 p.a.

London Weighting Allowance paid in addition. Applicants for (i) must be Associate Members of the R.I.B.A., for (ii) must have passed the Intermediate examination of the R.I.C.S., and for (iii) must have had three years' technical experience in quantity surveying with a quantity surveyor or building contractor.

Application forms may be obtained from the undersigned at the Board's Headquarters at 40, Eastbourne Terrace, London, W.2. to whom they must be returned by 25th May.

E. G. BRAITHWAITE, Secretary. 1113

BOROUGH OF TAUNTON ASSISTANT ARCHITECT

Applications invited for appointment of two Assistant Architects 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, 30th May, 1960.

Consideration will be given to housing accommodation if required.

K. A. HORNE,
Town Clerk. 1128

RADNORSHIRE COUNTY COUNCIL COUNTY ARCHITECT'S DEPARTMENT

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

- (a) ARCHITECTURAL DRAUGHTSMEN (three required). Salary A.P.T. Grade II (£765—£880 p.a.). Applicants should be experienced in contemporary school design and construction and have good drawing board experience and a flair for design.

- (b) QUANTITY SURVEYING ASSISTANT. Salary A.P.T. Grade II (£765—£880 p.a.). Duties will include abstracting, billing and site measurement and generally assisting the Quantity Surveyor.

The successful applicants for the four appointments above-mentioned will be engaged on an interesting capital works programme of new school construction, etc., which is expected to last for about five years. All four appointments are however wholly associated with the capital works programme and the appointments will terminate if the programme is completed or suspended.

The appointments will be subject to the Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services; to the Local Government Superannuation Acts and to termination by one month's notice in writing by either party at any time.

- (c) FOREMAN in Direct Works Section consisting of some two dozen men. Applicants should have considerable experience in supervising men, organising and programming work and in taking off approximate quantities from drawings and specifications. There will be five chargehands in the various trades to assist the Foreman. The wage will be at a rate equivalent to ninepence halfpenny per hour over the rate specified for craftsmen by the Joint Negotiating Committee for Local Authorities' Services (Building and Civil Engineering) and the appointment will be subject to the working conditions of that Joint Negotiating Committee. (The craftsman's rate at present is 4s. 11d. per hour and the wage applicable to this post is therefore 5s. 8½d. per hour.)

Applications stating the post applied for, age, qualifications and experience with the names of two persons to whom reference may be made must be received by the undersigned not later than 28th May, 1960.

D. C. S. LANE,
Clerk of the Council. 1070

County Hall,
Llandrindod Wells,
Radnorshire.

HOLLAND COUNTY COUNCIL LINCOLNSHIRE

COUNTY ARCHITECT'S DEPARTMENT
Applications are invited from qualified ARCHITECTS to fill three vacant posts on Grade A.P.T. IV, £1,065—£1,220 per annum.

The Council have a varied and interesting programme. The appointments 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 undersigned by 25th May, 1960.

H. A. H. WALTER,
Clerk of the County Council. 1080

County Hall,
Boston, Lincs.

MIDDLESBROUGH EDUCATION COMMITTEE ARCHITECTURAL STAFF

Applications are invited for the following vacancies in the Education Architect's Office of the Education Department. An excellent opportunity is offered for participation in the expanding Educational Building Programme. Appointments will be made within the grades as indicated, subject to qualifications and experience.

- (a) SENIOR ASSISTANT ARCHITECTS, A.P.T. IV, £1,065—£1,220.
- (b) ASSISTANT ARCHITECTS, A.P.T. III, £880—£1,065.
- (c) ARCHITECTURAL ASSISTANTS, A.P.T. I-II, £610—£880.

Housing accommodation will be considered for married applicants for posts (a) and (b) if required. Application forms and particulars from the Director of Education, Education Offices, Woodlands Road, Middlesbrough, to whom completed forms should be returned as soon as possible. 1074

URBAN DISTRICT COUNCIL OF COULSDON AND PURLEY ENGINEER AND SURVEYOR'S DEPARTMENT CHIEF PLANNING ASSISTANT

Applications are invited from suitably qualified candidates for the above appointment on the permanent staff in the Engineer and Surveyor's Department at a salary within A.P.T. IV (£1,065—£1,220) plus London weighting. Commencing salary according to experience and qualifications; accommodation available if required.

The successful candidate will be paid a car allowance on the essential user scale.

Applicants must have had good experience in general planning matters, development control, and public inquiry work.

Applications on forms to be obtained from H. M. Collins, A.M.I.C.E., A.M.T.P.I., Engineer and Surveyor, at the address below, to be returned to him with the names and addresses of two referees by first post on 27th May, 1960.

Canvassing will disqualify.

ERIC F. J. FELIX,
Clerk of the Council. 1072

Council Offices,
Purley, Surrey.

BOROUGH OF MALDEN AND COOMBE BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

SENIOR ASSISTANT ARCHITECT
Applications are invited from Chartered Architects for the appointment of Senior Assistant Architect, Grade A.P.T. IV, £1,065—£1,220, plus London weighting, commencing salary according to experience and qualifications. Forms of application, which must be returned endorsed by not later than Monday, 30th May, 1960, to be obtained from John Apse, A.M.I.C.E., Borough Engineer.

HAROLD E. BARRETT,
Town Clerk. 1035

Municipal Offices,
New Malden,
Surrey.

DURHAM COUNTY COUNCIL PLANNING DEPARTMENT

LANDSCAPE ARCHITECT. Salary £1,065—£1,220. Applicants must be Associates of the Institute of Landscape Architects or B.Sc. Horticulture may be considered. Successful applicant will be required for work on landscape schemes for parks, housing estates, restoration of derelict land, afforestation of colliery tips, tree preservation orders, etc.

PLANNING ASSISTANT. Salary £610—£765. Applicants must have an Honours Degree, preferably in Geography from a British University or have passed the Intermediate Examination of the Town Planning Institute or equivalent.

Housing available at Peterlee and Newton Aycliffe, 12 miles from Durham. Forms and further particulars from the County Planning Officer, 10, Church Street, Durham. Closing date, first post, 24th May, 1960. Canvassing members of the Council is prohibited.

J. K. HOPE,
Clerk of the County Council. 1059

CONTEMPORARY HOSPITAL DESIGN ARCHITECTS, QUANTITY SURVEYORS AND ENGINEERS

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

SENIOR ASSISTANT ARCHITECT, £1,300 to £1,600 per annum.

ASSISTANT ARCHITECT, £905 to £1,310 per annum.
PRINCIPAL ASSISTANT QUANTITY SURVEYOR, Scale II, £1,665 to £2,035 per annum.
PRINCIPAL ASSISTANT ENGINEER (MECHANICAL), Scale II, £1,665 to £2,035 per annum.
Applications, with the names of two referees, should be received by the Secretary, Oxford Regional Hospital Board, 43, Banbury Road, Oxford, not later than 22nd May, 1960. 1058

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 (FK/AJ/496/5), County Hall, S.E.1. 9075

COUNTY BOROUGH OF SOUTHAMPTON BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following permanent posts:—

- (a) SENIOR ASSISTANT ARCHITECT, Grade A.P.T. IV (£1,065—£1,220).
- (b) SENIOR ASSISTANT ARCHITECT, Special Grade (£785—£1,070).
- (c) SENIOR QUANTITY SURVEYOR, Special Grade (£785—£1,070).
- (d) ESTIMATING ASSISTANT in the Quantity Surveyor's Section, Grade A.P.T. II (£765—£880).

Applicants should be experienced in estimating for small jobbing works and knowledge of "working-up" and/or site measuring will be advantageous.

Housing accommodation available in approved cases and approved removal expenses reimbursed up to a maximum of £50.

Applicants should possess appropriate qualifications. Commencing salary within grade according to experience and qualifications. Application forms from the Borough Architect, Civic Centre, Southampton, returnable by 30th May, 1960. 1057

BIRMINGHAM REGIONAL HOSPITAL BOARD ASSISTANT REGIONAL ARCHITECT

Salary Scale £1,825—£2,175

Qualification: Registered Architect by examination. This is a newly established appointment. The successful candidate will be required to take charge of design teams engaged on the design of major hospital projects. The post is not restricted to those with previous hospital experience but a high standard of design ability is essential.

The post is superannuable. Five-day week. Generous annual leave.

Applications to Secretary, Birmingham Regional Hospital Board, 10, Augustus Road, Edgbaston, Birmingham 15, by 30th May, 1960, stating qualifications, age, experience, present position and salary and names of two referees. 1056

BOROUGH OF SHREWSBURY ARCHITECTURAL ASSISTANT

Applications are invited for the post of Architectural Assistant on the permanent staff of the Borough Surveyor at a salary in accordance with the Special Grade, £785—£1,070 per annum, commencing according to qualifications and experience.

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

Applications stating age, qualifications, experience and names of two referees to be sent to the Borough Surveyor, Guildhall, Shrewsbury, by Wednesday, 27th May. 1055

BOROUGH OF WILLESDEN

Applications are invited for the following permanent appointments:—

- (a) ASSISTANT ARCHITECT within Grade A.P.T. IV (£1,065—£1,220 p.a.).
- (b) ASSISTANT ARCHITECT within Special Grade (£785—£1,070 p.a.).
- (c) ARCHITECTURAL ASSISTANT within Grade A.P.T. II (£765—£880 p.a.).
- (d) ARCHITECTURAL ASSISTANT within Grade A.P.T. I (£610—£765 p.a.).

London weighting, maximum £30 p.a., is payable in addition to the above salaries.

Candidates for posts (a) and (b) must be Associates of the R.I.B.A. and should have a high ability in design, capable of supervising contracts and experience of multi-storey flats.

For one post experience of redevelopment schemes will be an advantage.

Candidates for posts (c) and (d) should have passed the Intermediate Examination of the R.I.B.A.

A programme of interesting and varied works is expected to continue for many years and opportunities are offered to imaginative designers with a contemporary and practical outlook.

The appointments will be superannuable and subject to the National Conditions of Service.

The Council is unable to assist with housing accommodation.

Forms of application and conditions of appointment may be obtained from the Borough Engineer & Surveyor, Town Hall, Dyne Road, Kilburn, N.W.6. Applications to be returned to the undersigned not later than 9 a.m. on Monday, 30th May, 1960.

R. S. FORSTER,
Town Clerk. 1050

KINGSTON UPON HULL EDUCATION COMMITTEE

REGIONAL COLLEGE OF ARTS AND CRAFTS
Principal: A. D. S. SEDGEM, A.R.E., A.R.C.A.

Applications are invited for the following post, duties to commence in September, 1960:—

SCHOOL OF INDUSTRIAL DESIGN ASSISTANT (Grade B) for display and exhibition design to N.D.D. Special level and interior decoration to Intermediate and Final standard in the School of Architecture.

Salary: Burnham Technical Scale—£700 × £27 10s.—£1,112 10s.—£37 10s.—£1,150 for men, and corresponding scale for women with appropriate equal pay increments. (Increments will be paid in respect of suitable teaching, professional and/or industrial experience, plus additions for training and graduate qualifications.)

Further particulars and application forms, to be returned as soon as possible, may be obtained from the Chief Education Officer, Guildhall, Kingston upon Hull. 1118

BOROUGH OF BEXLEY

ARCHITECTURAL DRAUGHTSMAN

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

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

Form of application and conditions of appointment are obtainable from Borough Engineer, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by Monday, 30th May, 1960. Canvassing will disqualify.

