

THE ARCHITECTS' JOURNAL



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

Societies and Institutions

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*

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

IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square. Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1. Mayfair 7086
ILA	Institute of Landscape Architects, 2, Guilford Place, W.C.1. Holborn 0281
I of Arb	Institute of Arbitrators. Hastings House, 10, Norfolk Street, Strand, W.C.2. Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1. Museum 7179
IQS	Institute of Quantity Surveyors. 98, Gloucester Place, W.1. Welbeck 1859
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3. Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1. Abbey 6172
ISE	Institute of Structural Engineers. 11, Upper Belgrave Street, S.W.1. Sloane 7128
LDA	Lead Development Association. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1. Museum 3891
LSPC	Lead Sheet and Pipe Council. Eagle House, Jermyn Street, S.W.1. Whitehall 7264/4175
MAFF	Ministry of Agriculture, Fisheries and Food. Whitehall Place, S.W.1. Trafalgar 7711
MARS	Modern Architectural Research Group (English Branch of CIAM). Secretary: Trevor Dannatt, A.R.I.B.A., 71, Blandford Street, W.1. Welbeck 4713
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1. Mayfair 9400
MOH	Ministry of Health. 23, Savile Row, W.1. Regent 8411
MOHLG	Ministry of Housing and Local Government. Whitehall, S.W.1. Whitehall 4300
MOLNS'	Ministry of Labour and National Service. 8, St. James' Square, S.W.1. Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, W.C.2. Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1. Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1. Reliance 7611
NAMMC	Natural Asphalte Mine Owners and Manufacturers Council. 94/98, Petty France, S.W.1. Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1. Abbey 4813
NBR	National Buildings Record. 31, Chester Terrace, Regent's Park, N.W.1. Welbeck 0619
NCBMP	National Council of Building Material Producers. 10 Storey's Gate, S.W.1. Abbey 5111
NEFMAI	National Employers Federation of the Mastic Asphalt Industry. 21, John Adam Street, Adelphi, W.C.2. Trafalgar 3927
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1. Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives. Federal House, Cedars Road, Clapham, S.W.4. Macaulay 4451
NFHS	National Federation of Housing Societies. 12, Suffolk St., S.W.1. Whitehall 1693
NHBRC	National House Builders Registration Council. 82, New Cavendish Street, W.1. Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington. Molesey 1380
NRDB	Natural Rubber Development Board. Market Buildings, Mark Lane, E.C.3. Mansion House 9383
NSAS	National Smoke Abatement Society. Palace Chambers, Bridge Street, S.W.1. Trafalgar 6838
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1. Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1. Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1. Abbey 4504
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh. Fountainbridge 7631
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1. Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George Street, S.W.1. Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 5, Old Palace Yard, S.W.1. Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1. Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2. Trafalgar 2366
RSH	Royal Society of Health. 90, Buckingham Palace Road, S.W.1. Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19. Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1. Victoria 2186
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1. Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3. Mansion House 3921
SIA	Society of Industrial Artists. 7, Woburn Square, London, W.C.1. Langham 1984/5
SIA	Structural Insulation Association. 32, Queen Anne Street, W.1. Langham 7616
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1. Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2. Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4. City 4771
TPI	Town Planning Institute. 18, Ashley Place, S.W.1. Victoria 8815
TTF	Timber Trades Federation. 75, Cannon Street, E.C.4. City 5040
WDC	War Damage Commission. 6, Carlton House Terrace, S.W.1. Whitehall 4341
ZDA	Zinc Development Association. 34, Berkeley Square, W.1. Grosvenor 6636

No. 3219]

[Vol. 124

THE ARCHITECTURAL PRESS

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

Price 1s. 0d.

Registered as a Newspaper.

CONTACT PYNFORD LTD FOR A

Complete Foundation Service

★ **SITE INVESTIGATIONS AND REPORTS**

that are clear and to the point.

★ **FOUNDATIONS DESIGNED**

to suit all site conditions

★ **FOUNDATIONS CONSTRUCTED**

quickly and accurately

★ **UNDERPINNING** by the proved

PYNFORD METHOD

Site Investigations, Site Clearance, Foundation Design and Construction, Site Tests During Construction, Piling and Underpinning, Controlled Jacking, Mining Subsidence Control, Plant Hire, Structural Alterations.

Write for our illustrated brochure and for further details write or 'phone

Pynford Limited *Foundation Engineers*

Patentees

74 LANCASTER ROAD, STROUD GREEN, LONDON, N.4. Tel: ARCHway 6216/

dampcoursing?

THEN IT MUST BE



COLD BITUMEN COVERING

Covers 1,500 square yards with 2 heavy coats at 1½ lb. per yard super for as little as 7½d. per square yard.

Adheres to moist surfaces and green concrete. Stable to temperature changes. No pre-heating.

Apply straight from the drum. No mixing. Ask for Leaflet 1040.



Cuts Building and Maintenance Costs!

EVODE LIMITED
Stafford
England

Telephone: 1590/1/2

Telegram: Evode, Stafford.

London Office:

1 Victoria Street, S.W.1.

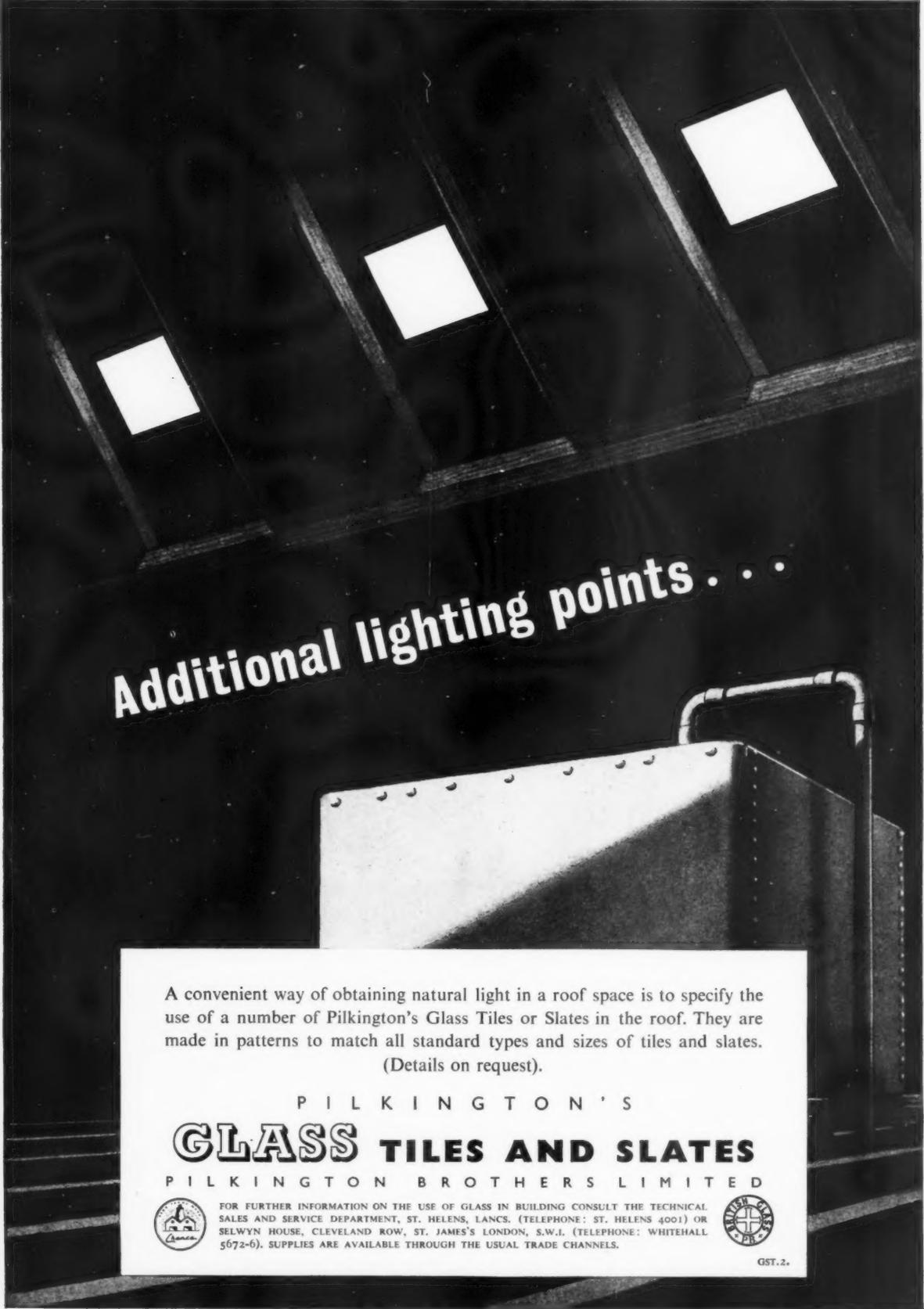
Telephone: ABBey 4622/3

Site
tion
ion.
ing
and
olled
ence
tural

6/

2





Additional lighting points . . .

A convenient way of obtaining natural light in a roof space is to specify the use of a number of Pilkington's Glass Tiles or Slates in the roof. They are made in patterns to match all standard types and sizes of tiles and slates.

(Details on request).

P I L K I N G T O N ' S

GLASS TILES AND SLATES

P I L K I N G T O N B R O T H E R S L I M I T E D



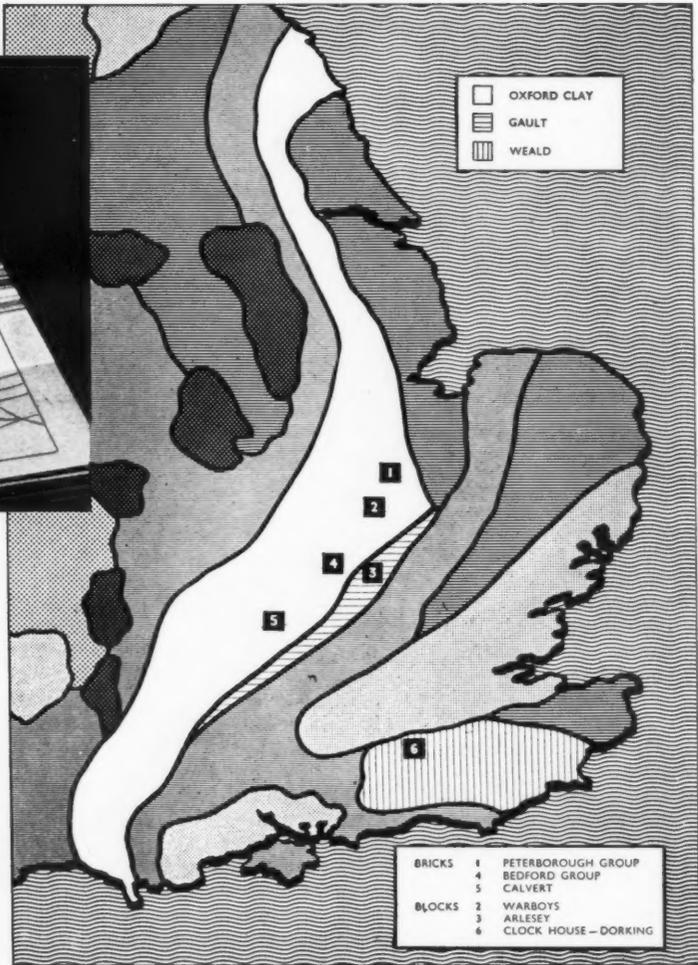
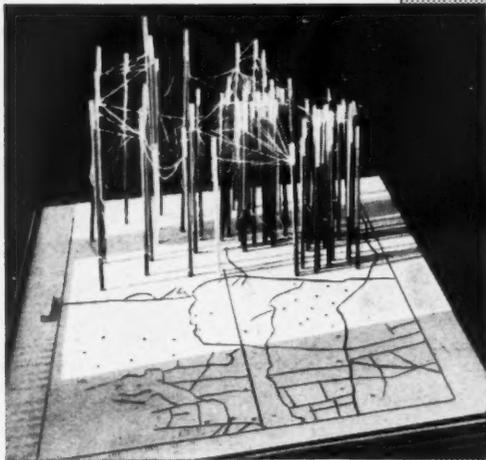
FOR FURTHER INFORMATION ON THE USE OF GLASS IN BUILDING CONSULT THE TECHNICAL SALES AND SERVICE DEPARTMENT, ST. HELENS, LANCS. (TELEPHONE: ST. HELENS 4001) OR SELWYN HOUSE, CLEVELAND ROW, ST. JAMES'S LONDON, S.W.1. (TELEPHONE: WHITEHALL 5672-6). SUPPLIES ARE AVAILABLE THROUGH THE USUAL TRADE CHANNELS.



GST.2.

BETWEEN THE PIT AND THE SITE . . . one of the links in the 'Phorpres' service is

. . . FORETHOUGHT



The works of London Brick Company Limited are strategically placed on the geologist's map.

The brick works are situated where the Oxford clay is deep, uniform and suitable for large-scale mechanical excavation. Bricks pressed from this clay are strong enough for mechanical handling before firing and their natural fuel content greatly reduces the addition of coal to complete the burning. Such Oxford clay deposits are a national asset.

The clay block works follow the Weald, Gault and upper Oxford clay strata. Lighter, more plastic clays are better suited to the "wire-cut" process necessary to produce the cellular shaped blocks.

The geologist is, therefore, an important member of the team whose planning and foresight ensure that 'Phorpres' products maintain their high quality and low cost.

LONDON BRICK COMPANY LIMITED in the service of the building industry

Head Office: Africa House, Kingsway, London, W.C.2. Telephone: HOLborn 8282
 Midland District Office: Prudential Buildings, St. Philip's Place, Birmingham 3. Telephone: Central 4141
 South-Western District Office: 11 Orchard Street, Bristol 1. Telephone: Bristol 23004/5
 Northern District Office: St. Paul's House, 20-22 St. Paul's Street, Leeds. Telephone: Leeds 20771



BY APPOINTMENT
 TO HER MAJESTY QUEEN ELIZABETH II
 BRICK MAKERS



When you specify A.C. switch sockets

remember Temco—the switch that cannot continually arc no matter how slowly the dolly is moved. The contacts have a semi-positive snap action on both 'make' and 'break'. The dolly is under spring control throughout its travel and always snaps cleanly into the "on" and "off" positions.

Temco A.C. Switch Sockets have solid silver contacts, non-tracking base, shutters for safety and contact tubes that do not deform.

Although Temco Switch Sockets are so advanced in design and so reliable in performance you will be surprised how reasonable the price is. Please write for Catalogue.