ARTHUR GOLDFINCH,
Town Clerk. 1106

CITY OF CARLISLE

Applications are invited from Qualified ARCHITECTS to work on an interesting building programme. There are three posts which offer scope for initiative and imagination and an opportunity to carry projects through from sketch design to completion. Salary range A.P.T. IV, £1,065-£1,220 per annum. Housing accommodation considered. Application forms together with further particulars can be obtained from The City Engineer, 18, Fisher Street, Carlisle.

H. D. A. ROBERTSON,
Town Clerk. 1114

CITY OF LINCOLN

ASSISTANT ARCHITECT

Applications are invited from experienced Architects for the above position on the established staff of the City Architect at a salary in accordance with A.P.T. Grade IV, £1,065-£1,220.

The Department is engaged upon an extensive and varied programme of architectural works and applicants must be capable of taking charge of a group responsible for the design and supervision of major projects.

The post is superannuable and a medical examination will be required.

Housing accommodation available. Applications, giving full particulars of qualifications and experience together with the names of two persons to whom reference may be made, should be submitted to R. R. Alexander, F.R.I.B.A., M.T.P.I., City Architect, Stamp End, Lincoln, not later than 23rd May, 1960.

J. HARPER SMITH,
Town Clerk. 9980

Town Clerk's Office,
Lincoln.

WANTED: CLERK-OF-WORKS for the District Estate Office, British Railways, Newcastle. Experienced in all trades, able to supervise maintenance work, make surveys, prepare plans, specifications and estimates for small alterations to estate properties and conduct correspondence in connection therewith. Salary at scale rate £395 per annum to age 20, £547 per annum at age 25 or above on entry, to maximum £791 at age 32 or eighth year. Permanent post after probationary period, superannuation scheme, certain free and reduced travel facilities. Apply Estate and Rating Surveyor, British Railways, North Eastern Region, York. 9979

CARDIGANSHIRE COUNTY COUNCIL
Would you enjoy a mild climate, good fishing, bathing and sailing, with the amenities of a University town and a National Library close at hand? Architects and Assistants who can accept these attractions should apply to the County Architect, County Hall, Aberaeron, Cardiganshire, for forms for posts in A.P.T. Special Grade and A.P.T. Grades I-II. Applications to be returned by 30th May, 1960.

J. E. R. CARSON,
Clerk of the County Council. 1033

WESTERN REGIONAL HOSPITAL BOARD
ARCHITECTURAL DIVISION

The Board has decided to expand considerably its Architectural Department in order to undertake, with its own staff, a substantial proportion of the increased volume of new hospital building and applications are invited for the undernoted posts.

Exceptional opportunities will be available in the design, construction and function of hospitals from sketch plan stage to completion.

Hospital experience is not essential. SENIOR ASSISTANT ARCHITECTS, Salary scale £1,300 x £60 (5) - £1,600.

ASSISTANT ARCHITECTS, £905 x £35 (1) x £45 (6) x £50 (2) - £1,310.

TRAINEES, Salary according to age. £230 at age 15 rising to £480 at age 25. Candidates for all posts, other than trainees, must possess full professional qualifications. All posts are subject to National Health Service Conditions and are superannuable. Applications in writing, stating age, qualifications and previous experience together with the names and addresses of three referees, should be sent to the Secretary, 351, Sauchiehall Street, Glasgow, C.2, not later than 28th May. 9985

COUNTY BOROUGH OF ROCHDALE
BOROUGH SURVEYOR'S DEPARTMENT

Applications are invited from suitably qualified persons for the post of QUANTITY SURVEYOR on Special Classes Scale (£785-£1,070 p.a.). The Corporation make 100 per cent. loans for house purchase in approved cases.

Applications stating age, qualifications, experience and names of two referees to Borough Surveyor, Town Hall, Rochdale, by 27th May.

Canvassing will disqualify. Relationship to any member or senior official of the Council must be disclosed. Appointment subject to medical examination. 1129

THE UNIVERSITY OF SHEFFIELD

Applications are invited for the post of TECHNICAL ASSISTANT (ARCHITECTURAL) on the staff of the Planning Office which offers opportunity for interesting work on the New Buildings Programme. Applicants should have drawing office experience in an architectural office, and have a knowledge of working drawings. Starting salary £700-£850 per annum according to age and experience. Applications stating age, qualifications and experience, with details of present post and the names of two persons to whom reference may be made should be submitted to the Bursar, The University, Sheffield, 10, not later than 23rd May, 1960. 1023

CORBY DEVELOPMENT CORPORATION

SENIOR ASSISTANT ARCHITECT

There is a vacancy on the staff of the Chief Architect for a Senior Assistant.

The appointment will be made within A.P.T. Grade V (£1,220-£1,375) and the commencing salary within this Grade will depend upon qualifications and experience.

Candidates must be A.R.I.B.A., or possess an equivalent qualification recognised by the Architects Registration Council.

The appointment is within the Local Government Superannuation Scheme.

Housing is available and removal expenses will be paid.

Applications stating age, education, training, qualifications, experience, appointments held and salaries, together with the names of two referees must reach the undersigned by Monday, 23rd May, 1960.

R. F. BROOKS GRUNDY,
General Manager.

Corby Development Corporation,
Spencer House,
Corby, Northants. 1024

MERIONETH COUNTY COUNCIL

COUNTY ARCHITECT'S DEPARTMENT

Applications are invited for the appointment of JUNIOR ARCHITECTURAL ASSISTANT, Grade A.P.T. I-£610-£765 per annum. Preference will be given to applicants who have passed the Intermediate examination of the R.I.B.A. or its equivalent.

Full particulars of the appointment, together with application form, may be obtained from the County Clerk, County Offices, Penarlag, Dolgellau, by whom applications must be received by not later than 16th May, 1960. 9984

BOROUGH OF KEIGHLEY

BOROUGH ARCHITECT'S DEPARTMENT

Applications are invited for the following permanent position.

ASSISTANT ARCHITECT, Grade A.P.T. IV, Salary Scale £1,065-£1,220. Applicants must be Associate members of the R.I.B.A., and possess good experience in architectural design and building work under construction.

Applications to be made upon the prescribed form to be obtained from the undersigned, to whom same must be returned, accompanied by copies only of two recent testimonials, not later than first post, Monday, 30th May, 1960.

E. G. FELGATE, A.R.I.B.A.,
Borough Architect.

Borough Architect's Department,
College Street, Keighley. 1102

Architectural Appointments Vacant

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

TWO ARCHITECTURAL ASSISTANTS required-Intermediate R.I.B.A. standard-who have had good office experience. Salary £600-£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., 20, Park Road, Melton Mowbray, and 31, Friar Lane, Leicester. 8776

ARCHITECTURAL ASSISTANTS required in busy Bloomsbury office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications, experience, etc., to Box 918, c/o 7, Coptic Street, W.C.1. 8815

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.R.I.B.A., Grosvenor 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.

RONALD WARD & PARTNERS have immediate vacancy for ASSISTANT ARCHITECTS with initiative and some experience, for interesting, commercial, industrial and civic projects. Salaries commensurate with ability. Apply, 29, Chesham Place, S.W.1. BELGRAVIA 3361. 9638

W. H. WATKINS, GRAY & PARTNERS require ASSISTANTS of Intermediate and Final standard. Pension scheme and luncheon vouchers. Salary range £700 to £900. Apply 57, Catherine Place, London, S.W.1. 8798

ASSISTANT ARCHITECT required by Hasker & Hall, L/F.R.I.B.A., for responsible position in their London office, 13, Welbeck Street, W.1. (WEL. 0061.) 9661

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

LARGE SCALE Development in London and Industrial Buildings in Home Counties. High office blocks and residential flats. Four ASSISTANT ARCHITECTS required. Senior and Intermediate standard. West End Office. Five-day week. Good salaries and bonuses. Box 9885.

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, Offices, and Luxury Flats. Good salaries according to ability and experience, luncheon vouchers, five-day week, and excellent working conditions. Write 5, Holborn Circus, Thavies Inn House, E.C.1, or telephone CITY 8811, quoting SLB in both instances. 7100

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

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

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.

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

MONRO 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. 3609

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

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, 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. 9096

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

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. 9406

NORMAN & DAWBARN require experienced architects for interesting projects both here and overseas. Applicants should be interested in good design. Salaries from £900 upwards. Phone or write for an appointment to: 7 Portland Place, W.1. 9584

ARCHITECTURAL ASSISTANTS required by Hasker & Hall, L/F.R.I.B.A., in their offices in London and Warwickshire. Good salary, with scope for initiative and responsibility. Write to 13, Welbeck Street, W.1. or telephone WEL 0951 or Knowle (Birmingham) 3502. 9662

BUSY City Firm engaged in industrial and commercial work requires ASSISTANT of Final standard with several years' office experience. Five-day week. Luncheon vouchers. Salary by arrangement. Box 9227.

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

EXPANDING practice with varied work in different parts of the country, require keen and capable Intermediate standard ASSISTANTS. Good salary and prospects for the right men. Holiday commitments honoured. Balling and Partners, 14, Bloomsbury Square, W.C.1. CHANCERY 4725. 9469

TRIBE & WAKEHAM, Chartered Architects, require a **SENIOR ASSISTANT** to supervise construction of interesting and important project abroad. Salary by arrangement. Telephone **WELbeck 7744** or write to 16, Fitzhardinge Street, London, W.1. for an appointment. 9444

TRIBE & WAKEHAM, Chartered Architects, require **ASSISTANTS** in all grades to work in their London office on interesting projects both in this country and abroad. Salary by arrangement. Telephone **WELbeck 7744** or write to 16, Fitzhardinge Street, London, W.1. for an appointment. 9443

RICHARD SHEPPARD, ROBSON & PARTNERS require **ARCHITECTURAL ASSISTANTS**. Intermediate or Final standard. 5 Southampton Place, W.C.1. CHANCERY 4261. 9510

ARCHITECTS and ASSISTANT ARCHITECTS required for interesting commercial, industrial and civic projects. Responsibility and initiative encouraged. Five-day week, good salary commensurate with ability and experience. **Ronald Ward & Partners**, 29, Chesham Place, S.W.1. BELGRAVIA 3561. 9246

£750-£1,000 - **KEEN YOUNG ARCHITECTS** WANTED URGENTLY. Senior and Junior Assistants required to work on a variety of interesting contracts, including flats, hospitals, offices, hotels, shops and interiors, etc. Opportunities for modern design and control of contracts. Salaries as above or according to experience. **R. Mountford Pigott & Partners**, South Kensington. Tel. KENSINGTON 1242. 9543

ARCHITECTURAL STAFF, all grades, required for interesting work. Good salary, bonus, superannuation scheme. House Purchase Assistance Scheme. Excellent working conditions. Five-day week. Please apply, giving details of qualifications, experience and salary required to: **George Brown & Partners, A.R.I.B.A., F.I.A.S.**, and **Eric Ross, F.R.I.B.A., Equity & Law Building**, Baldwin Street, Bristol, 1. 9458

C. H. ELSOM & PARTNERS require **ASSISTANTS** for work on theatres, laboratories, shops, stores and town centre redevelopment, etc. Apply 10, Lower Grosvenor Place, S.W.1. VIC. 4304. 9584

ARCHITECTURAL ASSISTANTS required. Salary between £1,000 and £1,100 according to experience. Glasgow office, five-day week. Schools, offices, etc. State full experience. **D. Harvey & A. Scott**, 2, Lynedoch Place, Glasgow, C.3. 9663

SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS required for varied work. Croydon office. Telephone: **D. L. CROYDON 3679**. 9689

ARCHITECTS. SENIOR ARCHITECTURAL ASSISTANTS required immediately for a wide variety of work. Application should be made in writing to **Kenneth F. Masson, A.R.I.B.A., Chief Architect, S.C.W.S. Ltd.**, 76, Morrison Street, Glasgow, C.5. 9677

ARCHITECTURAL ASSISTANT required for small office with varied practice. Apply giving details of experience and salary desired to **Caroe & Partners**, 16, Great College Street, Westminster. 9751

ARCHITECTURAL ASSISTANT required of intermediate standard, capable of working with minimum of supervision. Salary £650-£850 according to experience. Apply to: **S. Dodson & Son, L.A.R.I.B.A., Museum Buildings, Priory Gate, Peterborough, Northants.** 9790

AN experienced ARCHITECTURAL ASSISTANT, holding Intermediate R.I.B.A., required immediately for established firm on the South Coast. Opportunity presented to obtain further experience on various large contracts. Salary bracket £750/£850 p.a. Write stating age and experience. **Thomas, Jolly, Grant & Kelsey**, 26, Kent Road, Southsea, Hants. 9712

ARCHITECTURAL ASSISTANT required. Intermediate standard, small office, varied practice. Initiative appreciated and opportunity for advancement. Write or 'phone: **Nicholson & Rushton**, 2, New Square, Lincoln's Inn, W.C.2. HOLBORN 2095. 9753

WEST LONDON Property Development Group requires practical **ARCHITECTURAL STAFF** for permanent, pensionable employment. Full particulars of experience and salary required to Box 9759.

SEELY and PAGET have immediate vacancy in their City Office. Standard near Final R.I.B.A. with office experience. Holiday arrangements respected. Salary range £942 x £53 (4) - £1,050 plus luncheon vouchers. Write 41, Cloth Fair, E.C.1. or telephone **MET. 8511**. 9760

ARCHITECTURAL ASSISTANTS required. Probationer up to Intermediate R.I.B.A. level, or Students R.I.B.A. Facilities given for study of design at London Schools. **Hare & Perri, A.R.I.B.A.**, 29, Elm Street Ipswich. 9761

RALPH TUBBS requires qualified **ASSISTANT ARCHITECT** to work on new Television Centre. Phone **WELbeck 2129** or write 46, Queen Anne Street, London, W.1. 9927

ADAMS, HOLDEN & PEARSON require a qualified **ARCHITECTURAL ASSISTANTS** and **ASSISTANTS** up to intermediate standard for Hospital work. Five-day week, Pension Scheme. Apply, giving age, qualifications, experience and salary required, to 38, Gordon Square, W.C.1. 9723

THERE is no need to travel to Town when you can work in a progressive **HEBTS** office on varied and interesting schemes. Write or telephone **Dawe, Carter & Partners**, 33, Clarendon Road, Watford 27295. 9721

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

INTERMEDIATE to Final ASSISTANTS required immediately. Salary according to ability and experience. **Theo. H. Birks**, 38, Portland Place, London, W.1. LAN. 7236. 9739

BRIGHTON
SENIOR ASSISTANT ARCHITECT of proved design and technical ability required to work largely on own initiative with team engaged on multiple projects in United Kingdom and Overseas. 35-hour week. Pension Scheme. Salary by arrangement. **Gotch and Partners**, 26, Regency Square, Brighton. 9725

BRIGHTON, BOURNEMOUTH OR LONDON
UP to £1,000 per annum offered to experienced **ARCHITECTURAL ASSISTANTS** to work on multiple projects in United Kingdom and Overseas. 35-hour week. Pension Scheme. Reply to: **Gotch and Partners**, 26, Regency Square, Brighton. 9726

BRIGHTON, BOURNEMOUTH OR LONDON
INTERMEDIATE standard ASSISTANTS of all-round ability needed for progressive positions engaged upon wide variety of work both here and abroad. 35-hour week. Reply to: **Gotch and Partners**, 26, Regency Square, Brighton. 9727

ARCHITECTURAL ASSISTANT required for Surveyor's Department of South Coast Brewery. Experience in alterations and decorations to licensed premises essential. Appointment will include work in connection with Brewery buildings and some experience of reinforced concrete structures will be an advantage. Age under 45. Permanent appointment. Pension scheme. Salary range £900-£1,000 according to experience. Write, stating age and experience, to Box 9974

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 9807.

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. 9808

SCHERRER and HICKS require **ASSISTANTS** of R.I.B.A. Final and Intermediate standard, preferably with two or three years' experience, for both their London and Manchester offices. Please write 19, Cavendish Square, W.1. 9814

DOFFMAN & LEACH, A.R.I.B.A., 17, Wolverhampton Road, Stafford, require **SENIOR and JUNIOR ARCHITECTURAL ASSISTANTS**. Progressive office, interesting and varied work. Five-day week. Good conditions and prospects. Salary commensurate with ability and experience. 9822

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

ASSISTANT ARCHITECTS and ARCHITECTURAL ASSISTANTS required immediately by **Boryst. Rigby Childs & Glover**. High pressure work, with opportunity to go abroad if desired. Pleasant offices. Remuneration by agreement. 6, Welbeck Street, LONDON, W.1. Tel. **WEL. 1681**. 9829

WIMPEY
AN expanding programme of work in the Architects' Department offers good opportunities to **ARCHITECTS and ASSISTANTS** keen to apply their knowledge and ability to progressive design and construction techniques. The work covers varying types of Industrial, Commercial and Domestic Projects of considerable size and interest. Permanent appointments, with good salaries, and covering a wide range of experience, are immediately available at Head Office. Five-day week; pension scheme available for successful applicants wishing to make a career with the Company. Applicants should write to: **E. V. Collins, A.R.I.B.A., Chief Architect, George Wimpey & Co., Limited**, 27, Hammersmith Grove, London, W.6. 9859

BRYAN & NORMAN WESTWOOD & PARTNERS require **JUNIOR ASSISTANTS** to work in their new branch office at Weybridge. Please apply to 21, Suffolk Street, S.W.1. Trafalgar 4411. 9914

ASSISTANT ARCHITECTS of all grades wanted for various projects in London and Birmingham Offices of Firm of Architects. Good opportunities for working on interesting and diverse buildings in different parts of the country. Write, giving particulars of age, experience, and qualifications to **A. W. Varcoe, A.R.I.B.A., Jackson & Edmonds**, 30, Gloucester Place, W.1. 9947

JOHN and SYLVIA REID require **ASSISTANT ARCHITECTS** with a good educational background and at least 3-4 years' office experience. Must be keenly interested in all aspects of design including furniture, domestic equipment, exhibitions, etc. Only those who are conscientious and welcome responsibility need apply. Please reply in handwriting stating age, qualifications and salary required to 88, Talbot Road, Highgate, N.6. 9945

WHY NOT THE BEST OF TWO WORLDS?
Pairs of **ASSISTANTS** required, Intermediate-Final grade, to work six months in London and six months in East Africa. Current salaries and overseas allowances. Telephone: **GROSVENOR 3668/9**. 9967

TRING, HERFORDSHIRE. SENIOR ASSISTANT ARCHITECTS required for work on Contemporary Design for Schools, Teachers' Training Colleges, University work and high flats. Write to: **W. W. Chapman, A.R.I.B.A.**, Woodroffe, Buchanan & Coulter, 41, High Street, Tring, or phone Tring 2083 for an appointment. 9966

WORCESTER Architects require **ASSISTANT** of intermediate standard in small busy office. Salary about £500 per annum according to experience. Apply in writing to **Henry Rowe & Son**, 38, Foregate Street, Worcester. 9960

SMALL GROUP in office doing interesting and specialised commercial work requires additional members qualified or near qualified. Good working conditions, with luncheon facilities. Five-day week. Salary £800-£1,200. Apply in writing to Box 9955.

ENTHUSIASTIC ASSISTANTS, who are interested only in work, money and prospects need apply to **H. A. Halpern & Associates**, 26a, High Street, Chatham, approaching Final standard, starting at £700 p.a. 9954

SENIOR and INTERMEDIATE STANDARD ARCHITECTURAL ASSISTANTS required for London and Weston-super-Mare. Write full particulars including salary required, **R. H. Gallannaugh, L.R.I.B.A.**, 54, Queen Anne Street, London, W.1. 9948

ARCHITECTURAL ASSISTANT required for Agricultural practice. Quick and competent draughtsman. Some knowledge of agricultural buildings an advantage. Preferably a car owner. Write, stating age and experience to **R. A. Bennett & Partners**, Chartered Surveyors & Land Agents, 29, Sheep Street, Cirencester, Glos. 9942

PATRICK GWYNNE requires further **ASSISTANTS** in salary range £700-£900 for work on houses and bungalows. The Homewood, Esher, Surrey. Tel. Esher 3310. 9931

ARCHITECTURAL ASSISTANTS. **Schwepes Ltd.** have a limited number of vacancies in their Head Office Architect's Department for keen, enthusiastic men of Intermediate and Final standard. This is an opportunity for men of the right calibre to work for an expanding company and its subsidiaries on both new projects and the development of existing buildings, etc. Starting salary range £750 to £1,000 according to ability and experience. Profit sharing and pension schemes, five-day week, staff cafeteria. The department is located in a very modern office block adjacent to Paddington Station. Please write full particulars of experience, qualifications, age, etc., to Miss Lister, Personnel Department, **Schwepes Limited**, 2, Connaught Place, London, W.2. 9932

W. S. HATTELL & PARTNERS, Coventry, require fully qualified **ARCHITECTS** with some years' office experience to take charge of a wide range of contracts including Television Studios, Schools, Church, Pubs, Factories, Shops, etc. Applicants must have good design sense and first-class knowledge of construction and administration, and be capable of controlling junior staff. Salary £1,000-£1,500 depending on ability. Pension Scheme. Five-day week. Travelling expenses paid to interviewed applicants. House available. Replies to 1, Queens Road, Coventry. 9934

ERIC COLE & PARTNERS, 12, Bath Road, Swindon, require experienced **ASSISTANTS**. Work varied and interesting. Expanding practice. Salary by arrangement. Write or 'phone Swindon 3467. 9941

SENIOR ASSISTANT ARCHITECT required for interesting new projects. Applicants must be experienced and keen to take responsibility for schemes from sketch plan to final account stage. Salary: £1,250 per annum. Apply: **Ian Fraser & Associates**, Chartered Architects, 30/31, Barton Arcade, Manchester, 3. Telephone: Deansgate 4233. 9920

URGENTLY required by Staff Architect to help him build up new department in West End Office. A Senior ASSISTANT approaching Final R.I.B.A. standard. The work is varied and interesting and there is a chance to get in on the ground floor. Salary range for the right man up to £1,000 p.a. Please reply briefly to Box 9917.