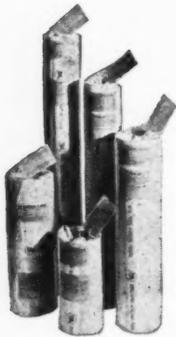
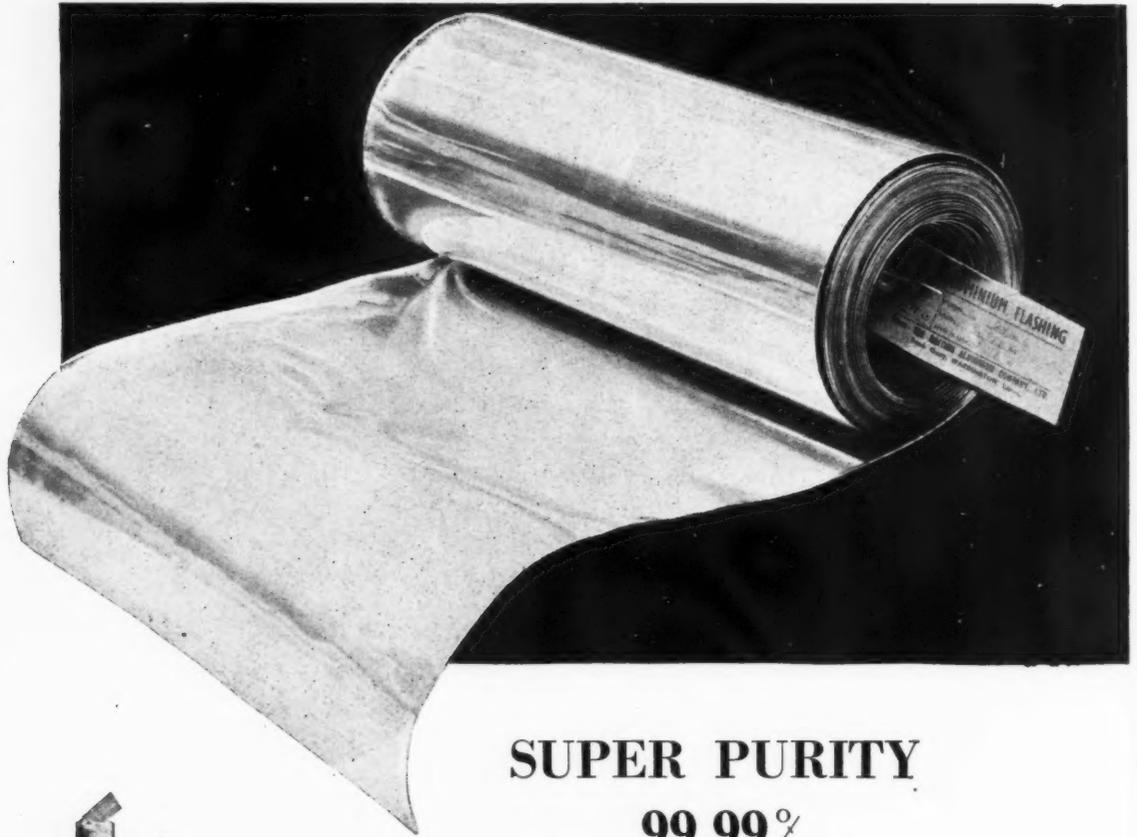
specify **TEMCO** A.C. switch sockets

YOU CANNOT GET BETTER

Delivery is prompt; the standard unvarying.

Temco Accessories are made by the Telephone Manufacturing Co. Ltd, and sold by

T.M.C.-HARWELL (SALES) LTD, 37 UPPER BERKELEY STREET, LONDON, W 1 TELEPHONE: PADDINGTON 1867-9



SUPER PURITY

99.99%

ALUMINIUM --flashing quality

Flashing Quality Super Purity, specially refined to 99.99 per cent, is the most malleable aluminium you can buy, admirably suited to traditional plumbing techniques.

More highly resistant to atmospheric attack than any lower purity of aluminium, Flashing Quality Super Purity is the ideal permanent flashing material, costing considerably less than other metals of comparable life. For example, 5 cwt of 20 s.w.g. Super Purity costs only 2s. 2d. a square foot.

Ample stocks of Flashing Quality are available, in 14 and 28 lb rolls; 80 lb rolls can be supplied specially. Please write for further information and for the name and address of your nearest stockist.

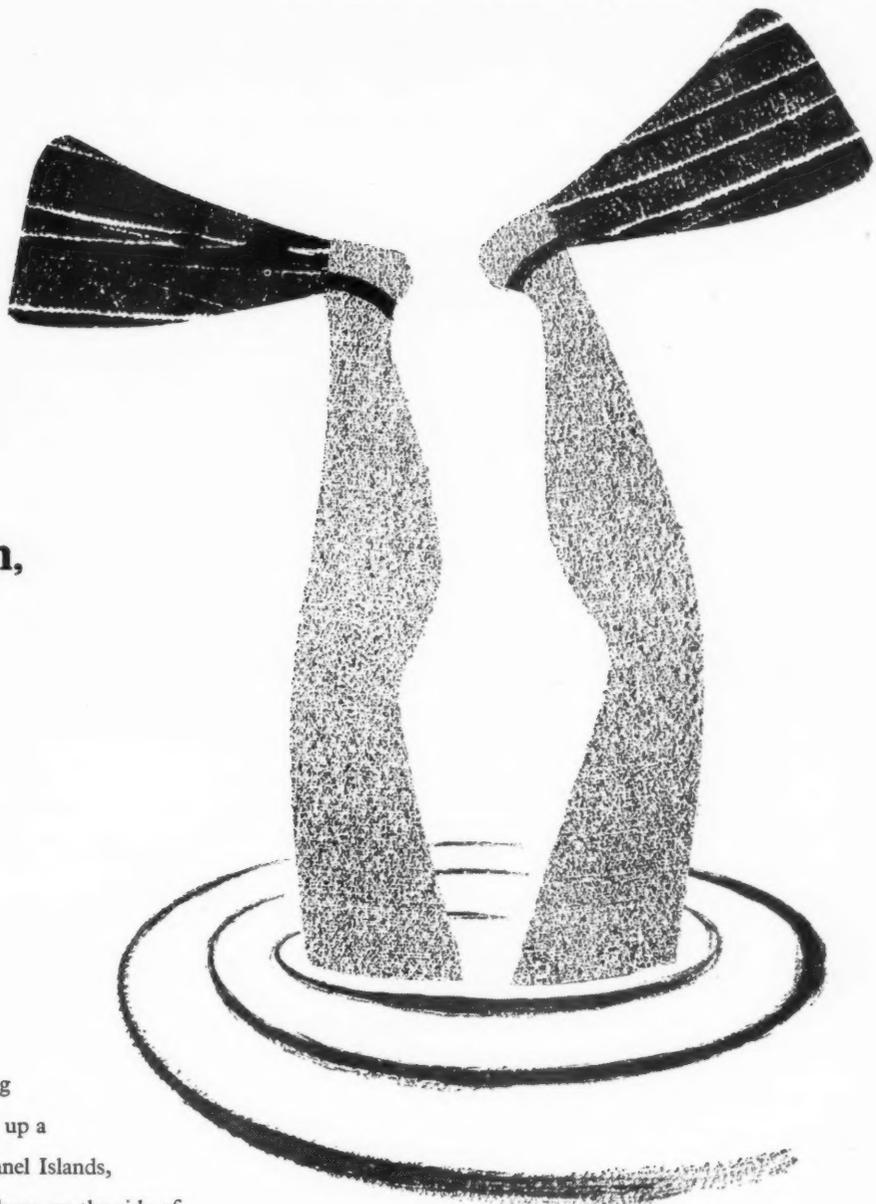
Super Purity is a plumbers' metal



The BRITISH ALUMINIUM Co Ltd

NORFOLK HOUSE ST JAMES'S SQUARE LONDON SW1

**“I’m
going
down,”
said the
frogman,
“to look
at our
walls”**



There are more ways of inspecting a wall surface than that of climbing up a ladder. At a place in the Channel Islands, you dive into 12 feet of water. There, on the side of a certain swimming pool, and very much against our wishes,

you will find Pammastic—doing fine. It is not, of course, designed for life underwater.

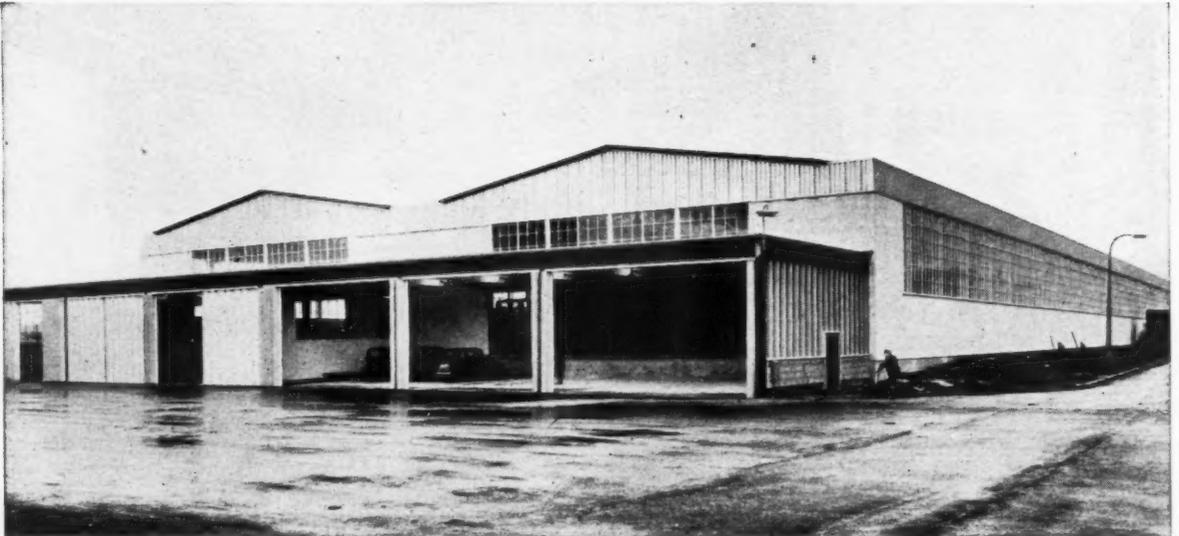
But this happy misuse provides a dramatic demonstration of a point that deserves publicity—*Pammastic is the plastic emulsion paint that can be used outside a building as well as inside.*

Suitable for most surfaces, it needs no primer or undercoating, and dries in an hour. Its fine matt surface can be washed down and *scrubbed* clean repeatedly. Further information about the remarkable properties of Pammastic—and its notable complementaries, Pammel (the luxury gloss enamel), Pammelette (the superfine eggshell enamel) and Pammatt (the superfine flat enamel)—is available on request.

BLUNDELL PAINTS

BLUNDELL, SPENCE & CO. LTD., YORK HOUSE, 37 QUEEN SQUARE, LONDON, W.C.1.

Q-Panel is 100% re-usable—facilitates extension



Robertson Q-Panel was used on the new buildings for British Vitamin Products Ltd.

**Robertson Q-Panel was specified by the
Architects, Llewellyn, Smith & Waters for the
new buildings erected by C.A.S. (Industrial Developments) Ltd.
for British Vitamin Products Ltd., Chelmsford**

Advantages of Robertson Q-Panel include:—
SPEED OF ERECTION · ATTRACTIVE APPEARANCE
GOOD INSULATION · CLEAN, DRY ERECTION
LIGHTWEIGHT · ALL-WEATHER CONSTRUCTION

*You will see more and more
Q-Panel installations*



*Write today—NOW for illustrated
descriptive literature*

**ROBERTSON
Q-PANEL**
TRADE MARK

Manufactured by

*Telephone: Ellesmere Port 2341
Telegrams: "ROBERTROOF"*

ROBERTSON THAIN LIMITED · Ellesmere Port · Wirral · Cheshire.

**Sales offices: LONDON · GLASGOW · BELFAST · BIRMINGHAM · NEWCASTLE
LIVERPOOL · SHEFFIELD · MANCHESTER · CARDIFF**

***NOW*... construct, surface and decorate with the one board...**

balanced **weydec** regd.

**No need to waste time any longer
in glueing down plastic sheeting to
base material. WEYDEC IS HERE**

What is this WEYDEC? It is a brand new board with a tough colourful plastic surface and a WEYROC Man-Made Timber core. It costs less than you might expect, too. *Less in first cost* than timber and conventional plastic surfacing combined, and *less indirectly* because with surface and core factory-bonded you save man-hours and the cost of adhesives.

Next, WEYDEC is balanced. This means that a plain plastic backing reduces any tendency of the decorative surface to distort the board.

ALL THAT AND COLOURS TOO...

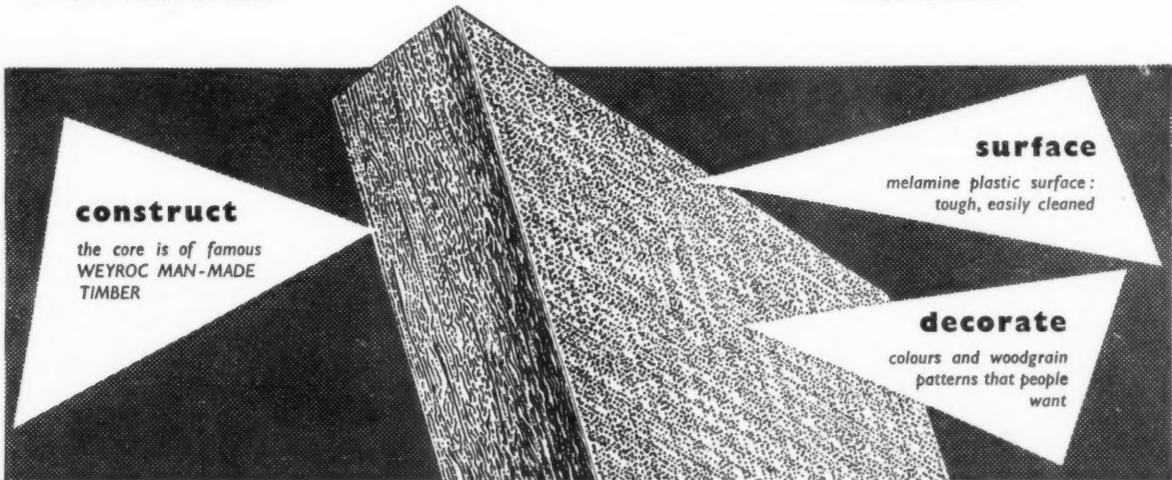
Gay colours in attractive linen finishes, and an interesting woodgrain pattern are in the WEYDEC range. Use colourful, hardwearing WEYDEC in canteens, cafes and bars, in restaurants, shops, hospitals and schools. Use it in homes and public buildings. Now, with WEYDEC, working surfaces and partitions, flush doors and furniture and many other things can be finished to a new standard at a new speed.

Weydec is made in 8 ft. x 4 ft. boards, $\frac{1}{2}$ " and $\frac{3}{4}$ " thick

Retail Prices: $\frac{1}{2}$ " 5/2 a sq. ft.

$\frac{3}{4}$ " 5/11 a sq. ft.

Usual Trade Discounts



and for colour surfacing...

hardec THE BALANCED BOARD WITH THE 'BUILT-ON' DECORATIVE PLASTIC SURFACE

Whenever you think of plastic surfaces remember HARDEC. It is as hardwearing as they come, and you'll find an attractive range of colourful linen-finish and woodgrain patterns. But HARDEC is in a class by itself, because it is *balanced*. Balance gives it outstanding stability, makes it much easier to use. Fix HARDEC flat and it stays flat, whether screwed, glued or nailed—it's no trouble to apply either vertically or horizontally.