NO pension, no lunch vouchers. Although old-established this is a young office, small enough to retain an individual family character while nevertheless being extremely busy on good quality work of all kinds from Liverpool to the South coast and from 1 to 17 storeys. Several challenging jobs urgently await able ASSISTANTS with enthusiasm for clean design and, when necessary, the ingenuity to construct the impossible. Salaries by arrangement. Write or phone James & Bywaters, 5, Bloomsbury Street, W.C.1 (Museum 9952/3). 9998

OSCAR GARRY & PARTNERS require ASSISTANTS of Intermediate and Final standard. Salary according to office experience. Please ring for appointment. WELBECK 2507-8-9. 9911

ARCHITECT-PLANNER, ARCHITECTS AND ARCHITECTURAL DRAUGHTSMEN required for progressive young office engaged on a wide range of important projects; salaries up to £1,300 per annum offered to enthusiastic young men of ability. Apply to James Parr, Architect, 132A, Nethergate, Dundee. 9909

RECENTLY QUALIFIED ARCHITECTS are required for work on the design and production of multi-storey flats and non-traditional buildings. Apply stating salary required to R. H. Ball, A.R.I.B.A., Chief Architect, Reema Construction Ltd., Milford Manor, Salisbury. 9908

ASSISTANTS required, some experience in shops essential. Apply stating experience and salary required to: Stanley R. Nevell & Partners, 34, Smith Square, S.W.1. ABBey 3971. 9907

ARCHITECT. Two qualified experienced ASSISTANTS required. Good salary, excellent prospects. Progressive West End Office. Full particulars to Box 9905.

DESIGNER. Wanted with some architectural training and minimum three years' practical experience. Must be able prepare perspectives high class interiors. Portman Square. Good salary and travel facilities. Apply Box 9906.

ASSISTANT required in Architect's Office in Kingston-on-Thames. Varied and interesting work with good prospects for the right person. Apply in writing stating salary required to Donaldson & Co., 75, London Road, Kingston-on-Thames. 9904

ASSISTANTS required immediately. Write stating experience and salary required to Phillip Cranswick, A.R.I.B.A., A.M.T.P.I., 36, Sackville Street, London, W.1. 9901

ROBERT POTTER & RICHARD HARE have an immediate vacancy for a qualified ARCHITECT for work in connection with the repair and conservation of Historic Buildings. A knowledge of current techniques of restoration an advantage. Apply stating experience and salary required to De Vaux House, Salisbury. 9899

ROBERT POTTER & RICHARD HARE have an immediate vacancy for a qualified ARCHITECT. Recent experience on school buildings and a knowledge of cost planning an advantage. Apply stating experience and salary required to De Vaux House, Salisbury. 9900

J. M. AUSTIN-SMITH AND PARTNERS require qualified ASSISTANTS (maximum age 30) to work in conjunction with Senior Assistants. Apply in writing giving all relevant details to 29, Sackville Street, London, W.1. 9899

ASSISTANT ARCHITECT wanted in new Chelmsford office by well established London firm, age 22/35. Intermediate standard at least. Salary range £500/£950 according to qualifications. Interesting and varied work Home Counties and London area. Apply Gunton & Gunton, Empire House, St. Martin's le Grand, London, E.C.1. 9886

FARMER AND DARK have vacancies for:—
SENIOR ARCHITECTS
ASSISTANT ARCHITECTS
JUNIOR ARCHITECTS

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

Scope for people with initiative and ability. Five-day week (four for Juniors studying). Holiday arrangements honoured and travelling expenses paid to those interviewed.

Please write or telephone: Romney House, Tuford Street, S.W.1. ABBey 6311. 9881

ROBERT MATTHEW & JOHNSON-MARSHALL have vacancies for experienced ASSISTANTS to work in their London office on a number of interesting projects. Applications should be made in writing to 24, Park Square East, London, N.W.1. 9873

TAYLOR WOODROW CONSTRUCTION LIMITED require ARCHITECTURAL STAFF at the Head Office in Southall. There are vacancies for Intermediate and Qualified ARCHITECTURAL ASSISTANTS capable of independent work and for experienced ARCHITECTURAL DRAUGHTSMEN in a department working on varied Industrial and Commercial schemes. Congenial working conditions. Restaurant. Pension Scheme. Apply to: Personnel Manager, 345, Burslip Road, Southall, Middx. (WAXlow 2365). 9883

NORTH LONDON. Established practice requires ASSISTANT, R.I.B.A. Intermediate standard. Principally industrial and commercial work. Five-day week. Please send full particulars and salary required to C. E. Owen Ward, R.I.B.A., Midland Bank Chambers, Aldermans Hill, Palmers Green, London, N.13 (telephone PAL 1186/7). 9882

ARCHITECTURAL ASSISTANTS required, qualified and unqualified. Salaries by arrangement. After qualifying period a Bonus Scheme is in operation, together with a non-contributory pension and life assurance scheme. Telephone CHANCERY 3525 for appointment or write Woodroffe, Buchanan & Coulter, 5, Bedford Row, W.C.1. 9876

LOUIS DE SOISSONS, PEACOCK, HODGES & ROBERTSON have immediate vacancies in their London office for SENIOR and JUNIOR ASSISTANTS. Write stating age, salary and experience to the above at: 3, Park Square Mews, Upper Harley Street, N.W.1. 9871

LOUIS DE SOISSONS, PEACOCK, HODGES & ROBERTSON have immediate vacancies in their Welwyn Garden City office for SENIOR and JUNIOR ASSISTANTS. Write stating age, salary and experience to the above at: Midland Bank Chambers, Welwyn Garden City, Herts. 9872

THREE ARCHITECTURAL ASSISTANTS required in City Office for works of varied character. Intermediate standard. Salary scale £750-£900. Telephone: Central 7748 or write Box 9859.

CLIFFORD CULPIN, 39, Doughty Street, W.C.1. requires at once a SENIOR MAN to take responsibility throughout all stages of important projects. Starting salary £1,000 to £1,150 according to experience. Full holiday this year. Phone or write for appointment CHA 5395. 9863

CLIFFORD CULPIN, 39, Doughty Street, W.C.1. requires at once post-Intermediate ARCHITECTURAL ASSISTANTS to work on all stages of a wide variety of projects including an important Civic Centre in the modern idiom. Commencing salary £800-£950 p.a. and opportunities for rapid advancement to keen men with a sense of responsibility. Full holiday this year. Write or phone CHA 5395 for appointment. 9864

SENIOR ASSISTANT required in busy General Practice in Romford area, experience in Schools and Flats an advantage. Salary range £1,000-£1,400. Write stating age and experience to Box 9862.

EXPERIENCED Intermediate and young Qualified SENIOR ASSISTANTS urgently wanted in city office; salary by arrangement on a very attractive scale for the right person. Varied and interesting work; high design standard. In writing: Bernard Taylor & Associates, 16, Kennedy Street, Manchester 2. 9856

GRAHAM CRUMP & DENIS CRUMP, F.R.I.B.A. require ARCHITECTURAL ASSISTANTS in Croydon office. Intermediate standard with several years' office experience. Interesting and varied work. Two weeks' holiday this year. Salary £500-£800 according to abilities. Five-day week. Write giving full particulars, 43, George Street. 9855

MANCHESTER Architects urgently require two ASSISTANTS in grades from Intermediate up to grade meriting £1,000 p.a. salary. Varied work of considerable interest; five-day week etc.; office conducted on enlightened lines. Box 9857.

GOLLINS, MELVIN, WARD & PARTNERS require ARCHITECTURAL ASSISTANTS for their Sheffield Office to work on interesting University projects. Five-day week, quarterly bonuses and pension scheme. Write: 281, Glossop Road, Sheffield 10, or telephone Sheffield 29922 for an appointment. 9846

ARCHITECTURAL ASSISTANT, Intermediate standard, required by Architects in Barnet, Herts. Write stating office experience and salary required. Apply Box 9860.

GOOD conditions and prospects are offered to first-class QUALIFIED PRINCIPAL ARCHITECTURAL ASSISTANT in an established, busy practice in Hertfordshire. Salary £1,000 plus. Urgent application to Architect, National Provincial Bank Chambers, Welwyn Garden City, Welwyn Garden 3833. 9987

EDINBURGH. Interesting work awaits responsible ASSISTANT with initiative; salary according to aptitude. Please state own estimation, in confidence, to Michael Laird, 65, Castle Street, Edinburgh. 9977

CO-OPERATIVE WHOLESALE SOCIETY LTD. Architects' Department, Manchester. ARCHITECTURAL ASSISTANTS, both Final and Intermediate standard, required to assist on interesting and varied development programmes. Five-day week. Pension Scheme. Applications stating age, experience, qualifications and salary required to G. S. Hay, F.R.I.B.A., Chief Architect, Co-operative Wholesale Society Ltd., 1, Balloon Street, Manchester 4. 9981

PRINCIPAL'S ASSISTANT with two or three years' post-graduate experience wanted soon for small practice in West End with possibility of junior partnership later. Write with full particulars and stating salary required to Roger Worboys, M.A., A.R.I.B.A., 50, Baker Street, W.1. 1027

ARCHITECTS, QUALIFIED, required to work in small design groups on interesting development schemes in Birmingham and other cities throughout the United Kingdom. Good opportunities in an expanding practice with offices in Birmingham and London. Progressive salary scales, incentive bonus scheme, luncheon vouchers, five-day week, and three weeks' holiday. Flat accommodation available in Birmingham. J. Seymour Harris & Partners, 3-4, Greenfield Crescent, Birmingham, 15. Tel. EDGbaston 4571. 1028

ARCHITECTURAL ASSISTANTS with some experience required to work in design/construction groups on interesting redevelopment schemes in Birmingham and other cities throughout the United Kingdom. Good opportunities in an expanding practice with offices in Birmingham and London. Progressive salary scales, bonus scheme, and holiday in accordance with service, luncheon vouchers, five-day week. Flat accommodation in Birmingham. J. Seymour Harris & Partners, 3-4, Greenfield Crescent, Birmingham, 15. Tel. EDGbaston 4571. 1029

BUSY Architects' Practice, W.C. London, has vacancies for SENIOR and JUNIOR ASSISTANTS. Interesting housing, industrial and commercial work. Five-day week, luncheon vouchers. Holiday will be honoured. Salaries up to £1,250 p.a. Replies in strict confidence to The Senior Partner, Box 1022.

BOISSEVAIN & OSMOND REQUIRE ASSISTANTS OF INTERMEDIATE STANDARD TO WORK ON A VARIETY OF INTERESTING BUILDINGS IN THEIR NEWLY BUILT OFFICES IN EPSOM. GOOD SALARIES WILL BE PAID TO MEN WHO SHOW INITIATIVE AND ENTHUSIASM WITH AMPLE OPPORTUNITY FOR ADVANCEMENT ON A MERIT BASIS. WORKING CONDITIONS ARE EXCELLENT WITH A FIVE-DAY WEEK. PLEASE REPLY TO KINGS SHADE WALK, EPSOM, SURREY. 1017

AN ASSISTANT is required in the Architect's Department of Schweppes Limited. This is an opportunity for a keen, qualified architect with an enthusiasm for planning and detail, to work for an expanding company and its subsidiaries on both new projects and the development of existing buildings, etc. Salary according to ability and experience. Profit sharing and pension schemes, five-day week, staff canteen. The department is located in a very modern office block adjacent to Paddington Station. Please write full particulars of experience, qualifications, age, etc., to The Architect, Schweppes Limited, 50, Eastbourne Terrace, London, W.2. 1020

CARDIFF—SENIOR ASSISTANT ARCHITECT, salary £1,200, and JUNIOR ASSISTANT, salary £700, required immediately for general practice. Robertson and Wigley, Architects, 44, The Parade, Cardiff. Telephone 33392/3. 1019

IMPERIAL CHEMICAL INDUSTRIES LIMITED GENERAL CHEMICALS DIVISION

HAS vacancies for ARCHITECTURAL ASSISTANTS for work on the design of amenities, offices, canteens, laboratories and plant buildings. Candidates for these vacancies should have either a Degree or Diploma in Architecture and preference will be given to those with A.R.I.B.A. and one or more years' experience, since this qualification.

Salary will be dependent on age and experience and there are Pension Fund and Profit-sharing Schemes. Where necessary, married men will receive a refund of reasonable removal (including travel) expenses, and a temporary lodging allowance is payable whilst maintaining two homes.

Applicants should write stating age, qualifications and experience, to STAFF MANAGER, IMPERIAL CHEMICAL INDUSTRIES LIMITED, GENERAL CHEMICALS DIVISION, CUNARD BUILDING, LIVERPOOL, 3. 1018

ARCHITECTURAL ASSISTANT—Applications are invited from qualified persons for permanent and progressive position in the Architect's Department of the Royal Arsenal Co-operative Society, Woolwich. Sound knowledge of construction and experience in surveys and preparation of working drawings for shop, office and industrial buildings, shopfittings, etc., essential. Five-day week, Superannuation Scheme in operation. Salary £689-£819 per annum according to experience. Apply, giving age, experience and qualifications, to The Staff Manager, 71, Powis Street, Woolwich, S.E.18. 9990

RAGLAN SQUIRE & PARTNERS require all grades of ASSISTANTS for work of national importance in Reading area. Apply in writing: 3, Hobart Place, S.W.1. 1016

POWELL AND MOYA require ARCHITECTURAL ASSISTANTS of all grades. Opportunity to work on new hospital schemes from early stages. Applicants should write to 36, Great Smith Street, London, S.W.1, stating age, training, experience and salary required. 1015

QUALIFIED or NEAR QUALIFIED ASSISTANT required for medium sized office in pleasant surroundings. Experience in the design of houses and flats an advantage. Pension scheme, canteen facilities, car allowance, possibility of housing. Salary in range of £1,000 to £1,300 according to experience. Apply, giving particulars of experience and stating present salary, to Selby J. Clewer, F.R.I.B.A., Bournville Village Trust, Oak Tree Lane, Birmingham, 30. 1014

ARCHITECTS with busy practice in Brighton require ASSISTANTS with practical experience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box 5848.

PROGRESSIVE and busy practice with a wide range of domestic and commercial development require the following Assistants:—
QUALIFIED or SENIOR ARCHITECTURAL ASSISTANT. £1,100-£1,200 according to experience.

INTERMEDIATE or JUNIOR ARCHITECTURAL ASSISTANT. £700-£800 according to experience.

Contemporary outlook preferred. After an initial period a profit sharing basis may be introduced. Will be required to work at Camberley, Surrey.

Also:
QUALIFIED ARCHITECT—£1,250. After probationary period will be required to manage office on a profit sharing basis. For Haslemere Office, John M. Ramsay, A.R.I.B.A., Lloyds Bank Chambers, Haslemere. (Tele. 2286.) 1013

CHANNEL ISLANDS.—SENIOR ASSISTANT required in an established and expanding practice in Jersey. Applicants should have had several years' experience and must be capable of taking charge of a small drawing office under the resident partner and of running contracts. Possibilities of profit-sharing and ultimate partnership for the right man. Interviews can be arranged in London or Southampton. Write giving full particulars to John H. Saunders, L.R.I.B.A., F.R.S.A., at 22, Brunswick Place, Southampton. 1012

FIRST ASSISTANT required to help two busy partners and secretary, holiday arrangements respected. Ring Holborn 5101. 1127

J. DOUGLASS MATHEWS & PARTNERS have three vacancies for **ARCHITECTURAL ASSISTANTS.** Salary range £700 to £1,000. Group system operated, giving opportunity for taking part in all aspects of work. Graded salary system, Annual Bonuses, Pension Scheme, Luncheon Vouchers, 3, Ebury Street, London, S.W.1. 8993

ARCHITECTURAL ASSISTANT required for busy West End office. Salary according to age and experience. Apply to Maurice Sanders, F.R.I.B.A., 24, Harley Street, W.1. 1101

UP to £1,200 per annum with Bonus Scheme and Luncheon Vouchers offered to qualified conscientious **SENIOR ARCHITECTS.** Only those confidently capable of designing and carrying out projects from sketch plans to final accounts need apply. There are excellent prospects for the right persons. Applications should be made in writing in the first instance, stating age, experience and qualifications, to: W. Russell Orme & Partners, 55, Manchester Street, London, W.1. 1103

ARCHITECTURAL ASSISTANTS, post-Intermediate or Final standard, required in busy London Architects' Office, to work on varied projects of interesting nature. Salaries up to £1,000 per annum with Bonus and Luncheon Vouchers are offered to those who are keen and conscientious. Applicants should write, stating age, experience and training, to: Box 1104.

EXPERIENCED ARCHITECTURAL ASSISTANTS of Intermediate and Final standard. Substantial salary, interesting and varied contemporary work. There is considerable scope for initiative and advancement. Five-day week. Luncheon Vouchers. Joseph Mendleson & Partners, 71, Wimpole Street, London, W.1. HUN 0361. 1111

ASSISTANT required for varied and interesting Industrial, Commercial and Domestic work. Office and site experience essential. Five-day week. Salary according to ability and experience. Apply in writing to A. B. Owles, A.R.I.B.A., c/o Wells & Walchli, 6-8, Sackville Street, London, W.1. 1112

REQUIRED immediately, **ARCHITECTURAL ASSISTANT.** Intermediate to Final standard, with at least three years' office experience, for new branch office in Exeter. Five-day week, minimum restrictions and above average salary for applicant with initiative and sense of responsibility. Box 1120.

APPLICATIONS are invited for the post of **ARCHITECTURAL ASSISTANT.** Intermediate R.I.B.A. standard, in busy office engaged on varied work; five-day week. Salary commensurate with experience and ability. Quick & Lee, Chartered Architects, 11, Waterloo Place, Leamington Spa, Warwickshire. 1096

THE LAING HOUSING COMPANY INVITES applications for the following vacancies in their Head Office at Queensbury:

ARCHITECTURAL ASSISTANT for varied and interesting domestic design and detailing. Intermediate R.I.B.A. or equivalent.
ASSISTANT QUANTITY SURVEYOR for taking-off, estimating, site measurement and interim valuations. Intermediate I.Q.S. or equivalent.

These positions are permanent and pensionable. Salary commensurate with qualifications and experience. Assistance given to those studying for a recognised qualification. Sports and Social Club facilities. Applications in writing to Personnel Manager (H.6), John Laing and Son (Holdings) Limited, London, N.W.7. 1094

FIRM of the future burrowing its way to fame in the oldest house in Bloomsbury Square, requires stalwart **ASSISTANTS** to join it in coming glory. Holidays 1960 assured. Dalling and Partners, 14, Bloomsbury Square, W.C.1. CHANCERY 5125.

SENIOR and INTERMEDIATE ARCHITECTS required by busy City office, every opportunity for initiative and responsibility; varied practice. Five-day week. Salaries by arrangement and commensurate with experience. Kenneth Lindy, Joseph Hill & Partners, 24, St. Mary Axe, E.C.3. 1096

APPLICATIONS are invited to fill posts as **ASSISTANT ARCHITECTS.** Five-day week. Compulsory Superannuation Scheme. Salary range £750-£1,080 per annum. Apply: W. J. Reed, F.R.I.B.A., Chief Architect, C.W.S. Ltd., 99, Leman Street, London, E.1. 1085

W. & M. GIVEN, Architects and Consulting Engineers, Coleraine, N. Ireland. **ARCHITECTURAL ASSISTANTS,** all grades, and **ONE CIVIL ENGINEERING ASSISTANT** required for Schools, Hospitals and Housing. Reply to above, or telephone Coleraine 2288/89. 1079

HORSHAM, SUSSEX.—Small office requires **Intermediate to Final standard ASSISTANT.** Experience which the successful applicant must have will be considerably increased. Country wages, long hours, no vouchers. Box 1078.

EXPERIENCED SENIOR ASSISTANT ARCHITECT required in Architect's Department of commercial firm in the West Riding of Yorkshire. Must be prepared to work on projects of varying size also willing to travel throughout the country. Five-day week, Pension Scheme, canteen facilities. Salary by arrangement according to age and experience. Apply Box 1077.

ERIC LYONS requires an **ASSISTANT ARCHITECT.** Realistic salary in accordance with experience and capabilities. Write: Mill House, Bridge Road, Hampton Court, Surrey. 1076

ASSISTANT to Brewery Company Architect required. First class working conditions and good salary to young man with ability and initiative. Intermediate to Final standard. Previous Brewery experience not essential. Assistance with removal. Pension. Write to Company Architect, Groves & Whitnall Ltd., Regent Road Brewery, Salford, 5, Lancs. 1075

ARCHITECTS ASSISTANTS. Excellent opportunities for men of Intermediate standard to obtain good experience and salary in multiple shop concern engaged on programme of new shops and modernisation throughout the country. This Company's Head Office will be transferred to Bracknell, Berks, in 1961. Cost of additional fares to London will be paid until the move and assistance with housing will be given to those living in London. Pension Fund. Apply with details of age and experience to Personnel Officer, MacFisheries, 10/12, Little Trinity Lane, London, E.C.4. Tel. No. MANSON House 3210. 1073

LANCHESTER & LODGE urgently require **ASSISTANTS** around Intermediate standard. Varied and interesting work. Luncheon vouchers, five-day week. Write full particulars: 10, Woburn Square, London, W.C.1. 1069

COOK, CULLING & ILLINGWORTH have a vacancy for experienced **SENIOR ASSISTANT ARCHITECT** in busy practice dealing largely with Industrial buildings. Candidates should have had at least five years' full time office experience. Apply: Meeting Lane, Gold Street, Kettering. 1067

QUALIFIED and JUNIOR ARCHITECTS' ASSISTANTS required for varied practice. Salary according to qualifications and experience plus bonus on profits. Write Beecher & Stamford, F/A.R.I.B.A., 14, Park End Street, Oxford. 1065

ARCHITECTS and ASSISTANTS with good industrial experience required for work on major industrial developments. Good prospects in expanding organisation. Apply, stating age, qualifications, experience and salary required, to Box 1100.