Use balanced HARDEC for panelling and partitions, working surfaces and wall-linings. Decorate ceilings and put facings on flush doors with it. In home and industry, in shops, offices, restaurants and bars, in schools and hospitals, there's *nothing* quite like HARDEC.

Hardec is made in boards 8 ft. x 4 ft. x $\frac{1}{2}$ " thick (nominal)

Retail Prices from 3/9 a sq. ft. *Usual Trade Discounts.*

Write for descriptive folder and a sample of Hardec to:

THE AIRSCREW COMPANY & JICWOOD LIMITED, Dept. A.J. · WEYBRIDGE · SURREY

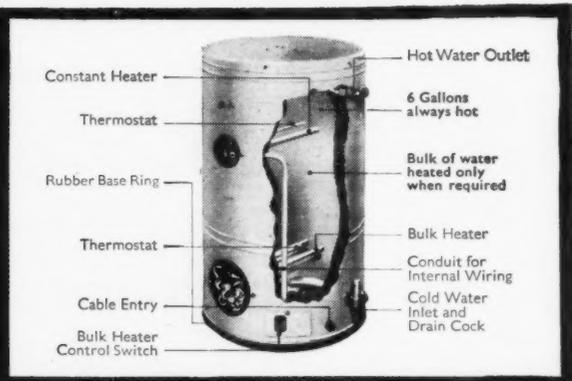
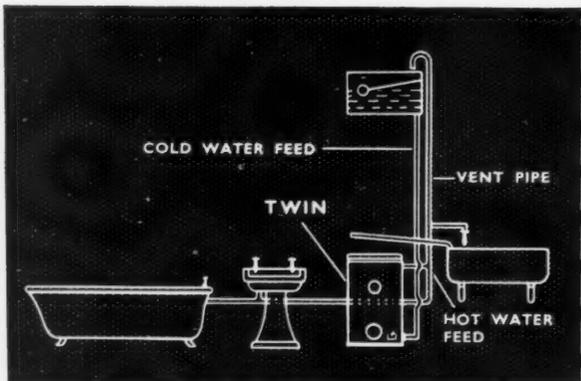
LOWER INSTALLATION COSTS

LOWER RUNNING COSTS

WITH THE **B·N·E TWIN** WATER HEATER

The reduction of installation costs is one of the primary advantages of the B.N.E. 'Twin' water heater. The diagram below shows the simplicity of the plumbing—no independent hot water storage tank, and no flow and return pipes. The plumbing consists of a feed pipe from the cold water tank, another from the heater outlet to the hot water taps, and a vent pipe. The elimination of flues is another installation advantage that is perhaps of even greater importance in flats than in houses. Finally, the 'Twin's' compact size enables it to be tucked away under the draining board, where the pipe run to the kitchen sink is reduced to a minimum, removing one more of the problems associated with water heating systems.

The reduction in running costs is achieved by the 'dual personality' of the B.N.E. 'Twin'. As shown below it incorporates two heaters, the upper one—with only a 500 watt element—is permanently in circuit, and being thermostatically controlled ensures that 6 gallons of really hot water are always available for normal needs at the sink or hand-basin. When larger quantities of hot water are required, the lower heater—consisting of five 500 watt thermostatically controlled elements—can be brought into circuit by the operation of a conveniently placed foot switch. In a short time the full contents, 20-30 gallons according to the model, are heated to scalding temperature. Thus the B.N.E. 'Twin' provides large or small quantities of hot water without the expense of keeping large quantities constantly heated.



Send for further details to :

BRITISH NATIONAL ELECTRICS LTD.

The Domestic Appliance Section of JOHNSON & PHILLIPS LTD.

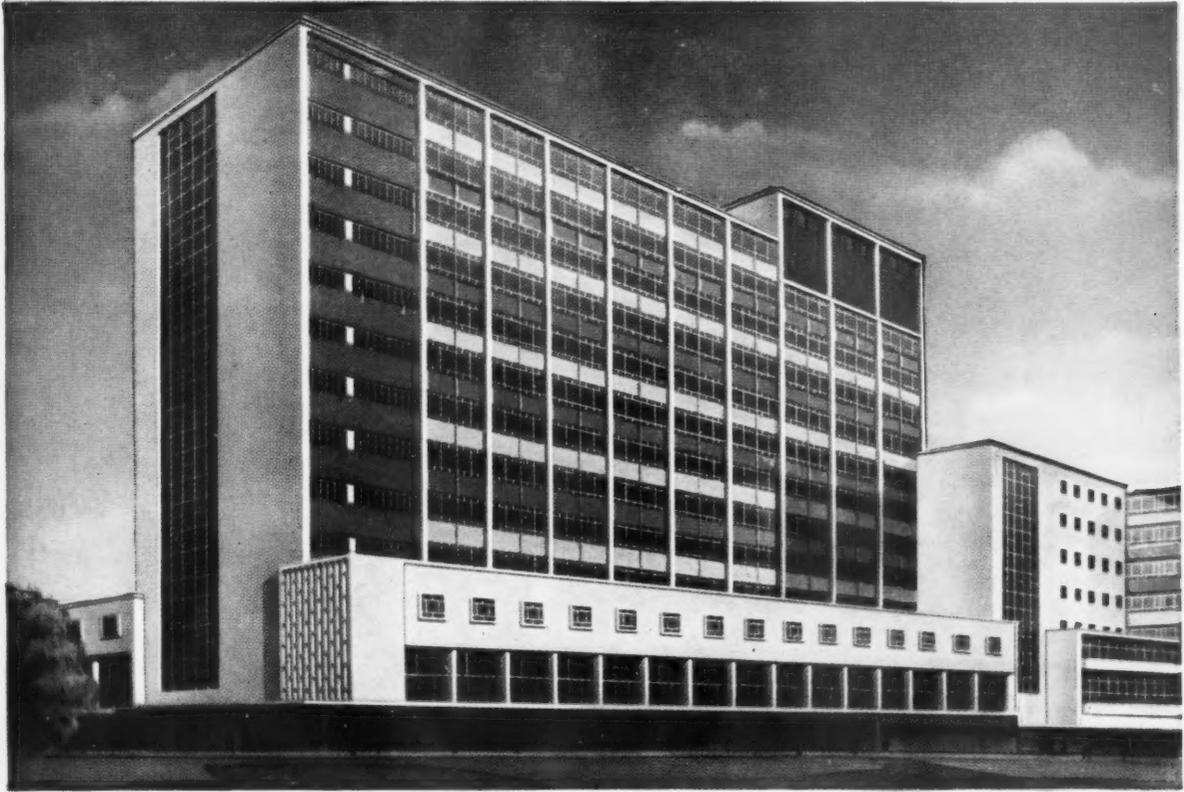
NEWARTHILL • MOTHERWELL • SCOTLAND





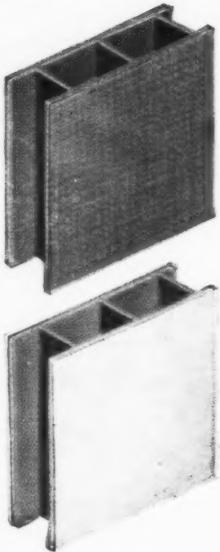
H
T
H

HOLOPLAST CURTAIN WALLING



Cotton, Ballard & Blow, Architects & Surveyors. Sir Robert McAlpine & Sons Ltd., Constructors

THE 'BIG TOP' — the largest curtain walling job in the country



The great new architectural project in the City of Birmingham, the block of shops and offices known as the 'Big Top', is a very big venture indeed. Much of the elevation, 80,000 square feet in fact, is Holoplast Curtain Walling. Holoplast Ltd. provide more than the best material: they provide a *complete* curtain walling system of great beauty.

It is based on the exclusive 'split mullion' design, which entirely overcomes problems of thermal movement and prevents moisture penetration. Because it works prefabricated Holoplast Curtain Walling saves site labour.

Each job is specially designed and everything, including infill materials is supplied with it. Quotations cover the whole operation, including erection and delivery. Architects and builders should certainly know about the advantages of the Holoplast Curtain Walling System—and it's only a matter of a letter or a 'phone call to Dept. 145 for full particulars.

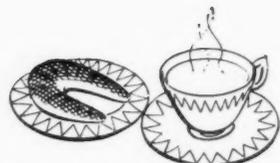
The Colours chosen by the Architects are not as shown above which are merely illustrative of our range.



HOLOPLAST LTD. Sales Office: 116 Victoria St., London, S.W.1. TELEPHONE: VICTORIA 9354/7 & 9981.
HEAD OFFICE & WORKS: NEW HYTHE, NEAR MAIDSTONE, KENT.

C.W.I.

Canteen comfort!



Contractors: Messrs. George Wimpey & Co. Ltd. Regional Architect: B. C. Jones Esq., A.R.I.B.A., A.M.T.P.I.
Flooring Contractors: Rowan & Boden Ltd., Newcastle upon Tyne.

for a cheerful, hygienic floor—choose **ACCOFLEX**

because

Accoflex, the vinyl-asbestos tile, provided the colourful floor for the Staff Canteen of Messrs. George Wimpey & Co. Ltd., at Newcastle, and they made full use of the design possibilities of these 9" x 9" tiles to produce the striking directional effect you see above. As you may know, Accoflex is a *flexible* tile—it can be laid on almost any good sub-floor. It is available in 14 colours, mostly light ones, and has a sparkling lustrous finish. Accoflex is the new flooring surface that Architects, Builders and the public alike have accepted as a material of modern conception and application . . . fully explained in Publication No. 321.

- its bright colours make floors sparkle
- it is easy to clean and maintain
- it resists grease, dilute acids, and alkalis
- it is tough and hard-wearing

and it's

Armstrong
FLOORING

ACCOFLEX • ACCOTILE • CORK TILE

ARMSTRONG CORK COMPANY LTD., Flooring Department, BUSH HOUSE, ALDWYCH, LONDON, W.C.2 • Telephone: COVent Garden 1101

K

e

is

48



important buildings decorated with Gay's Paints



Illustration by courtesy of J. Harrison, Esq., A.R.I.B.A., County Architect, Surrey County Council.

Surrey Fire Brigade Headquarters, Reigate

The strictly purposeful buildings of the Surrey Fire Brigade at Reigate do not offer the scope for decorative treatment of a town hall or modern school. But by the skilful selection of colours and paint the architect has harmonised the group of buildings with their pleasant setting of lawns and trees whilst providing that appearance of smartness and efficiency associated with the fire service.

Councils are amongst the largest users of Gay's Paints. Their architects, realising that painting is often the major recurring cost in building maintenance, cannot afford to leave the materials used to chance. Gay's paints can be relied upon for service.

GAY'S SERVICE TO ARCHITECTS

TECHNICAL SERVICE.

Gay's fully qualified staff are available for immediate consultation when unusual surfaces or conditions indicate the need for special paint treatment.

COLOUR SCHEME SERVICE.

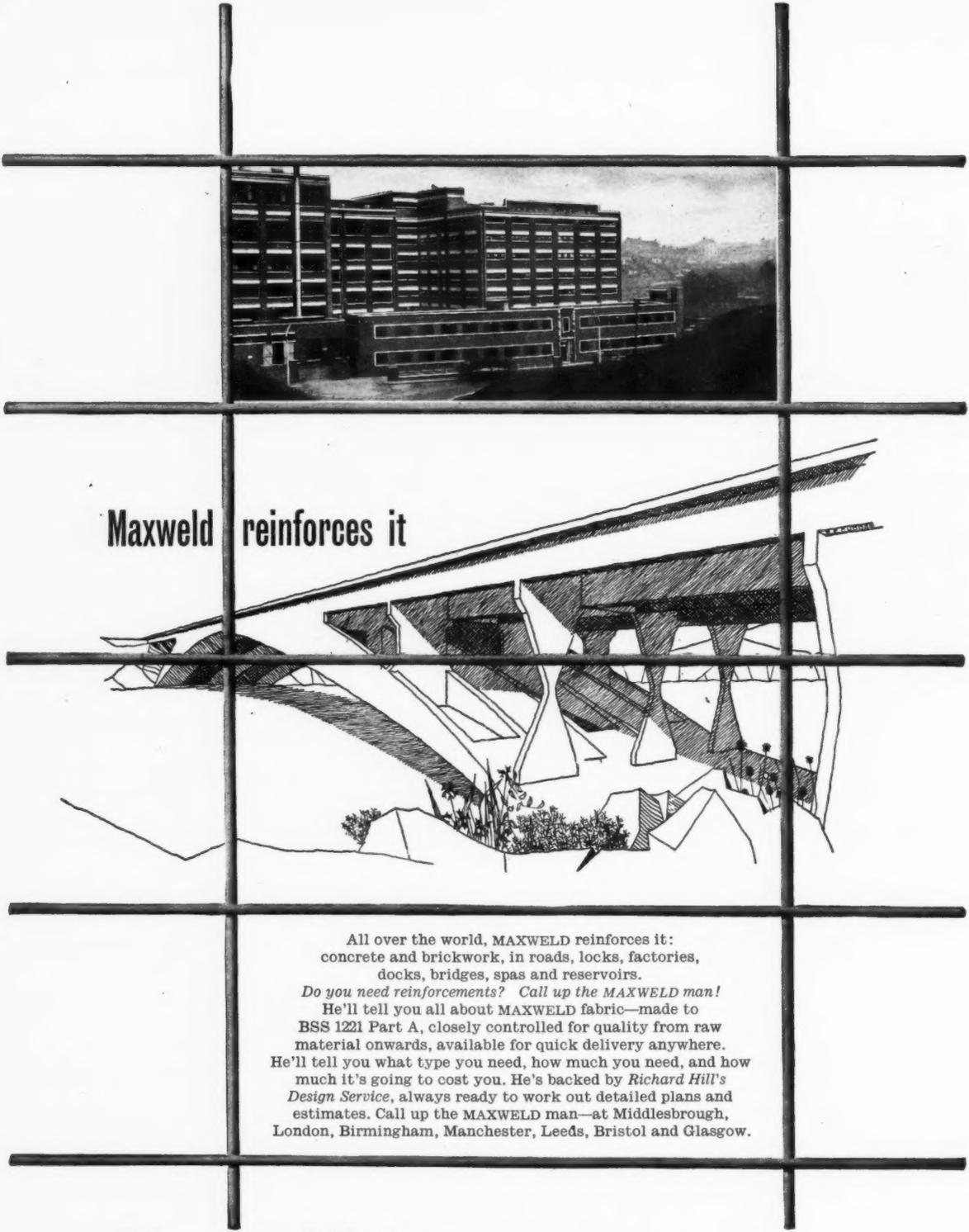
Personal good taste is no sure guide for the decoration of buildings used by many people. Gay's experience of recent work is appreciated by many architects.

Gay's Paints

R. GAY & CO. Associated with Robt. Ingham Clark & Co. WESTMORLAND HOUSE, 127/131 REGENT STREET, LONDON, W.1
Established 1859

Telephone: Regent 0831

Branches: BELFAST · BIRMINGHAM · BRISTOL · GLASGOW · LEEDS · MANCHESTER



Maxweld reinforces it

All over the world, MAXWELD reinforces it:
concrete and brickwork, in roads, locks, factories,
docks, bridges, spas and reservoirs.
Do you need reinforcements? Call up the MAXWELD man!
He'll tell you all about MAXWELD fabric—made to
BSS 1221 Part A, closely controlled for quality from raw
material onwards, available for quick delivery anywhere.
He'll tell you what type you need, how much you need, and how
much it's going to cost you. He's backed by *Richard Hill's*
Design Service, always ready to work out detailed plans and
estimates. Call up the MAXWELD man—at Middlesbrough,
London, Birmingham, Manchester, Leeds, Bristol and Glasgow.

Maxweld fabric

is manufactured by **RICHARD HILL LIMITED** (Established 1868)
Newport Wire and Rolling Mills, Middlesbrough, Yorkshire. Tel : Middlesbrough 2206

A MEMBER OF THE FIRTH CLEVELAND GROUP

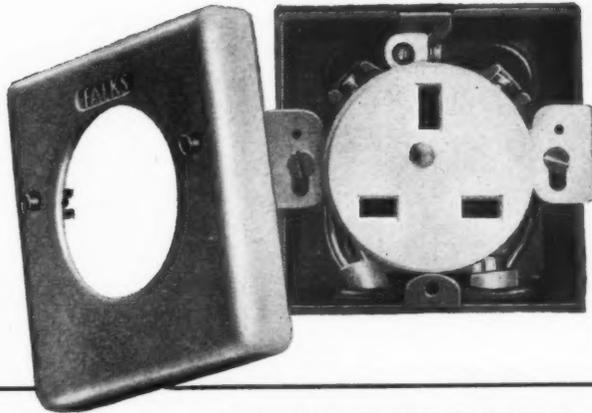


This FALKS socket saves money because it's "BRACKET-FIXING"

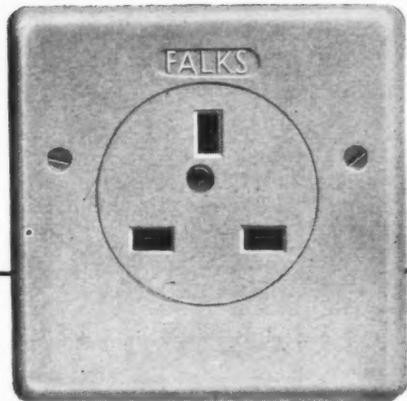


A glance will show how easy wiring becomes and how a better job can be achieved at less cost.

Note how a generous working length of wire can be readily secured in sensible terminals conveniently situated at the top of the socket, and afterwards tucked away. All wiring and attachment of bracket clearly visible until final fixing of the cover when B.S.1363 box is used for 13 amp. and even 15 amp. installations.



As with all FALKS electrical accessories, appearance has been given every consideration. Workmanship is of the usual high standard and a complete range of switched and unswitched, flush or surface, is available in both brown and ivory. The switched version is double pole.



FALKS

Write for complete list of electrical accessories No. 802/54

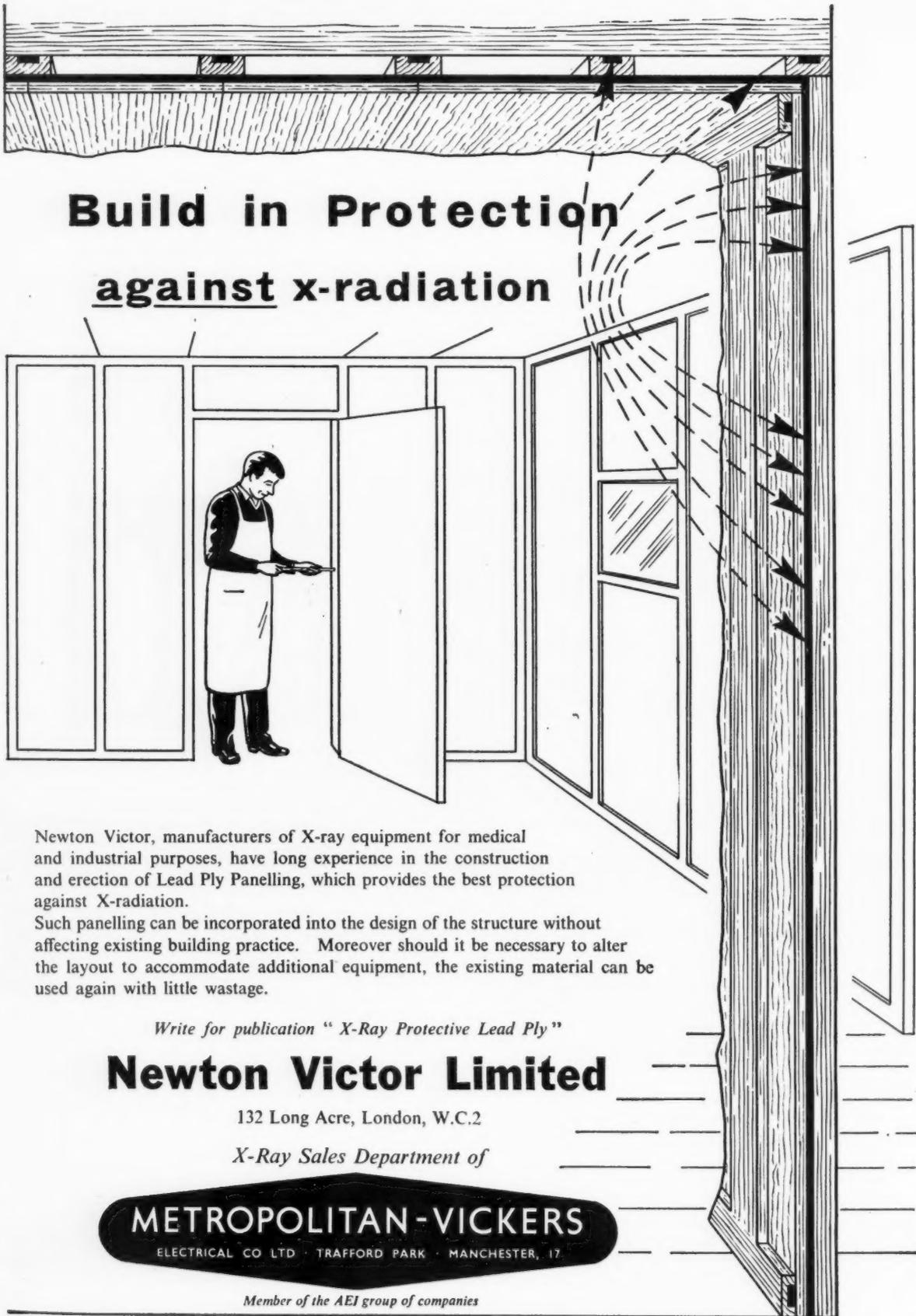
FALK, STADELMANN & CO. LTD.

91 Farringdon Road, London, E.C.1. Tel. HOL 7654

Showrooms: 20/22 Mount Street, London, W.1. Tel. MAY 5671



Branches at: MANCHESTER, BIRMINGHAM, NEWCASTLE-ON-TYNE- DUBLIN, CARDIFF, LEEDS, LIVERPOOL, SWANSEA, BRADFORD, GLASGOW, NOTTINGHAM, NEWCASTLE-UNDER-LYME, BRIGHTON, SOUTHAMPTON, EDINBURGH, BELFAST AND BRISTOL.



Build in Protection against x-radiation

Newton Victor, manufacturers of X-ray equipment for medical and industrial purposes, have long experience in the construction and erection of Lead Ply Panelling, which provides the best protection against X-radiation. Such panelling can be incorporated into the design of the structure without affecting existing building practice. Moreover should it be necessary to alter the layout to accommodate additional equipment, the existing material can be used again with little wastage.

Write for publication "X-Ray Protective Lead Ply"

Newton Victor Limited

132 Long Acre, London, W.C.2

X-Ray Sales Department of

METROPOLITAN-VICKERS
ELECTRICAL CO LTD · TRAFFORD PARK · MANCHESTER, 17

Member of the AEI group of companies

Successful completion of
Basildon New Town Shops
by J. & J. DEAN LTD.



● The illustration shows one of Britain's latest shopping centres, Barstable Shops, Basildon New Town. Complete Construction by J. & J. Dean Ltd.

Architect: N. Tweddell A.R.I.B.A.

J. & J. DEAN LTD.

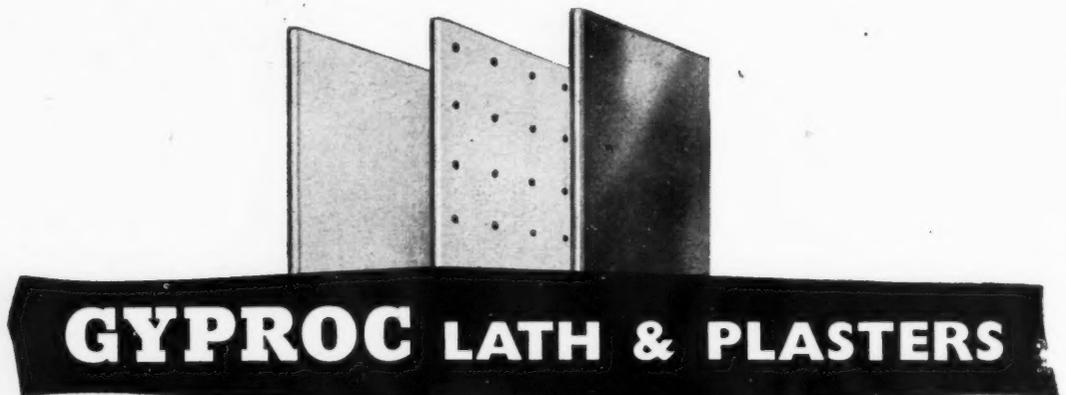
RUCKHOLT ROAD · LONDON E.10

PHONE LEYTONSTONE 3644

GYPROC make the lath

and make the plasters that marry

into a tenacious, perfect bond



GYPROC Lath is composed of a cellular gypsum core encased in millboard liner. When a GYPROC Plaster such as PARISTONE or GYPSTONE is applied to the surface of the lath, the gypsum crystals penetrate and interlock with the paper fibres during setting.

GYPROC Lath is available in three grades: *Plain* for normal work; *Perforated* for greater fire-resistance; *Insulating* for better thermal insulation. All 16 ins. wide, $\frac{3}{8}$ in. thick in sizes 42, 48 and 54 ins. long, and $\frac{1}{2}$ in. thick in sizes 48 ins. and 54 ins. long. Packed in easy-to-carry bundles of six laths.

PARISTONE Plaster is made in undercoat and finishing coat grades. GYPSTONE Plaster is used for single coat work. Write for Leaflets for full information.

PLAIN PERFORATED INSULATING

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 District Sales Office: 11 Musters Rd., West Bridgford, Nottingham. *Nottingham 82101.*

London Office: Bath House, 82 Piccadilly, London, W.1. *Grosvenor 4617/9.*

L.P.I.

IN RESTAURANTS



THEY SEE THE ADVANTAGES



Banqueting Hall of La Belle Etoile, Jersey.
Architects: Blomfield and Biggar, A/A.R.I.B.A. Builder: Peter Hallett & Co. Ltd.

A well-laid table is shown off to advantage under a Lumenated ceiling. Pleasant light of correct intensity is diffused from the ceiling area, giving a bright note on silver, glass, wood and linen. The absence of glare and shadow means greater comfort for the guests, wherever they sit.

Lumenated Ceilings fit in perfectly with modern trends in design. Overhead beams and pipe-lines are all completely screened by their clean, translucent surface. In the case of old buildings, they also form an ideal method of modernising interiors by giving a handsome new ceiling at a lower level in restaurants, offices, bars, foyers and premises of every kind.

See the advantages, too, in installation and maintenance! The Ceiling is light in weight with a durable, non-inflammable, dust repellent surface which requires little cleaning. It can readily be combined with air-conditioning or acoustic systems.



LUMENATED CEILINGS

U.K. PATENT NO. 756089

A BRILLIANT NEW IDEA IN ARCHITECTURAL LIGHTING

Further information is given in a booklet, "LUMENATED CEILINGS", and our Advisory Service will make recommendations for individual installations.



LUMENATED CEILINGS LIMITED

Alliance House, Caxton Street, S.W.1. Tele: ABBEY 7113
Scottish Sales Office: 10 Bothwell Street, Glasgow, C.2. Tele: CENTRAL 6571/2
Registered Office: Thermotank Ltd., 150 Helen Street, Glasgow, S.W.1

TGA 112



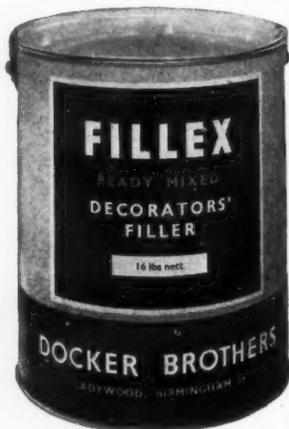
Dockerlux

THE FINEST GLOSS PAINT IN THE WORLD



Vydok

THE PERFECT EMULSION PAINT
Matt or Eggshell



Fillex

DECORATORS' FILLER

Here is a NEW general purpose filling compound, designed specially for the decorator.

FILLEX, which is supplied in ready-for-use paste form, can be used for filling in cracks in plaster and skimming rough surfaces. It is suitable for most surfaces other than wood or metal.

FILLEX

- ★ is suitable for INSIDE and OUTSIDE work.
- ★ has exceptional adhesive properties and can even be used on glazed tiles to produce a smooth surface for painting.
- ★ has excellent keeping qualities (but should be protected from frost).
- ★ is supplied in 4 lb. and 16 lb. tins.

PRICE: 4 lb. tins at 1s. 6d. per lb. 16 lb. tins at 1s. 3d. per lb.

DOCKER BROTHERS • LADYWOOD • BIRMINGHAM 16

LONDON OFFICE • 17 BERNERS STREET • W.1



Remembrance Day

**Please give
generously**

To you from falling hands we throw
The torch; be yours to hold it high.
If ye break faith with us who die
We shall not sleep, though poppies grow
In Flanders fields.

*"In Flanders Fields" — John McCrae
(d. 1918)*



**SATURDAY
NOVEMBER 10th**

**THE
UNITED STEEL** —
COMPANIES, LIMITED

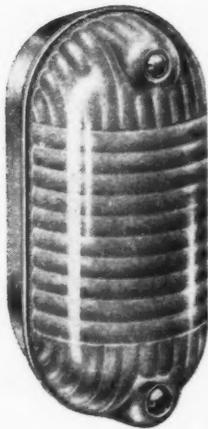




gniwon)



hello,
young
lovers!



price 23/6

Simplex
Corrilux

for
passages
corridors
doorways
staircases
arches
farm out-buildings
and any other
locations
frequented by
courting couples

OUR LEAST-POPULAR PRODUCT with many of the Young Set is the Simplex Corrilux. They dislike its excellent light distribution. They loathe its complete weatherproofing. They despair of its exceptional strength. And they won't thank you if you try to tell them about its —

- simple installation
- 1-piece glass
- adaptability—holds any lamp up to 100W, through wiring
- 2" centre, and 2 brick-width knockouts
- 2 secret key screws

.....
.
.
Corrilux lighting fittings by
.
.....