ARCHITECTS urgently required in City Office for Industrial and Commercial projects in London and the Provinces. Pension Scheme, L.V. and five-day week. Write full particulars and salary required to Ley, Colbeck & Partners, F/R.I.B.A., Palmerston House, 51, Bishnongate, E.C.2, or 'phone LON. 3830. 1105

POULTON & FREEMAN require **TWO ASSISTANT ARCHITECTS.** There is also an additional vacancy for a **GIRL ARCHITECT.** Five-day week, three weeks' paid holiday (present arrangements honoured) bonus scheme, luncheon vouchers. Denis Poulton, Philip Freeman and John Rice, F/A.R.I.B.A., 61, Wyndham Place, W.1. AMBassador 2211. 1107

EXPERIENCED CLERK OF WORKS required at once for Pre-Cast Concrete Office Building 50,000 sq. ft. at Harrow. Contract just commenced. Contract period 8/9 months. Salary range £900-£1,100 p.a. according to experience. Apply, giving full particulars of experience, to G.R.C., 18, Upper Brook Street, W.1. MAYfair 5855. 1108

ARCHITECTURAL ASSISTANT of Intermediate standard required at Branch Office at Sutton, Surrey. Varied practice, five-day week. Salary according to experience. Write or telephone: Gerald Stenstone & Partners, 34, Bloomsbury Way, W.C.1. CHANCERY 3444. 1109

ARCHITECTS AND ASSISTANTS **REQUIRED** for work on interesting Industrial project affording first-class design and technical experience. Apply in writing to: Sir William Halcrow & Partners, (B.A. Architects' Section), 47, Park Lane, London, W.1. 1110

BRISTOL Architects require Intermediate standard **ASSISTANT** with office experience and initiative. Small informal office with varied practice including spec. housing. Write Alexander Beckingsale & Partners, 30, White Ladies Road, Bristol, 8. 1099

ARCHITECTURAL ASSISTANT about Intermediate standard, required for interesting and varied programme. Good draughtsmanship essential. Commensurate salary. Reply, stating age, experience and present salary, to Richard Ferguson, 124, London Road, Chelmsford, Essex. 1096

INTERMEDIATE JUNIOR ASSISTANTS required for large office development and flats. Salary according to experience and capability. Write to A. Green, A.R.I.B.A., 23, Fitzroy Street, W.1. 1063

ARCHITECTURAL ASSISTANTS AND DRAUGHTSMEN with initiative required for interesting and varied work on major industrial projects. Architectural Assistants should be of Intermediate to Final R.I.B.A. standard with several years' experience and capable of preparing working drawings and specifications with minimum supervision. Draughtsmen should have a good training in modern building construction and have had at least four years' experience in an Architect's Office. Pension scheme, five-day week. Luncheon vouchers. Apply with full particulars to J. D. & D. M. Watson, 67, Tufton Street, Westminster, S.W.1. 1025

TOOLEY AND FOSTER require **ARCHITECTURAL ASSISTANTS** (preferably just qualified or soon to take R.I.B.A. Final) for responsible work in Essex practice ten miles from London. Unfurnished two-bedroomed flat available if required. Salary by arrangement in accordance with age and experience; five-day week, voluntary superannuation scheme. Apply by letter to Midland Bank Chambers, Buckhard Hill, Essex, or phone BUC 2211. 9997

SHINGLER & RISDON require **TWO SENIOR ASSISTANTS and FOUR ASSISTANTS** to take over the design and construction of important comprehensive developments. Salary by agreement. Holiday commitments recognised. 'Phone CHA 2951. 9996

ARCHITECT required, approx. five years' qualified experience private or contractor's office. Major schemes. Responsible position. Prospects for competent young man. Wallace F. Smith, A.R.I.B.A., M.S.I.A., 84, Crane Street, Salisbury, Wiltshire. 9953

MORRIS DE METZ, F.R.I.B.A., requires **ASSISTANTS**, all grades, for interesting work. Salary according to experience and ability. Holiday arrangements respected. 2, Gloucester Place, London, W.1. HUNTER 2581. 9993

CROYDON.—**ARCHITECTURAL ASSISTANTS** required: Senior and Junior. Varied and interesting work: Schools, Hospitals, etc. Apply, stating age, experience and salary required, to George Lowe & Partner, 79, George Street, CROYDON 3608/9. 9992

ASSISTANT ARCHITECTS **DUE** to the expansion of the Architect's Department in the Birmingham Headquarters of our large Building Organisation, the following Assistants are required for permanent pensionable positions under the control of our Staff Architect.

(a) **SENIOR ASSISTANT ARCHITECTS** (salary range £1,200 p.a.) with progressive thoughts on the design of Domestic, Industrial and Commercial projects, and capable of taking control as a Group Leader.

(b) **ARCHITECTURAL ASSISTANTS** (salary range £800 p.a.) capable of preparing full working drawings with a minimum of supervision.

Assistance with housing accommodation may be granted to the successful applicants at the Board's discretion.

For further information, forward brief particulars of qualifications and experience to:

J. Hughes Longstaff, Dipl. Arch. (Leeds) A.R.I.B.A., Staff Architect, C. Bryant & Son Ltd., Small Heath, Birmingham, 10. 9994

ERNEST W. BANFIELD & SON urgently require **ARCHITECTURAL ASSISTANTS** of Intermediate and Final standard in their London office. Ecclesiastical, commercial and industrial projects. Five-day week. Salary by arrangement. Ring MUS 0175 for appointment. 1046

ARCHITECTURAL DESIGN DRAUGHTSMAN

required by
SHELL INTERNATIONAL PETROLEUM
COMPANY LIMITED
for its

LONDON ESTATES DIVISION
CANDIDATES should have experience in surveys of existing buildings, land survey and should be able to prepare working drawings for structural alterations and the layout and equipping of large and small offices.

Age 25/27 years. Salary would be based entirely on age, experience and qualifications. There is an excellent Pension Scheme.

Applications, which will be treated in confidence, should be addressed to:—
Personnel/Recruitment/D.D.,

Shell International Petroleum Co. Ltd.,
St. Helen's Court,
St. Helen's,
London, E.C.3. 1064

WATKINS & PARK require ASSISTANT ARCHITECTS at Leigh-on-Sea and Basildon. Salary £750 or more according to experience. Five-day week. Modern outlook. Apply 13, Clay Hill Road, Basildon. Tel.: 1061
VAX 2040.

ARCHITECTURAL ASSISTANT (A.R.I.B.A.) required on the Architect's Staff of a large Industrial Group near Birmingham. Good prospects of long term employment for experienced and capable man. Reply, stating age, qualifications, experience and approx. salary, to Box 1054.

ASSISTANT required. R.I.B.A. Intermediate standard. Five-day week. Excellent prospects. Bernard Gold & Partners, 4/6, Savile Row, W.1. Phone REGENT 7551 1052

ASSISTANT ARCHITECT, Intermediate/Final standard, required for expanding practice inland town of Hampshire. Excellent prospects for right applicant. Box 1051.

ARCHITECTURAL ASSISTANTS required approaching or at intermediate stage, in the Coventry area. Interesting development in flat design. Up to £900 p.a. salary according to ability and experience. Write with full particulars to Box 1048.

£400 TO £800 salary per annum offered to young, keen ASSISTANT wishing variety in country private architectural practice. Please write, giving age and experience, to Forsyth Lawson, Cunningham & Partners, Chartered Architects, 30, Horse Fair, Banbury, Oxon. 1047

ARCHITECTURAL ASSISTANTS required for Architect's Department of large retail department store group. Pay range £900 to £1,250 a year according to qualifications and experience. Interesting and varied work embracing design of modern supermarkets, department stores, factories and private houses. All workers are partners and share all profits, with good holidays, sick pay, shopping discount, subsidised meals and non-contributory pension scheme. Apply in writing, giving full details to Director of Personnel, John Lewis Partnership, Oxford Street, London, W.1. 1002

TEATHER & HADFIELD, Chartered Architects, Mazda Buildings, Campo Lane, Sheffield, require ASSISTANT ARCHITECTS capable of taking charge of Contracts from sketch design to completion. Also ARCHITECTURAL ASSISTANTS up to Intermediate standard. Holiday commitments will be honoured. 1011

VACANCIES arise for one ASSISTANT up to Final standard and one ASSISTANT up to Intermediate standard. Full particulars to Wilburn and Son, Architects, 11, South Parade, Doncaster. 1009

SIR PERCY THOMAS AND SON of Cardiff, Swansea and Shrewsbury, require experienced ASSISTANTS for all three offices.

Applicants should be qualified and experienced, with a sound knowledge of progressive design, and capable of exercising a high degree of responsibility.

Salaries range from £750 to £1,500 per annum, depending on experience, etc. Holidays are three weeks per annum, and every third Saturday morning is free.

Applications, stating age, qualifications and experience, should be made to the Secretary, at 10, Cathedral Road, Cardiff. 1008

CADBURY BROTHERS LTD. have vacancies for

ARCHITECTURAL ASSISTANTS OF FINAL AND INTERMEDIATE R.I.B.A. standard required by Cadbury Brothers Limited, to work on a varied and interesting programme. Experience in industrial and commercial building design desirable. Five-day week, attractive working conditions and amenities, pension scheme. Housing accommodation will be provided. Salary according to qualifications and experience. Write, stating age, qualifications and salary required, to: Chief Architect, Cadbury Brothers, Bourneville, Birmingham. 1007

COMPETENT Intermediate ASSISTANT required. Some experience of housing and flats. Initiative and design ability essential. Salary £600-£1,000 per annum with profit sharing scheme. E. S. Boyer & Associates, 88-90, Grays Inn Road, London, W.C.1. 1030

ASSISTANTS required at Beaconsfield or Daventry. Apply H. Desmond Hall, Beaconsfield 1366 1034

DONALD ROWSWELL urgently requires capable ASSISTANTS of various grades for Croydon office. Salary by agreement. Holiday arrangements honoured. Apply with full details to 5A, Friends Road, Croydon, or telephone CROYDON 4080. 1045

ARCHITECTS require ASSISTANT for general practice in London. Would suit man with small practice wishing to join old established firm. Write stating age, training, experience, salary required and when free, to Box 1043.

JUNIOR ARCHITECTURAL ASSISTANT required by a world-wide organisation with Head Office in London. Applicants must be probationers approaching Intermediate standard or students of the R.I.B.A. and have had at least three years' experience in the preparatory of working drawings and details. Apply in writing, giving full information to Personnel Officer, Cable and Wireless Limited, Mercury House, Theobalds Road, London, W.C.1. 1042

BREWERY Architect's Department has vacancy for experienced ASSISTANT approaching Final standard. Applicants for this permanent pensionable appointment should have a minimum of five years' office experience preferably with knowledge of licence work. Applications, with full particulars, to Fergus H. Frost, A.R.I.B.A., The Birkenhead Brewery Co. Ltd., 73, Oxtown Road, Birkenhead. 1041

ADVANCEMENT guaranteed to capable ARCHITECTURAL STAFF of intermediate and Final standard accepted into the drawing office of our Barnet practice. Interesting team work in preparing package deals relating to housing development and commercial projects. Write Box 1139.

ARCHITECTS' CO-PARTNERSHIP require qualified or nearly qualified ASSISTANTS for interesting University development and work on Special School. Please write to 44, Charlotte Street, W.1, or phone LANGHAM 5791. 1131

Architectural Appointments Wanted

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

ARCHITECTURAL ASSISTANT with excellent references re design, site supervision, quick and accurate draughtsmanship, good working drawings and detailing, requires position with firm on the South Devon coast or near, after spending three years abroad. Willing to work on week's notice until proven my ability. Position required as from August 1st, 1960. (Age 32, qualified industrial designer M.S.I.A. (S.A.)) Please contact Advertiser, P.O. Box A 238, Avondale, Southern Rhodesia. 9623

Other Appointments Vacant

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

SHOPFITTING DRAUGHTSMAN required for preparation of lay-outs for new Super-Markets. Varied and interesting work. Five-day week. Staff canteen. Apply in writing to Cooper & Cos. Stores, 90-102, Edgware Road, London, W.2, for the attention of Mr. E. M. West, giving details of experience. Salary about £750 per annum, depending on experience. 9946

DRAUGHTSMEN required by Architects in Barnet, Herts. Write stating salary required and experience. Apply Box 9861.