Simplex

Simplex Electric Co Ltd

Creda Works Blythe Bridge Staffs

A  COMPANY



Brush off the fear of FIRE!

With OXYLENE BORAM Fire Retardant Coating which raises inflammable surfaces to Class 1 "surface spread of flame" (B.S. 476-1953).

Oxylene Boram can be overpainted or applied to painted surfaces without loss of fire retarding qualities. It gives real fire protection and is approved by Local and Fire Authorities.

Free Technical Service.
Write for particulars.

OXYLENE BORAM

Also Fabric
RINSE for
Textiles

FIRE RETARDANT COATING

"The one-powder mix"

THE TIMBER FIREPROOFING CO. LTD.,

13a Old Burlington Street, LONDON, W.1.

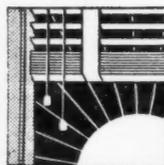
Tels; GROsvenor 6421/2

Works at:— Market Bosworth, Nuneaton
Queen Elizabeth Avenue, Hillington, Glasgow, S.W.2.

D470/2376



knowing architects specify . . .



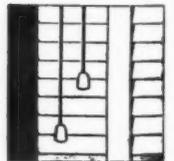
Approximately 60% of the Venetian Blinds in the world today are of Luxaflex Manufacture.

Luxaflex — the only blind with plastic tapes — is a must for hospitals and schools.



Luxaflex venetian blinds

REGISTERED TRADE MARK



Catalogues and technical specifications will be sent on request to

SCOTTISH ALUMINIUM WARE LTD., Industrial Estate, LARKHALL, LANARKSHIRE, SCOTLAND. Telephone: Larkhall 281-3 or the following Agents.

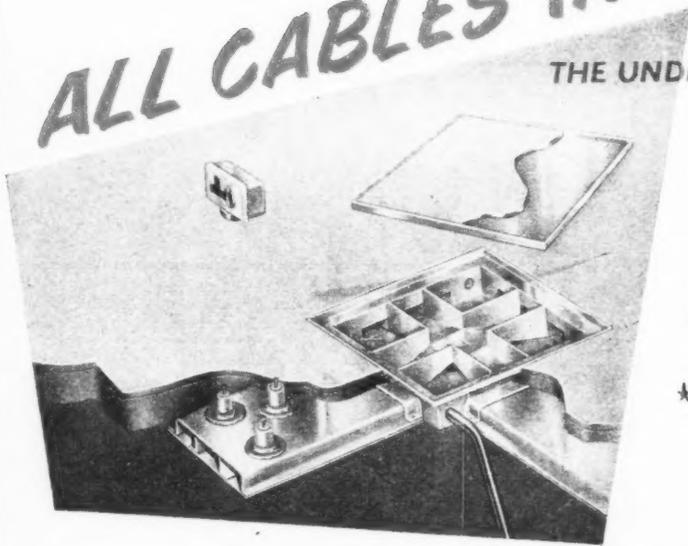
LONDON
Bissell (Transport Supplies) Ltd., 48 Besuchamp Place, London, S.W.3

MANCHESTER
Cumming-Davies, Ltd., 10 Station Buildings, Altrincham, Cheshire

NEWCASTLE
Alexander Leith & Co., 25 Collingwood Street, Newcastle-upon-Tyne, 1

ALL CABLES IN ONE DUCT!

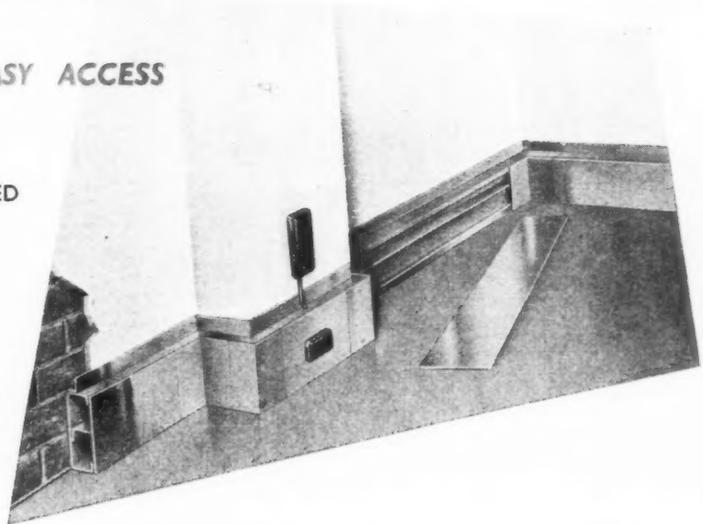
THE UNDER FLOOR SYSTEM FOR 1½" SCREEDS



- ★ SIZES FROM 4" x 1" UPWARDS—
DIVIDED AS REQUIRED
- ★ ALL-STEEL RUST RESISTING FINISH
- ★ CONTINUOUS ELECTRICAL CONTINUITY
- ★ FLYOVER SEPARATORS TO SEGREGATE
TELEPHONE FROM POWER CABLES
- ★ FLOOR OUTLETS AT PREDETERMINED
CENTRES—NO CUTTING INTO SCREED

THE SKIRTING SYSTEM FOR EASY ACCESS

- ★ SIZES FROM 4" x 1" UPWARDS—
DIVIDED AS REQUIRED
- ★ READILY REMOVABLE FRONT COVERS
- ★ ALL-STEEL RUST RESISTING FINISH
- ★ SUPPLIED IN 6 FT. LENGTHS
- ★ FULL RANGE OF BENDS, TEES,
ETC., AVAILABLE



GREENWOOD-AIRVAC CONDUIT SYSTEMS

AS SUPPLIED TO:



SALTERS HALL, LONDON, E.C.
 WALBROOK HOUSE, LONDON, E.C.
 HAYMARKET HOUSE, LONDON, W.1
 UNILEVER LTD., HESKETH HOUSE, LONDON, W.1
 REMAX LTD., REMAX HOUSE, LONDON, W.C.1
 APOTHECARIES' HALL, LONDON, E.C.
 ROYALTY THEATRE SITE, LONDON, W.1

MINISTRY OF WORKS BUILDINGS
 SHELL-B.P. LTD., SHELL HOUSE, BIRMINGHAM
 LONDON AIRPORT S.E. FACE BUILDING
 FERGUSON-PAILIN BUILDING, MANCHESTER
 GLOBE & SIMPSON BUILDING, SHEFFIELD
 BEBINGTON TOWN HALL, CHESHIRE
 LOCOMOTIVE HOUSE, LONDON, S.W.1

The publication 'Greenwood-Airvac Conduit Systems' tell you more about these patented cable ducts. Please write for a copy

Greenwood-Airvac *conduit systems*

GREENWOOD'S AND AIRVAC VENTILATING COMPANY LTD.

Patentees, Designers and Manufacturers of Ventilating Equipment and Electrical Conduit Systems.

BEACON HOUSE, KINGSWAY, LONDON, W.C.2. CHAncery 8135/6/7 'Airvac', London.

VESTIBULE AND FRENCH CASEMENT DOORS AND FRAMES *with a quality guarantee*



QUALITY STANDARD JOINERY by

Windows, Doors, Stairs, Kitchen Fittings etc.

**BOULTON
AND PAUL**

BOULTON & PAUL LTD., RIVERSIDE WORKS, NORWICH



DE

For
out
des
con
har
a dr
as a
ins
she
for
and
jam



The facts about the **Radiation YORKIST 12**

built-in cooker

DESIGN

For a modern kitchen-living room the Yorkist No. 12 has outstanding merit owing to its compact, space-saving design—it occupies a floor space of only 44 $\frac{3}{4}$ " x 13 $\frac{1}{2}$ ". This continuous-burning side-oven combination grate is made to harmonise with a living room. It has an open fire fitted with a drop-down fire cover for overnight burning and for use as a fast-boiling hotplate. The large cooking oven has an insulated door; and heat is evenly distributed by a loose sheet convection plate. An open fire with a very low front for increased radiation is obtained by lowering the fall bar and polished hob. The overall dimensions (without mantel, jambs and hearth) are: 38" wide x 38" high x 14" deep.

PERFORMANCE

The Yorkist No. 12 has a boiler rating of 100,000 B.Th. U/24 hr. Under cooking conditions it will heat about 10 gallons of water an hour from 50°F. to 140°F. and give cooking and hot water facilities to a household of 6-8 people. The open fire is particularly welcome in a combined kitchen-living room: it will heat a room up to 1,600 cu. ft. The shovel-type ashpan normally need only be cleared once in 24 hours. Weekly fuel consumption is 1 $\frac{1}{2}$ -2 cwt. in normal use, including daily cooking. A wide range of fuels is used, including smokeless fuel such as coke.

INSTALLATION

The hot water storage cylinder should be not more than 30 gallons capacity. It should be lagged and placed as near to the boiler as possible. The flow and return pipes—1" B.S.P.—should be not more than 30 feet long and should be lagged if they exceed 15 feet. The Yorkist is suitable for an opening 40" wide x 45" high (from hearth level) x 14" deep, and should be connected to a uniform 9" x 9" flue.

An additional advantage is the method of delivery. The Yorkist is packed in two self-contained units—the oven and fire units—ready to be assembled. This saves time and precious man hours in installation.

Exceptionally easy to maintain and keep clean, an all-purpose cooker, domestic fire and water heater, the Yorkist 12 has proved its solid value in thousands of well-run homes.

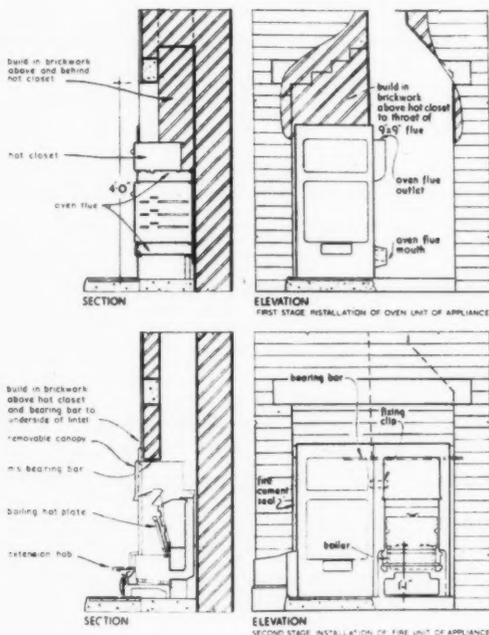
SPECIFY THE YORKIST 12 MADE BY

Radiation

PIONEERS OF SMOKE REDUCTION

✓ Approved by the Ministry of Fuel and Power

Technical Information Sheet for the Yorkist 12 (and for the oven-over-fire Yorkist 20) from Radiation Group Sales Limited (Solid Fuel Division), Belper, Derby.



Approved



by the Fire Offices Committee

For Safety's sake specify "CRUSADER" Automatic Sprinklers.
Designed, manufactured and installed by the Sprinkler

Division of FIRE ARMOUR LIMITED—
the only independent F.O.C. authorised
Sprinkler contractors.

*Technical advice and estimates with-
out obligation.*



Fire Armour LIMITED

(SPRINKLER DIVISION)

G.W.R. SIDINGS,
WOOD LANE, LONDON, W.12

Telephone: SHEpherds Bush 3900.

Specialists in Fire Fighting equipment.

DHB/2821

NORTONIA

NON-MAGNESITE

a guaranteed product

A SYNTHETIC WOOD BLOCK laid
in Sand and Cement on a level ruled-off concrete.

NORTONIA flooring is toughened with a
P.V. plastic to give durability and a surface
simple to maintain by washing with soap and
water.

NORTONIA will withstand concentrated
traffic, including trucking, under wet or dry
conditions.

NORTONIA has the appearance of a wood
block floor at almost half the cost.

Ideal for Industrial floors, Schools, Hospitals,
Canteens, Shops, Garages, where appearance
—coupled with hard wear—is important.

NORTONIA has been laid in Technical
Colleges, Schools, and all types of buildings.

Samples and brochures on application to:—

THE TERRADURA FLOORING CO. LTD.

**PROVIDENCE WORKS · NORTON STREET
MILES PLATTING · MANCHESTER 10**

'Phone: COLlyhurst 1059/4533 Established 1909

**It's
HERE!**

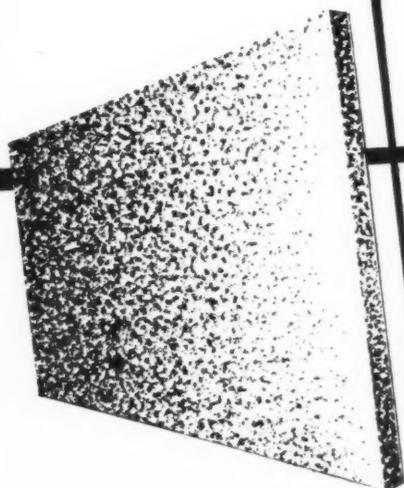


SOVEREIGN HARDBOARD

a new product by

SUNDEALA

We are pleased to announce that SOVEREIGN HARDBOARD—latest addition to the famous Sundeala range—is now in quantity production. Special processing of SOVEREIGN Board includes heat treatment to ensure maximum strength and hardness and moisture conditioning to render it suitable for use in the British climate. When you buy Hardboard buy SOVEREIGN—the best British board made today!



Full particulars and Technical Service from

SUNDEALA BOARD CO. LIMITED

Head Office: ALDWYCH HOUSE, LONDON, W.C.2.

Tel.: CHAncery 8159

or from its Offices at

Newcastle: NORTHUMBRIA HOUSE, PORTLAND TERRACE, 2

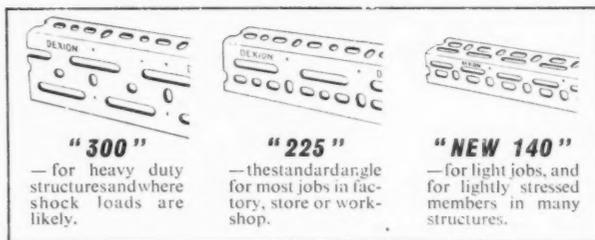
Now—a wider range of racking

With a new, lighter, lower-priced slotted angle, and new self-supporting steel shelves in graded sizes, the Dexion system of construction has been extended to cover practically *all* racking needs — with even greater economy. The new shelving in itself can cut costs by as much as 20%.

With the range of slotted angles in the Dexion system, you can easily and quickly build almost any item of equipment. Dexion just needs cutting and bolting, and the job's done! But for large storage installations, careful designing can save a lot of money. You are invited to make full use of Dexion's unique experience *at the planning stage*.

• NEW DEXION 140 — light weight, low cost

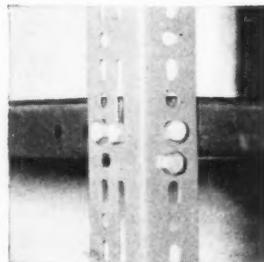
Dexion 225 (2½" x 1½") is the popular industrial size for most jobs. Dexion 300 (3" x 1½") is the robust, heavy-duty angle. New Dexion 140 (1¾" x 1¾") slashes costs on the light jobs. All are available in rust-protected, stove-enamelled steel, or in aluminium alloy, and all can be used in combination. (For even lighter applications, there is also the new Dexion 112 — half the size of 225.)



• NEW SELF-SUPPORTING, Rigid Shelves No bearers—a big saving

Dexion storage installations can be "tailored to fit" both the goods and the space — often, space otherwise wasted. The new Dexion shelves bolt direct to uprights; locking design gives built-in rigidity. Without bracing or bearers, the job is neater, quicker, cheaper. A unique feature: bolted support bars can increase load capacity of shelves wherever needed.

Five sizes :
Rust-protected and stove-enamelled, Dexion steel shelves give a fine finished job at low cost. Sizes: 36" x 12", 18", 24", 30" and 36". (Also original Dexion panels, for use with bearers, 36" x 6".)



• THE DEXION MAN has a trained eye for cost-saving

The Dexion representative is trained to find an efficient solution to *your* storage or equipment problem. His practical experience can help you save money, space, labour, with Dexion structures exactly fitting your needs, in factory, warehouse or office. As many customers have found, you may gain a lot by calling him in.



DEXION DESIGN SERVICE

Dexion is far easier to use than wood or angle iron — so most jobs present no difficulty. But where the installation is fairly big, or there are tricky features, careful design can mean substantial savings. The Dexion Design Service takes the worry off your hands. It is free to customers: don't hesitate to use it — preferably at an *early* stage of planning.

DEXION CONSTRUCTION SERVICE

If you have not the labour needed to erect the bigger structures, you can have the whole job done by a skilled Dexion team — with speed and efficiency that keep the cost low.

at lower cost



What's so special about DEXION?

Today there are, of course, other slotted angles. But Dexion, which started an entire industry, remains far and away in the lead — and not only because of its sound engineering design.

Dexion leads because this organization is concerned solely with slotted angle — giving you the best material to solve your problems at the lowest cost, with

free technical service to help you, based on unrivalled research and experience.

The demand is now world-wide; Dexion is manufactured in six countries; over 150 million feet are already in use, and 80 per cent of sales are repeat orders. This success is the surest proof that the Dexion system has, indeed, something special to offer every user.



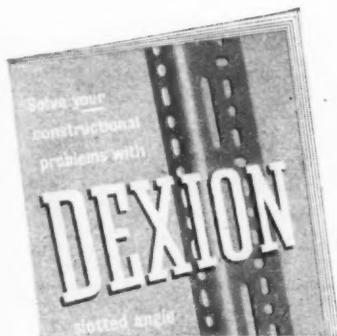
Complete reorganization of busy wholesale department at H. J. Ryman Ltd., Stationers and Printers. Dexion 225 slotted angle and new shelves make the most of cubic space and facilitate handling of materials. Installation designed and erected by Dexion Ltd.

AT ANY TIME — BUT BEST AT THE PLANNING STAGE —

GET IN TOUCH WITH

DEXION

REGD.



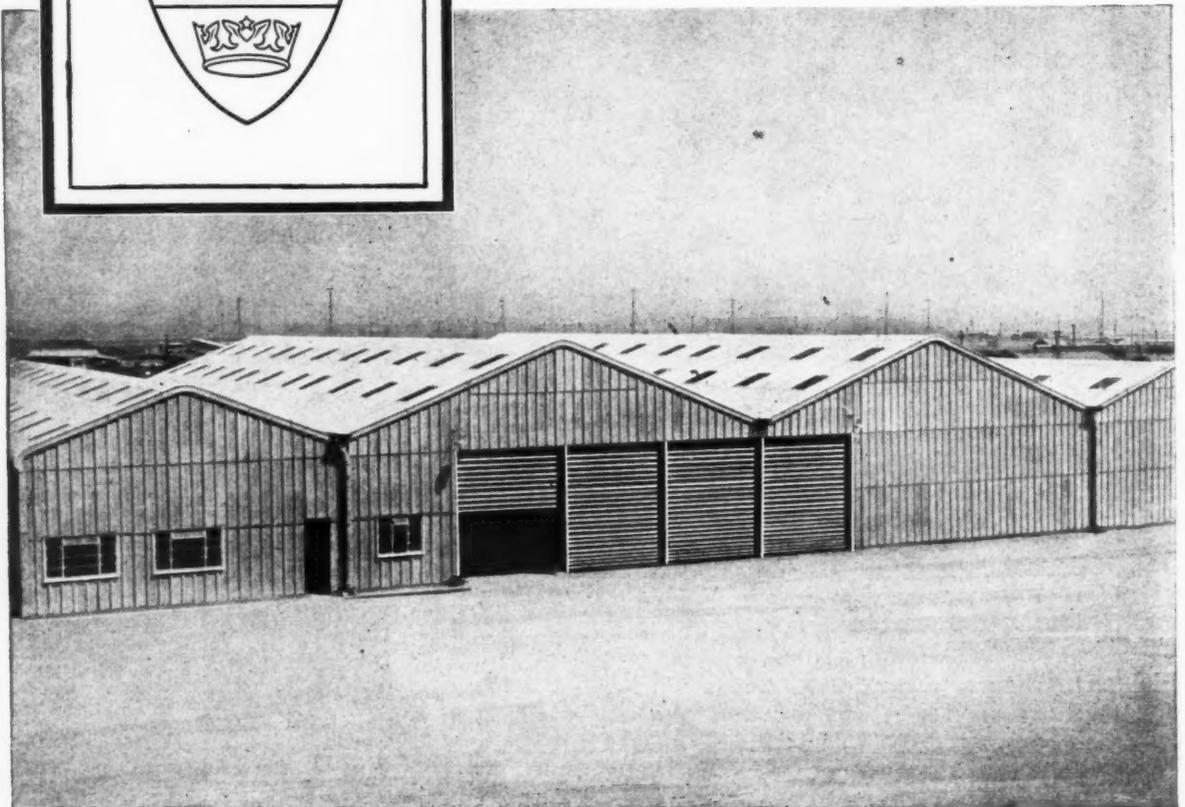
◀ **THIS BOOKLET IS FULL OF IDEAS.** To judge Dexion's usefulness to you, send for booklet B.G. 143. Illustrations show how up-to-date firms use Dexion to solve dozens of problems. Full description of the Dexion system, with prices. Just write "B.G. 143." on your business letterhead, and post to Dexion Ltd., 65 Maygrove Road, London, N.W.6. Or ring MAIda Vale 6031-9.

The world's household names use



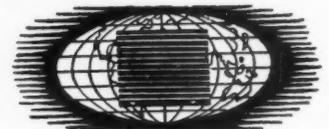
The doors commanding the world's largest sale

British European Airways fitted Brady Steel Rolling Doors to the building recently supplied and erected at London Airport by The Coseley Engineering Co. Ltd of Wolverhampton. Brady Rolling Doors in steel, wood or aluminium — hand or electrically operated — are available to fit any type of opening.



G. BRADY & COMPANY LIMITED MANCHESTER 4

Phone COLlyhurst 2797/8. *London:* Thames Works, Strawberry Vale, Twickenham, Middx. *Birmingham:* Rectory Park Road, Sheldon 26. *Canada:* David C. Orrock & Co. (G. Brady & Co. Canada Ltd.) 4925 De Sorel Street, Montreal, Que. and also at 23 Scott Street, Toronto 1. *U.S.A.:* G. Brady & Co. Ltd., 11 West 42nd St. New York 18 N.Y. *Norway:* An Thorbjørnsen, Kongensgate, 14, Oslo. *Hong Kong:* Blair & Co. Ltd., Windsor House and also at Cape Town.



we shutter the world

MANUFACTURERS OF BRADY HAND AND POWER OPERATED LIFTS

S. & B.



a winning design

Chairs that add grace and dignity to their settings and keep pace with modern trends yet always retain a very practical use for a particular job.

For Canteen, Concert Hall, School, Hotel or Office there is a suitable range of Kingfisher furniture that is just right, and will look good for years to come. The Chair illustrated is as used in the Hotel Leofric, Coventry, Royal Festival Hall, Time-Life Building and London Airport.

REGISTERED DESIGN No. 864560

Kingfisher chairs and tables



KINGFISHER LTD · CHARLES STREET AND PHOENIX STREET · WEST BROMWICH · STAFFS

Telephone: Tipton 1631 · Telegrams: Kingfisher, Phone, West Bromwich · London: 139 Knightsbridge, S.W.1 · Telephone: Kensington 1331

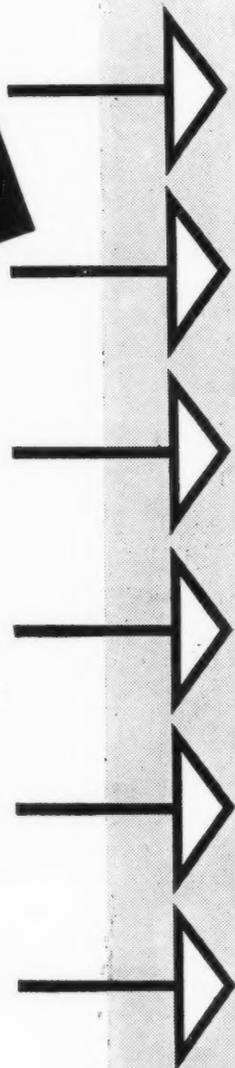
six
ways

to
BETTER
BUILDING

- ★ Durable and permanent
- ★ Almost unbreakable
- ★ Avoids rotting timber
- ★ No painting required
- ★ Elegant, distinctive eaves line
- ★ Guaranteed lining service

at
LOWER
COST

A saving of at least
£24 per house is possible



TYPE G



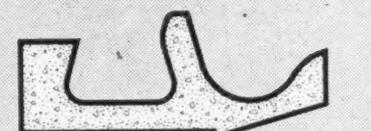
TYPE P



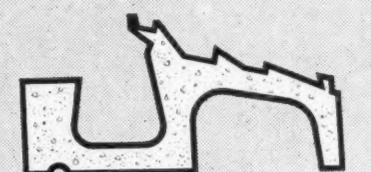
TYPE N



TYPE H



TYPE T



SPROCKET

FINLOCK



FINLOCK Guaranteed LINING SERVICE

A fully illustrated folder dealing with every aspect of this service is now available and will be sent to you immediately you write or phone to us for a copy, together with full Technical Literature on our products.

FINLOCK GUTTERS LTD.

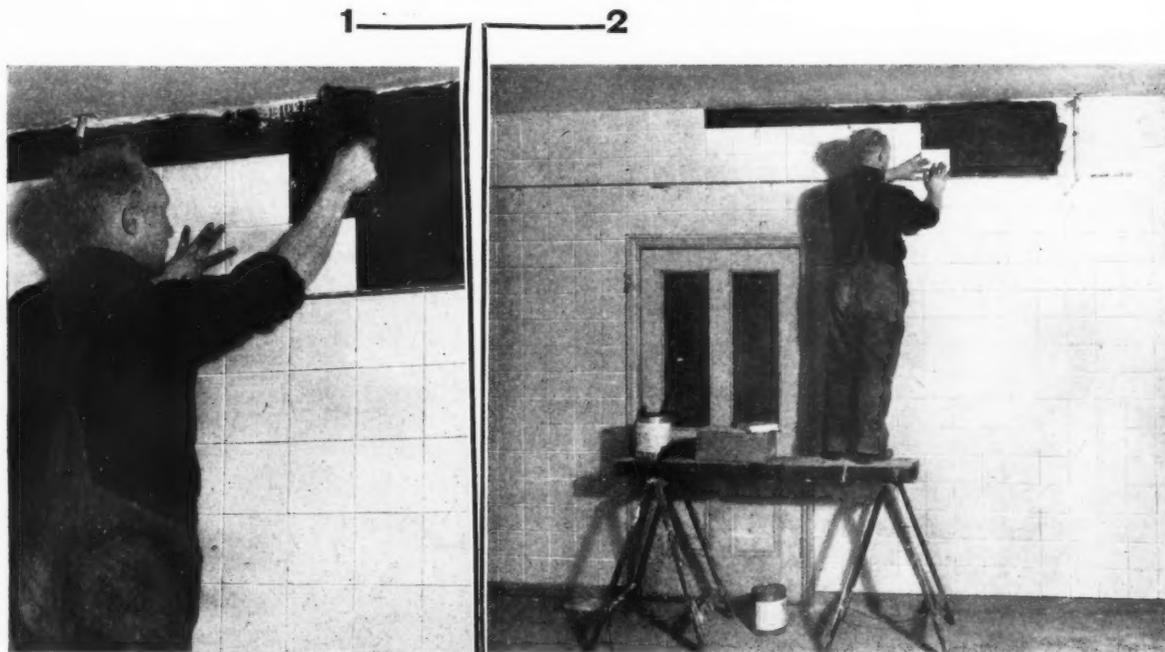
Finlock House, Frant Road, Tunbridge Wells, Kent. Telephone: Tunbridge Wells 3396/9

Works at: Southborough, Kent; Royston, Herts; Cwmbran, S. Wales; Crewkerne, Somerset; Leeds, Yorks; Wakefield, Yorks; Musselburgh, Scotland; Belfast, N. Ireland.

Why more and more tiling is being carried out by

RICHAFIX

The British Tile Adhesive



1 SPREAD THE RICHAFIX

2 FIX THE TILES IN POSITION

The RICHAFIX PROCESS IS AS SIMPLE AS THAT!

- (1) Richafix gives *permanent* adhesion on walls and floors.
- (2) It is immune to temperature variations and humidity: may be used on exteriors.
- (3) The resilience of the Richafix bond withstands cement contraction, vibration etc, to a very high degree.
- (4) It is the complete answer to "arching" or lifting of floor tiles.
- (5) Tiles may be fixed to almost any dry surface e.g, plasterboard, hardboard, wood, steel etc.; no hacking or keying required.
- (6) The weight factor is reduced to a minimum.
- (7) Speed of fixing is greatly increased.

Special Heat Resistant and Waterproof grades available.

Booklet R.F.3. on request

RICHARDS TILES LTD

Factories: TUNSTALL, STAFFORDSHIRE.

Stoke-on-Trent 87215

London Office and Showrooms: GRAND BUILDINGS, TRAFALGAR SQUARE, W.C.2 WHITEHALL 2488 & 8063



Recently the Swindon Press built an extension to their newspaper and printing offices. In a printing works, a controlled temperature is essential, and this has been achieved with an oil-fired central heating system assisted by insulation of the walls and roof. The oil fuel is supplied by Shell-Mex and B.P. Ltd.

A PRINTING WORKS NEEDS A CONTROLLED TEMPERATURE

The Swindon Press installed oil-fired heating in their extension

A FEW MONTHS ago the Swindon Press Ltd. built an extension to their newspaper and printing offices. Work was completed in November 1955, and now this fine building provides 50% more floor space, and relieves severe congestion in many departments.