BUILDING SURVEYOR required, W.1 Architects. Office work will consist mainly of preparation of Specifications, checking accounts, supervising minor works, surveys, maintaining technical library, etc. Apply stating age, experience and salary required to David Stern and Partners, 24, Gloucester Place, London, W.1. 9859

THE PATENT GLAZING CONFERENCE

TECHNICAL OFFICER
The Patent Glazing Conference, which is an old-established trade association representing the interests of specialist sub-contractors engaged in the manufacture, design and installation of Patent Glazing for the daylighting of industrial and other buildings, is considering the appointment of a full-time Technical Officer.

The duties would be generally to keep the Conference in touch with current developments in design and construction in the building industry as a whole, and to consider and advise on their implications for the Patent Glazing trade. He would be expected to pay particular attention to problems on the behaviour of traditional and new materials, insulation, lighting, safety, maintenance and economics and to advise on any research which the Conference might sponsor.

The ideal candidate would be in his late 20's or in his 30's, enthusiastic, have an enquiring mind and be capable of expressing himself clearly both orally and in writing. He should have scientific or technical experience preferably in research or in architecture. The salary would be according to his general qualifications but a starting salary of not less than £1,500 p.a., provisionally on a three-year engagement, is envisaged. The proposed appointment is a new one and prospects would depend entirely on how the work and the officer himself developed.

Applications, marked Strictly Personal, should be submitted by 31st May, 1960, to the Director, The Patent Glazing Conference, Burwood House, Caxton Street, S.W.1. 1066

ARCHITECTURAL DRAUGHTSMAN experienced in detailing fibrous plasterwork required immediately. Clark & Fenn Ltd., 16, Old Town, S.W.4. MAC. 2455. 1026

BUILDING SURVEYOR required by Chartered Firm in Southampton. General experience essential and preferably qualified. Salary in the range £750-£1,000 per annum according to experience. Apply in confidence in writing to B. Gater, F.R.I.C.S., F.A.I., Richard Austin and Wyatt, Chartered Surveyors, 26, London Road, Southampton. 1010

Services Offered

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

"DON" ARCHITECTURAL MODEL MAKERS. We offer the highest grade work with speed and reliability. —Please Phone Woolwich 1262 or write 6, Pelham Crescent, Hastings. 1673

SURVEYS. Large or small, drawn to large scales, accuracy guaranteed. Structural sewerage, sewage disposal, sanitary plumbing and drainage design. The Site Survey Company, London, S.E.3. Telephone LEE Green 7444. 6084

MODELS FOR ARCHITECTS. Charles Longbotham specialises in this work and offers first class personal service to architects in the London area. Northcroft Studio, Northcroft Road, West Ealing, W.13. Phone Ealing 7349. 1436

FULLY experienced in all Building and Architectural work, I am available to undertake: Designs, Working Drawings, Details, Surveys, Specifications, Models, etc. Just telephone Wallington 9883 (near Croydon) and I will call anywhere and take your instructions. Box 5648

ARCHITECTURAL MODELS. —Thomas E. Bartlett and Partners specialise in this work. 5 King's Ave., W.5. Phone PERIVALE 6283 6176

SURVEY OF LAND or buildings also Specifications, quantities and final accounts prepared for new or conversion work. LIV. 1839. 2356

YOUNG, energetic, experienced ARCHITECT and TOWN PLANNER establishing London and Suburbs practice will assist other offices to mutual advantage. No job too small. Guaranteed service. Box 9217.

LONDON practice with staff available offers comprehensive Architectural services including measured surveys to other firms of Architects. Box 9356.

ARCHITECTURAL GROUP available for Architectural design and detailing and land, building and quantity surveying. Tel. Wallington (Nr. Croydon) 3712. 9684

CONSULTING ENGINEERS offer a quick and efficient service to Architects, covering any building services. Quantity drawings, working drawings and specifications. Sketch schemes same week. Box 9797.

MODELS AND COLOUR PERSPECTIVES. Charles Houthusen offers work of the highest quality. 16, Thames Street, Sunbury-on-Thames, Middlesex. Sunbury 3728. 9709

DRAWINGS. Complete drawing service offered to Architects and others by specialist company. Box 9841.

SENIOR ARCHITECT with wide experience abroad would like a responsible position on a partnership level with a well established and progressive firm requiring someone to reside abroad and to take complete charge of the business. Box 9887.

CHARTERED ENGINEER offers full or part-time services in the West Midlands area. Building, structural civil engineering design work carried out promptly. Box 9956.

FLOOR WARMING SERVICE. —Heat loss calculations, electric floor warming schemes, advice on thermal insulation, etc. Services available to Architects, Contractors, etc. Box 1031.

CONSULTING ELECTRICAL ENGINEER offers service to Architect covering any type of building. Drawings and Specifications prepared at short notice. Box 1032.


ARCHITECTURAL DRAWING and survey service offered to overworked, understaffed architects in an area bounded by Hull, York, Leeds, Sheffield and Lincoln (including surrounding districts). We will call at your office. Box 9999.

A.M.I.H.V.E. (Surrey) will act as Consultant on warm air heating. Industrial or Domestic. Advice on schemes. Box 1098.

Accommodation Vacant

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

TO LET—Share of large light room with two other designers. 3rd floor office, Old Burlington Street, W.1. £125 p.w. REG 5425. 9799



BROUGHTON MOOR

LIGHT
SEA GREEN
OLIVE GREEN
AND BLUE

SLATE

for Facings, Foundation Stones, Paving and Flooring, Steps, Cills, Shop Fronts, Surrounds, Pilasters, Fireplaces and all architectural work

Send for technical pamphlets	1. Floorings 2. Facings 3. Coping 4. Cills 5. Riven Faced Slabs
------------------------------------	---

The BROUGHTON MOOR GREEN SLATE QUARRIES Ltd
CONISTON - LANCASHIRE
Telephone: Coniston 225/6 Telegrams: Cann, Coniston

BROAD-ACHESON

BLOCKS for
unvarying quality

SAVE—15% COST
using 3" B.A.—INNER LEAF

BROAD & CO. LTD. FACTORY, BARNET

HY-RIB

combined shuttering
and reinforcement

long span metal lathing

MODELS

for Architects & Civil Engineers
by **John B. Thorp**

EST. 1883
98 GRAY'S INN ROAD, LONDON
W.C.1. Tel: HOLborn 1011

CAMBERLEY: Ex. Suites of Offices. Central. Rents from £100 p.a. to £325 p.a. Recommended. Fox & Smallbone, Estate Agents, Camberley. (Tel. 2424.) 1021

For Sale and Wanted

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

HALDEN "ECONOPRINT" Model 40 Photo Copying machine: service maintained. Cost £345. £150, including separate developer. Apply: Ronald Ward & Partners, 29, Chesham Place, S.W.1. 9878

DRAWING BENCHES.—Seven second-hand 8-ft. units with plan drawers. Suitable for Architects or Surveyors. Offers wanted. View by appointment. B.R.C., 54, Grosvenor Street, W.1. HYD 4444. 1119

Miscellaneous

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

HANDMADE, CLAY TILES available in many beautiful colours. The perfect roofing material with the longest life. Particulars, samples and brochure from G. Tucker & Son, Ltd., Loughborough, Leicestershire. Phones: Loughborough 2446/7. 1609

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment.—Harvest Works. 96/107, St. Paul's Road, N.1. Canonbury 2661.

CROGGON & CO., LTD.—Chain Link Fencing and all types of Wrought Iron Fencing supplied and erected.—230, Upper Thames Street, London, E.C.4. CENTral 4382. 9429

REFRIGERATED SHELVES for bottle cooling; beer and wine coolers, etc., for hotel, catering and licensed trades supplied and installed. G.V.E. Ltd., 231, Strand, W.C.2. FLE 5947. 7661

WE shall be pleased to co-operate with Architects and Surveyors in the preparation of plans for open air or covered pools complete with water filtration and heating installations. Gilliam & Co., Ltd., Purley Way, Purley, Surrey. Tel. UPLands 9222. 9777

CRESOTE, 40 gallons 90s. delivered (Home Counties) in free drum. **REFINED TAR** (needs heating) 93s. 4d. **BARN TAR** (can be painted on cold) 96s. 8d. Coopers, Builders' Merchants, Ashford, Kent 9835

CONFIDENTIAL consideration of Architects' own development propositions extended by a Development Company who do not employ its own architectural staff. Schemes in London and South-East for housing estates and two- to four-storey flats particularly welcomed. Also multi-storey office developments. Joint participation arranged with existing clients or schemes taken over and Architects retained. Write or telephone for appointment: Wellwood Estates, Ref. P.D., 2, Sloane Gardens, S.W.1. Telephone SLOane 9178. 1081

Educational Announcements

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

R.I.B.A. and T.P.I. EXAMS.—Stuart Stanley (Ex. Tutor Sch. of Arch. Lea, Univ.), and G. A. Crockett, M.A./B.A., F./F.E.B.A., M./A.M.T.P.I., prepare Students by correspondence. 18, Adelaide Street, Strand, W.C.2. TEM. 1603/4. 9953

INTERIOR DESIGN AND DECORATION. Rhodoc School offers a complete home study course in interior design and decoration. Course 1—for professional use. Course 2—for personal use about your home. Free handbook by return post. Write to Dept. AJ, Rhodoc School, BCM/Rhodoc, London, W.C.1. 8658

CENTRAL LONDON Commercial Designer wishes to have Private Evening Tuition in Architecture. He has no knowledge of the subject and wants to start from scratch. Box 1083.

FULL OR SUPPLEMENTARY TUITION
Provided by correspondence for R.I.B.A. examinations. Revision Courses also available in any subject. Descriptive brochure on application.

ELLIS SCHOOL OF ARCHITECTURE
Principal: A. B. Waters, F.R.I.B.A., F.I.Arb.
103B, Old Brompton Rd., London, S.W.7
and at Albany House, Worcester.

today's slate

WINGILATE

A NATURAL MATERIAL WITH A BIG PLACE IN MODERN ARCHITECTURE

W

specialist manufacturers of slate
cills, surrounds, copings and cladding
to architects' specifications
The Bow Slate & Enamel Co. Ltd
The Town Hall, Bow Rd, Ed. ADV 2203

**2 HOUR
FIRE
RESISTANCE**

**VENTILATION
TRUNKING**




Where site requirements call for high fire resistance in smoke ducts or inter-floor ventilating systems DURASTEEL trunking can meet L.C.C. and other regulations. Alternatively, existing sheet metal trunking can be protected by false ceilings of DURASTEEL.