In a printing works, constant temperatures are vital to the efficient operation of inks and paper surfaces. The walls and the roof of the new extension have been insulated, and an oil-fired central heating system installed. This provides a comfortable, even warmth throughout the building, enabling it to be kept at a controlled temperature for as long as necessary,

which can be altered at the touch of a switch. No other system demands so little maintenance—only a few minutes is needed every few weeks. There is no stoking. No ash to be cleared out. Oil burns cleanly, is easily stored in quantity, and is easy to handle and deliver.

It is a well-known fact that there is a steadily growing gap between this country's demand for fuel and available home supplies. Already last year Britain was forced to import 11 million tons of coal. By 1960, this figure may well have reached 50 million tons. It has been estimated that by that date no less than one in four of Britain's indus-

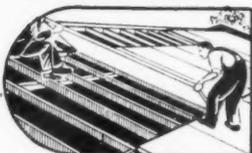
trial fuel consumers will have to change to oil-firing. Aware of this serious situation, more and more industrialists and property-owners are installing or converting to this most flexible and labour-saving heating system. Shell-Mex and B.P. Ltd. have had over forty years' experience in the handling of oil fuel and providing information on applying it to the best advantage. If you are considering oil-firing for the heating system of any building which you are designing or altering, please write to Fuel Oil Dept. 42F, Shell-Mex House, Strand, London, W.C.2. This of course will place you under no obligation.



CEILINGS

ROOF-DECKING

Under Sheet-metal (Traditional or Patent), Asbestos, Bituminous Felt, etc.

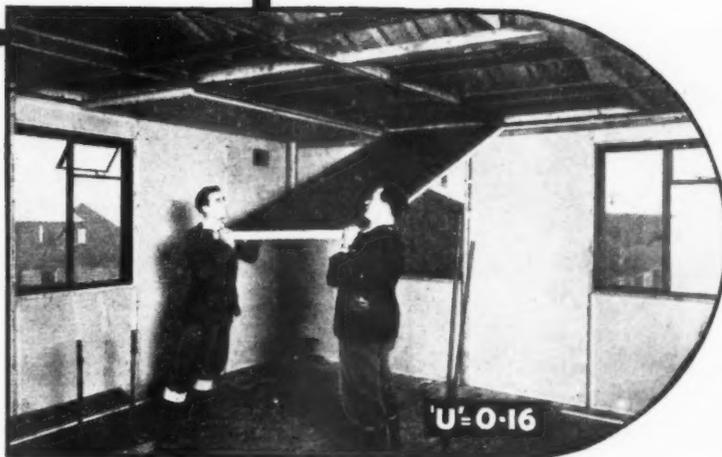
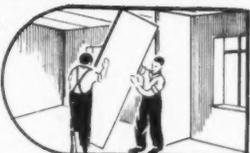


WALL-LININGS



PARTITIONING

- ★ Factory Screens
- ★ Divisions, etc.
- ★ Permanent or temporary
- ★ Glazed or unglazed



STRAMIT

— THE TWO-INCH THICK

BUILDING SLABS

— the low-cost
dry-construction material, which
combines great strength and rigidity
with exceptionally good values of thermal
insulation, sound absorption and
fire resistance

*
THOUSANDS OF TONS ARE USED
ANNUALLY IN THE CONSTRUCTION OF
FACTORIES, HOSPITALS, SCHOOLS, OFFICES, FLATS
AND HOUSES, THROUGHOUT THE COUNTRY

*
STOCK SIZES :
4 ft. wide x 8, 9, 10 & 12 ft. long

SPECIAL SIZES (made to order):
Any width, of 4 ft. or less, and any length, greater or less than 12 ft.

NOW AVAILABLE IN
3 QUALITIES AND 3 FINISHES
— supplied through leading merchants

STANDARD quality

HARDBOARD faced

ROOFING quality

ALUMINIUM faced

LOW-DENSITY quality

FABRIC faced

For latest details
technical data & B.R.S. Reports
**FILL IN COUPON
AND POST NOW**

Please send details of NEW range of STRAMIT Building Slabs:

Name of firm

Address

For the attention of Status

STRAMIT BOARDS LTD. COWLEY PEACHEY, UXBRIDGE, MIDDLESEX
A.J. Phone : West Drayton 3021

CANADIAN

Spruce

A Canadian wood, creamy white in colour and sometimes tinged with red, that has a wide range of uses.

TYPICAL USES

Light and medium construction, agricultural implements, windows and doors, shelves and general carpentry

Scaffolding, ladders, kitchen furniture

Wagon boxes, concrete forms, pumps, tanks and silos

Oars and paddles, organ pipes, sounding boards for musical instruments

Pulp and paper, rayon pulp and cellophane

Food containers, butter and cheese boxes, cooperage

SPECIAL ADVANTAGES

Strong for its weight, yet comparatively soft and very resilient

Seasons readily and uniformly

Easily worked, takes smooth satiny finish

Takes paints, varnishes and enamels well

Minimizes "wood tainting" in packaging of foods, butter, etc.

Takes nails without splitting and holds them well.

FOR FURTHER INFORMATION concerning Canadian woods contact The Commercial Counsellor (Timber), Canada House, Trafalgar Square, London, S.W.1.



WOOD IS NATURE'S BEST BUILDING MATERIAL

Reproduced here is figure of Canadian Spruce.

This advertisement is one of a series featuring Canadian Douglas Fir, Red Pine, White Pine, Western Red Cedar and Pacific Coast Hemlock.

TIM 6

ELLARD

ESTATE

SLIDING DOOR GEAR



The illustration on right shows yet another example of the use of ELLARD "Estate" Sliding Door Gear in the modern dwelling house. See how simple it is to convert a spacious room to one of a cosy, intimate atmosphere. The finger-tip smoothness of door action offers immediate reduction of living space when desired with the additional advantage

of fuel economy. Elegant appearance, ease of operation and long service are the main selling features of this attractive ELLARD Door Gear. Excellent design, moderate cost and maximum use of floor space make ELLARD Door Gear the obvious choice for both council estates and private houses.



RADIAL

SLIDING DOOR GEAR

Illustration on left shows ELLARD "Radial" Sliding Door Gear fitted to a private garage. Sliding doors are of great advantage in protecting cars against damage caused by accidental swinging of hinged doors. In addition, valuable working space is offered where it is most desired, at the entrance to the garage. Note also how ELLARD Door Gear provides easy access to and from the garage by a personal entry door. ELLARD "Radial" Sliding Door Gear is low in price and gives long service without maintenance. This gear is also suitable for the larger openings of commercial and industrial garages.

OVERDOR

GARAGE DOOR GEAR

ELLARD "Overdor" Gear, illustrated on right, represents the best method of operating an overhead type door, and it requires the minimum space, fixing time and maintenance. An entirely clear threshold is achieved, and both side walls are available for windows or shelves. "Overdor" Gear is designed for doors from 6ft. to 7ft. 3in. high and up to 200 lbs. in weight. The door is safely balanced and can be opened and closed with ease. The width of the door is not critical, but the construction should ensure that the door does not sag when in the raised horizontal position, and we suggest a maximum width of 10ft. The balance springs impose a compression force along the iamb, thus relieving the building of all stress until the door is raised, when less than half the weight of the door is supported by the twin top tracks. ELLARD "Overdor" is therefore especially suitable for lightly constructed buildings.



Immediate delivery of ELLARD "Estate", "Radial" and "Overdor" Sliding Door Gear can be obtained from ironmongers and builders' merchants throughout the country.



ELLARD SLIDING DOOR GEARS LTD., WORKS ROAD, LETCHWORTH, HERTS. • TEL: 613/4

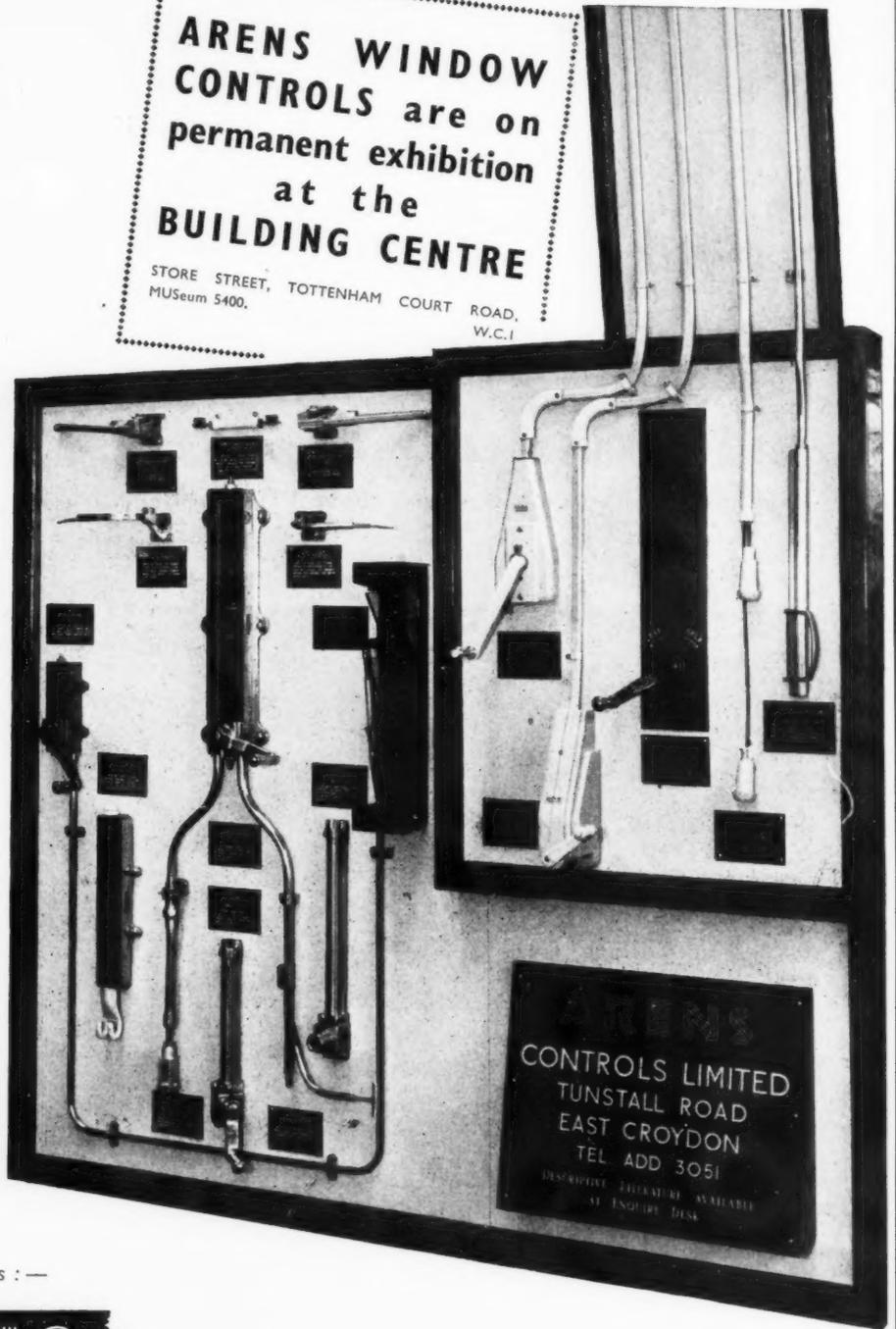
BMJ.

A CLOSE-UP OF WINDOW CONTROL

The more closely you examine an ARENS control the more you will appreciate its high standards of quality and performance. All ARENS controls are beautifully finished, with an attractive casing calculated to win the approval of all discerning architects. The unobtrusive conduit used can be painted to harmonize with the decorations, or concealed beneath the wall surfacing, as desired. Totally enclosed, precision-built mechanisms ensure accurate control and trouble-free service, and require scarcely any maintenance.

★ For further details please contact our Contracts Department.

**ARENS WINDOW
CONTROLS are on
permanent exhibition
at the
BUILDING CENTRE**
STORE STREET, TOTTENHAM COURT ROAD,
MUSEUM 5400, W.C.1



Sole Manufacturers:—



CONTROLS LIMITED

TUNSTALL ROAD · EAST CROYDON · SURREY

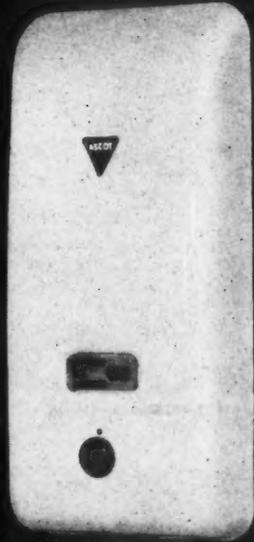
Telegrams: UNICONTROL, SOUPHONE, LONDON. Telephone: ADDiscombe 3051/4

OVERSEAS AGENTS: Australia: AREN'S UNIVERSAL CONTROLS PTY. LTD., G.P.O. BOX 1000 H. MELBOURNE. New Zealand: L. J. FISHER & CO. LTD., 30 ANZAC AVENUE, AUCKLAND. Kenya and Tanganyika: KENYA CASEMENTS LTD., P.O. BOX 2832, MOMBASA. Rhodesia: CRITTAL-HOPE (RHODESIA) LTD., P.O. BOX 2301, WORKINGTON. SALISBURY. South Africa: WIRE INDUSTRIES STEEL PRODUCTS & ENGINEERING CO. LTD., OPHIRTON, JOHANNESBURG. Western Canada: WILLIAMS & WILLIAMS (WESTERN) LTD., VANCOUVER & WINNIPEG. Holland, Belgium and Luxemburg: ELAND-BRANDT, DISTELWEG 84A, AMSTERDAM-N, HOLLAND.

**First choice of
local authorities
for new housing**



**An instant
hot water service
at an average cost
of only 4/6d. per week**



ASCOT 715

**balanced flue multipoint
gas water heater**



ASCOT GAS WATER HEATERS LTD
WHG/A256

255 NORTH CIRCULAR ROAD

LONDON N.W.10



Reproduced by permission of Hickleton & Phillips, London, E.C.4

This fine example of George III Silver was made in London by Andrew Fogelberg in 1771.

Products of Integrity

In this age of synthetics and substitutes
the authentic production still commands the
respect and favour of the discriminating.

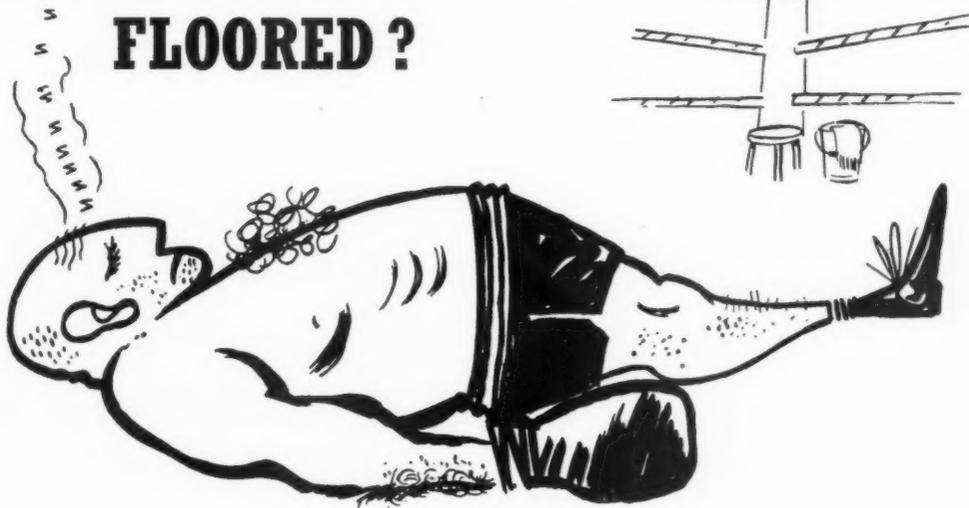
Specify—

CLAY ROOFING TILES

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

'The Clay Tile Bulletin,' post free on request

ARE YOU COMPLETELY FLOORED?