Send to manufacturers for data on—
**DURASTEEL 3DF2
FIRE PROTECTION PANELLING**

Also mfrs.
**FIREPROOF
DOORS**

DURASTEEL LTD.
Oldfield Lane, Greenford, Middlesex
Tel: WAXlow 1051/2 & 6311



FURSE LIGHTNING CONDUCTORS

EARTHING EQUIPMENT
SUPPLIED ONLY ON APPROVAL

SUPPLIED
FOR
EVERY CLASS
OF BUILDING
OR STRUCTURE &
EARTHING REQUIREMENT

W. J. FURSE & CO. LTD.
24, TRAFFIC STREET, NOTTINGHAM
LONDON: 20-22, GERRARD STREET, ALDERSHOT, HANTS.

BOOTS

NEW RESEARCH CENTRE

PENNYFOOT STREET, NOTTINGHAM.

C. St. C. Oakes Esq., M.B.E.
Messrs. Boots Ltd. Chief Architect

Send for details to Dept. AJ.
HATHERNWARE LTD. LOUGHBOROUGH. LEICS.

The design effectively uses stone-faced

HATHERNWARE

FAIENCE in yellow fluted and turquoise

dmHL 77

FIRST FOLD HERE

AJ enquiry service

If you require catalogues and further information on building products and services referred to in the advertisements appearing in this issue of the Architects' Journal please mark with a tick the relevant names given in the index to advertisers overleaf. Then detach this page, write in block letters, or type, your name, profession or trade and address in the space overleaf, fold the page so that the post-paid address is on the outside and despatch. We will ensure that your request reaches the advertisers concerned.

Postage
will be paid
by
Licensee

FOLD HERE

No Postage Stamp
necessary
if posted
in Great Britain or
Northern Ireland

BUSINESS REPLY FOLDER
Licence No. S.W. 1761

THE ARCHITECTS' JOURNAL

9-13 Queen Anne's Gate

London, S W.1.

FOLD HERE

TUCK IN THIS END

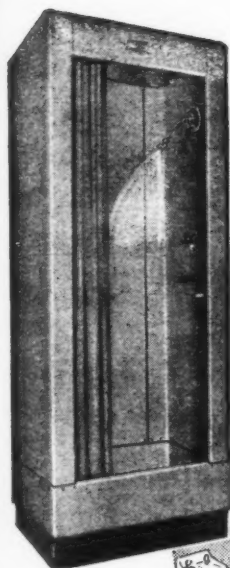
	PAGE	CODE
Fordham Pressings, Ltd.	69	0232
Frankipile, Ltd.	102	0235
Freeman, Joseph, & Sons, Ltd. ...	107	0236
Furse, W. J., & Co., Ltd.....	132	0241
Gardener & Newton (GB) Ltd.	30	0248
Gas Council.....	92	0246
General Electric Co., Ltd., The ...	36	0924
Glass Benders Association	42	1033
Greenwood Airvac Conduits, Ltd.	33	0220
Group Sales, Ltd.	62	0417
Guest Keen & Nettlefold (Mid-lands), Ltd.....	10	0265
Gyproc Products, Ltd.	55	0266
Hall, J. & E., Ltd.....	35	0270
Harris & Sheldon (Joinery), Ltd.	32	0279
Haskins, Ltd.	54	0285
Hathernware, Ltd.	132	0691
Haunchwood Brick & Tile Co., Ltd.	109	0825
High Duty Alloys, Ltd.	77	0292
Hills, F., & Sons, Ltd.	24	1001
Hills (W. Brom.), Ltd.	88	0297
Holoplast, Ltd.	100	0305
Home Fittings (GB), Ltd.	73	0307
Horsley Smith & Hewstson	78	0311
Ingham, R. E., & Co., Ltd.	115	0994
Intermit, Ltd.	72	0936
Jayanbee Joinery, Ltd.....	71	1043
Kenrick, A., & Sons, Ltd.	123	0337
Keynon, Wm., & Sons (Meta Mica), Ltd.	72	0987
Kirkstone Green Slate Quarries, Ltd.	115	0739
L. & G. Fire Appliance Co., Ltd....	135	0937
Lilleshall Co., Ltd., The	36	0910
Limestone Green Slate Slab Co., Ltd.	124	0357
Luxfer, Ltd.	4	0370
McArd, Robert, & Co., Ltd.....	48	037
McKinney Foundation, Ltd.	19	079
Marley Concrete, Ltd.	122	088
Marley Tile, Ltd.	90	087
Mather & Platt, Ltd.	74	040
Maxwell, Andrew	116	036
Merchant Adventurers, Ltd.	25	040
Montgomery Stobo & Co., Ltd. ...	57	042
Morris, Alfred, Group of Co's., The	80	042
Nairn, Michael, & Co., Ltd.	68	042
Negus, W. & M., Ltd.....	122	042
Newman, Wm., & Sons, Ltd.....	41	043
Newton, Chambers & Co., Ltd.....	50	043
North British Linoleum Co., Ltd.	33	082
Norwood Steel Equipment, Ltd....	52	044
Novobord (U.K.), Ltd.	6	044

	PAGE	CODE
Olsson, Martin (Fireboards), Ltd.	59	0446
Panel-Lastic Construction Co., Ltd.	116	0973
Parkes, Josiah, & Sons, Ltd.	49	0452
Pearl Varnish Co., Ltd.	101	0740
Peglars, Ltd.	114	0455
Pharaoh's Plywood Co., Ltd.	9	0912
Pilkington Bros., Ltd.	67	0476
Pitch Fibre Pipes Association of Gt. Britain, The	64	0390
Pochins (Manchester), Ltd.	73	1044
Powell Duffryn Modnlair, Ltd.	20	0913
Previte & Co., Ltd.	115	0487
Pullin, R. B., Ltd.	108	0974
Quicktho Engineering, Ltd.	18	0492
Remploy, Ltd.	7	0504
Rhodes Chains, Ltd.	31	0507
Rubberware, Ltd.	34	0520
Sandlime Brick Manf. Assoc., Ltd.	86	0531
Seddon, R., & Sons, Ltd.	75	0546
Selection Construction Co., Ltd.	53	0547
Semtex, Ltd.	89	0548
Shannon, The, Ltd.	117	0549
Sieglwart Floor Co., Ltd.	103	0556
Small & Parkes, Ltd.	2	0568
Sommerfelds, Ltd.	113	0576
Spiral Tube & Components Co., Ltd., The	108	1045
Steel Radiators, Ltd.	119	0589
Steelway, Ltd.	118	0592
Stott, James, Ltd.	51	0602
Sugg, William, & Co., Ltd.	91	0605
Swiftplan, Ltd.	29	0613
Templewood Hawksley, Ltd.	40	0625
Thermacoust, Ltd.	117	0629
Thermadare, Ltd.	106	0755
Thorp, J. B., Ltd.	132	0633
Tomo Trading Co., Ltd.	47	0637
Truscon, Ltd.	132	0645
Valor Co., Ltd., The	87	0833
Venesta Plywood, Ltd.	39	0658
Venus Pencil Co., Ltd., The	118	0661
Walker Crossweller & Co., Ltd.	82	0669
Wallpaper Manuf., Ltd., The	84	0671
Ward & Co., Ltd.	122	0676
Waring & Gillow, Ltd.	110	0680
Webb, John, Ltd.	122	1046
Wednesbury Tube Co., Ltd., The	58	0686
Weil, Joseph, & Son, Ltd.	60	1021
Winn, Charles, & Co., Ltd.	135	0699
Yale & Towne Mnf. Co., The	93	0704

Write in block letters or type, your name, profession and address below, and fold so that the post-paid address is on the outside.

ADDRESS _____

07

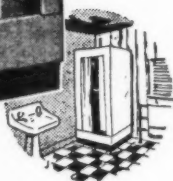


CARRY IN—OR BUILD IN

Hotsprings "Economic" Shower Cabinet

A complete, prefabricated, free standing Shower Cabinet, occupying a minimum of space. Suitable for use anywhere, even on a bedroom carpet. Eliminates structural alterations. Connects to existing services. Steel plinth, all-aluminium cabinet, stove enamelled finish. Mixing Valve, Shower and Waste chromium plated.

Write for Leaflet H.E.1.



"Economic" Cavity Shower Fitting

Patent applied for

The Cavity Shower Fitting is designed for building-in. It eliminates hit and miss methods of fixing, makes the builder's and plumber's work simple and easy, ensures a neat, flush fit between panel and wall and permanent, easy access to all concealed parts. Adjustable steel frame makes dimensional accuracy of shallow cavity unimportant. Mixing Valve and Shower chromium plated. Panel in coloured perspex. Leaflet on request.



CHARLES WINN & CO. LTD

Sanitary Specialists for 100 years

GRANVILLE STREET, BIRMINGHAM, 1

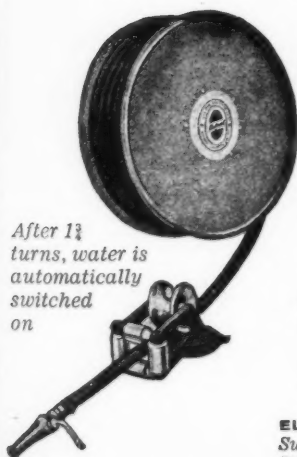
IT COULD NOT BE A BETTER PLAN...

"ON GUARD"

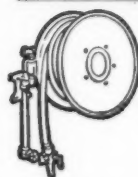
Autoreel

FULLY AUTOMATIC FIRE HOSE REEL

Essential for use in
INDUSTRY, HOSPITALS,
SCHOOLS, HOTELS, OFFICES, etc.



After 1½ turns, water is automatically switched on



ELGON wide area
Swinging Hose
Reel



JASON
First Aid
Hose Reel



DC20



DC7
Base
Discharge
Model



DC10

L & G DRY CHEMICAL EXTINGUISHERS



17/5 Water CO²

Send for literature and full data of the L & G "Autoreel" and the comprehensive range of L & G Fire Protection appliances. We will be pleased to co-operate and blend our equipment to individual designs and colour schemes. Our Representatives are always available for discussion and advice on the type of Fire appliance installation to suit your particular problem.

—SPECIFY

L & G

FIRE PROTECTION!

L & G FIRE APPLIANCE CO. LTD.

Caxton Street North · London · E16

ALBert Dock 3991/4

BRANCHES THROUGHOUT GREAT BRITAIN

SEND FOR DATA & FULL DETAILS

Year after Year...

WITH NEGLIGIBLE MAINTENANCE



LAI D 1929

*A photograph of High Holborn,
taken in 1929*



AFTER 31 YEARS

As it is today

By courtesy of: K. C. Hiffe, Esq., LL.B., A.M.I.C.E., M.Inst. Mun.E.,
Borough Engineer & Surveyor, Holborn Borough Council.

Laid in the spring of 1929, this section of High Holborn, London, is of concrete construction reinforced with BRC Fabric. Although this road has had to take its full share of the terrific increase in London's traffic, the only maintenance has been the laying of an asphalt carpet on top of the reinforced concrete. It is as capable of bearing the heavy loads of today as when it was first laid more than 31 years ago.

BRC
WELDED FABRIC
FOR ROADS

THE BRITISH REINFORCED CONCRETE ENGINEERING CO. LTD., STAFFORD
London, Birmingham, Bristol, Leeds, Leicester, Liverpool, Manchester, Newcastle, Cardiff, Glasgow, Dublin, Belfast,
Bulawayo, Calcutta, Johannesburg, Singapore, Vancouver.
Export Sales: 54 Grosvenor Street, London W.1

84-W.982

Y

rn,

RD
ast,
W.I
W.702