If our picture depresses you, just consider the awful punishment a floor gets. Especially when it's being jabbed and pummelled (when it's down) by the feet of schoolboys, for instance, or roller-skaters or soldiers. With no Queensberry rules to protect it, how can a floor defend itself? Before you reject the problem as insuperable, remember the tried and trusted material without substitute in this field—

CANADIAN HARD MAPLE FLOORING

- extreme resistance to abrasion
- freedom from splintering
- smooth, close-grained surface
- absence of open pores
- light, pleasant colour easily preserved
- the perfect flooring for schools, gymnasia, skating rinks, dance halls, factories, drill halls and all types of public building
- available for immediate delivery from our London stock: *prime quality, 1" x 3" nominal size, finishing 25/32" x 2 1/4" surface, kiln dried, tongued and grooved sides and ends, 3' and up long, average 4 1/4' at 23/9 a yard, finished measure.*

M·A·MORRIS·LTD



RAVENSDALE WHARF · STAMFORD HILL · LONDON · N.16 · TEL: STAMFORD HILL 6611 (6 lines)



PLEASING AND PRACTICAL



the new
CRANE
20
domestic
boiler

DESIGNED TO PLEASE
THE MODERN WOMAN

THE new, thermostatically controlled, CRANE 20 domestic boiler combines a modern, attractive appearance with all the practical features your customers expect from a first-class boiler. With an easily attained rating of 20,000 B.Th. U's per hour, it's suitable for use on hot water storage tanks of 25 to 35 gallons capacity.

The hot water supply is ample for all domestic uses—bath, basin, sink and a towel ailer. The boiler burns well on solid smokeless fuels—especially coke—and the circular firepot is entirely surrounded by water—for maximum efficiency. Available in Cream or White, with Black top finished all enamel. The thermostat control knob and ashpit door handle are supplied in a choice of colours.

B.Th.U'S PER HOUR FOR HOT WATER SUPPLY		FUEL CAPACITY (CUB. FT.)	HEATING SURFACE (SQ. FT.)	GRATE AREA (SQ. FT.)	GALLONS PER HOUR (FROM 50°F-130°F)	
NORMAL RATING	SLOW-BURNING RATING				NORMAL RATING	SLOW-BURNING RATING
20,000	12,000	0.70	1.82	0.45	25	15

HEIGHT TO TOP-PLATE	SIZE OF TOP-PLATE	OVERALL PROJECTION BACK TO FRONT		HEIGHT TO CENTRE OF TAPPINGS		TAPPINGS BOTH SIDES	SMOKE PIPE DIA.
		ASHPIT DOOR CLOSED	ASHPIT DOOR OPEN	FLOW	RETURN		
24	16½ x 16	18½	32	16½	9½	1½	4

women will love these easy to manage features

- * A joy to clean—no dust—no mess
- * Large deep ashpan complete with handle for easy carrying
- * Smooth, compact design—no awkward projections
- * Rids itself of ash with small amount of shaking
- * Hinged fuelling lid
- * Vitreous enamel top-plate.

PRICE £25 (Extra for bower-barffed firepot—for soft water areas)

Write today for descriptive leaflet to: CRANE LTD., 15-16 RED LION COURT, FLEET STREET, LONDON, E.C.4. Works: IPSWICH, London Showrooms: 115 Wigmore Street, W.1. Branches: Birmingham, Brentford, Bristol, Glasgow, London, Manchester.

Vizusell

—in New Bond Street



ARCHITECTS: Messrs. NORTH & PARTNERS, 40 BROADWAY, MAIDENHEAD.

SHOPFITTERS: Messrs A. DAVIES & CO (SHOPFITTERS) LTD., HORN LANE, LONDON, W.3.

COLOUR CONSULTANTS: GEORGE COLLETT, M.S.I.A. Associates, 30 HIGHGATE WEST HILL, LONDON, N.6.

VIZUSELL is basically a system of standard upright metal channels, spaced 30 in. apart, to which shelf brackets are attached at *any height* by the simple turn of a screw—simultaneously retaining any type of panel or mirror between the uprights.

VIZUSELL is ideal for Wall, Counter, Island, Window, or any other form of display. It is also remarkably inexpensive.

**WHATEVER THE SIZE OF
YOUR BUSINESS — VIZUSELL
WILL ENLARGE IT**

Messrs. H. J. RYMAN LTD., have opened their new West End Self-Service Store at 106, New Bond Street—the first in this Country for the sale of commercial Stationery—and VIZUSELL fittings have been used throughout. “WE ARE MORE THAN SATISFIED WITH THE RESULT, AND DELIGHTED WITH VIZUSELL” say Messrs. Ryman.

VIZUSELL makes it easy for the customer to *See*, to *Select*, and to *Buy*, and displays *more goods*—in an attractive manner. It is fully responsive to design and the planned use of colour, and lends itself to easy changes in display.

Used mainly in this instance for self-service, it is equally adaptable for all other methods of selling, **IN ALL TRADES.**

Consult your local Shopfitter, or write for full illustrated details to:—

**VERSATILE FITTINGS (WHS) LTD.
55 FETTER LANE, LONDON, E.C.4.**

PHONE: FLEET STREET 6262/3

A SUBSIDIARY OF W. H. SMITH & SON LTD.

For SCOTLAND ask GRAHAM & WYLIE LTD., MILL STREET, BRIDGETON, GLASGOW, S.E. Phone: Bridgeton 4831.

THE ARCHITECTS' JOURNAL
(Supplement) November 8, 1956

T. C. JONES

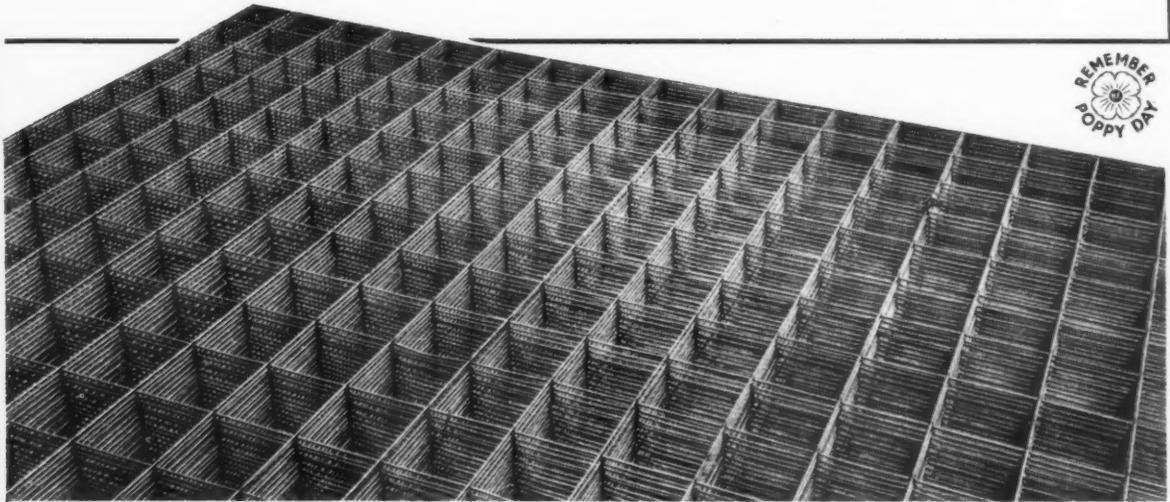
skill, experience and immense resources



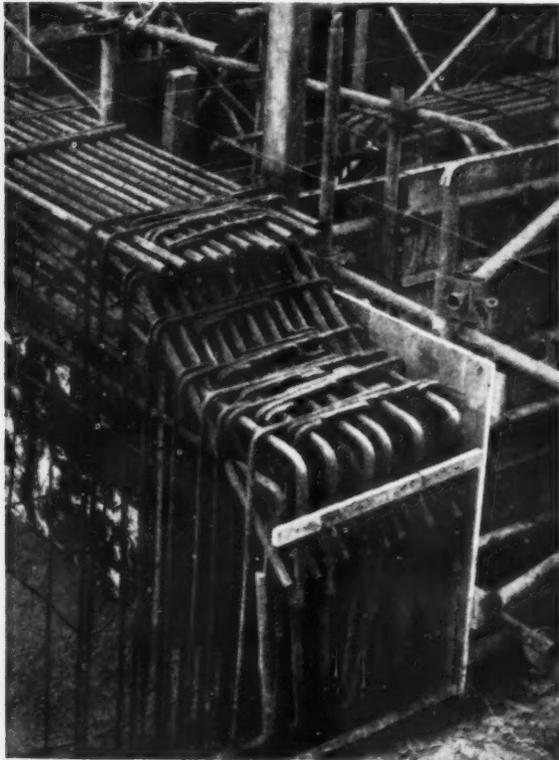




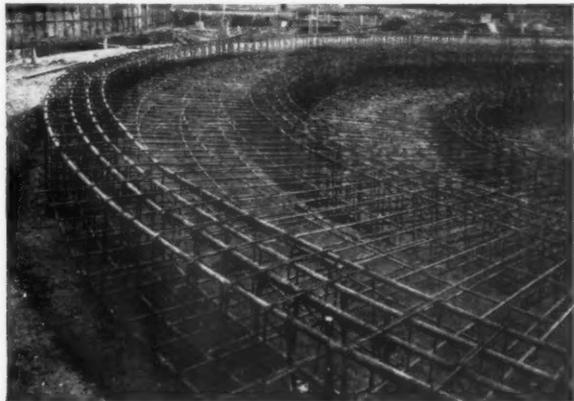
STORY of STEEL for concrete reinforcement



FRAMEMESH High Tensile Welded Fabric Reinforcement to British Standard 1221, 1945, Part A. Supplied in rolls or flat sheets.



ROD REINFORCEMENT in 9' 0" foundation beam for extension to the Kodak Works, Harrow.



CIRCULAR BEAMS for Sedimentation Tanks at Hereford Sewage Works.

T. C. JONES

AND COMPANY LIMITED

HEAD OFFICE:
Wood Lane, London, W.12
Tel: SHEpherds Bush 2020



SOUTH WALES OFFICE:
Bute Street, Cardiff
Tel: Cardiff 28786

REINFORCEMENT DEPARTMENT:
17 BUCKINGHAM PALACE GARDENS, LONDON, S.W.1
Tel: SL Oane 5271

WORKS:
SHEPHERDS BUSH, LONDON. NEASDEN, MIDDX.
TREORCHY, GLAMORGAN

ALL REINFORCEMENT ENQUIRIES PLEASE, TO:
17 BUCKINGHAM PALACE GARDENS, LONDON, S.W.1

A COMPLETE SERVICE FOR DESIGN, FABRICATION AND ERECTION

Scheme for better cooking



Specialist attention, based on the most up-to-date knowledge of all aspects of large scale cooking, is freely available through the Radiation service to architects. All we ask is to be called in at the earliest possible moment, as special equipment may be needed, or unusual arrangements for services, drainage and ventilation required.

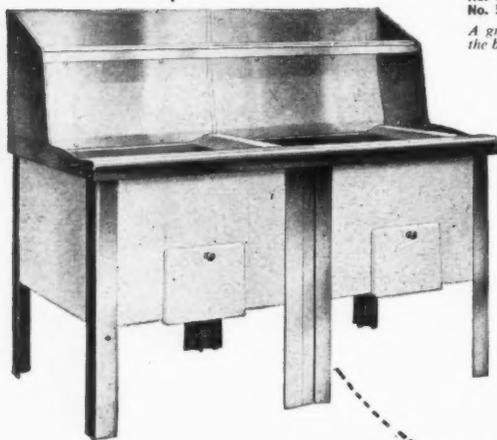
The **STRATFORD RANGE** is designed on the unit principle to permit of wall or central pattern suites being built up to meet requirements.

The oven is **REGULO** controlled; large, medium and small boiling burners are included in the hotplate, and being in vitreous enamel finish, the whole is easy to clean.

The two different Models of the **STRATFORD RANGE** have these overall dimensions:

	Width	Height	Depth
No. 5127	27"	36"	31½"
No. 5136	36"	36"	31½"

A grill can be supplied instead of some of the boiling burners at a small extra cost.

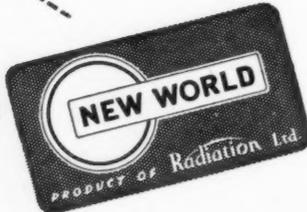


The **KINGFISHER FRYER** for deep fat frying is constructed on the unit principle and so is easy to install singly or in any number. Units are available with pans 24" or 18" wide. The fat temperature in either model is thermostatically controlled.

Finish includes vitreous enamel and stainless steel.



Please consult us on all large cooking problems

Insist on  **appliances**

RADIATION GROUP SALES LTD · LARGE APPARATUS DIVISION · 7 STRATFORD PLACE, LONDON, W.1 · MAYfair 6462

FREE ON REQUEST!

**The MAGNET
WALL CHART**

MAGNET JOINERY LIMITED
BINGLEY · BIRMINGHAM · GRAYS

EXTERIOR PLWOOD FLUSH DOORS

EXTERIOR DOORS
HEIGHT 6' 6"
WIDTH 3' 0" 3' 6" 4' 0"
THICKNESS 1 1/2"

STANDARD KITCHEN CUPBOARD UNITS

- Plwood construction throughout on under framing
- Strong frame and back panels to ensure rigidity and ease fitting of unit
- All doors top framed and ply faced both sides
- Doors on horizontal runners and top framed
- Top opens 3" high fixed on all floor units
- 1" solid French Pine or solid mahogany fixed to floor units
- Whisper panels or Chromium O handles supplied
- Ball Catcher fixed to all doors

BAY WINDOW DETAILS
DOUBLE ENDED OR SINGLE ENDED CAN BE MADE UP WITH SPLATED JAMBES FROM STANDARD STOCK WINDOWS

SPLAT AND CIRCULAR BAYS
PART GLASS SASHES BEING WHERE SHOWN

QUALITY AND SERVICE

MAGNET lowers building costs

DOORS · DOOR FRAMES · FRENCH FRAMES

WINGS AND VESTIBULE FRAMES · STANDARD STOCK WINDOWS

SPLAYS AND CIRCULAR BAYS · BAY WINDOW DETAILS

STANDARD KITCHEN CUPBOARD UNITS



FOR STANDARDISED JOINERY

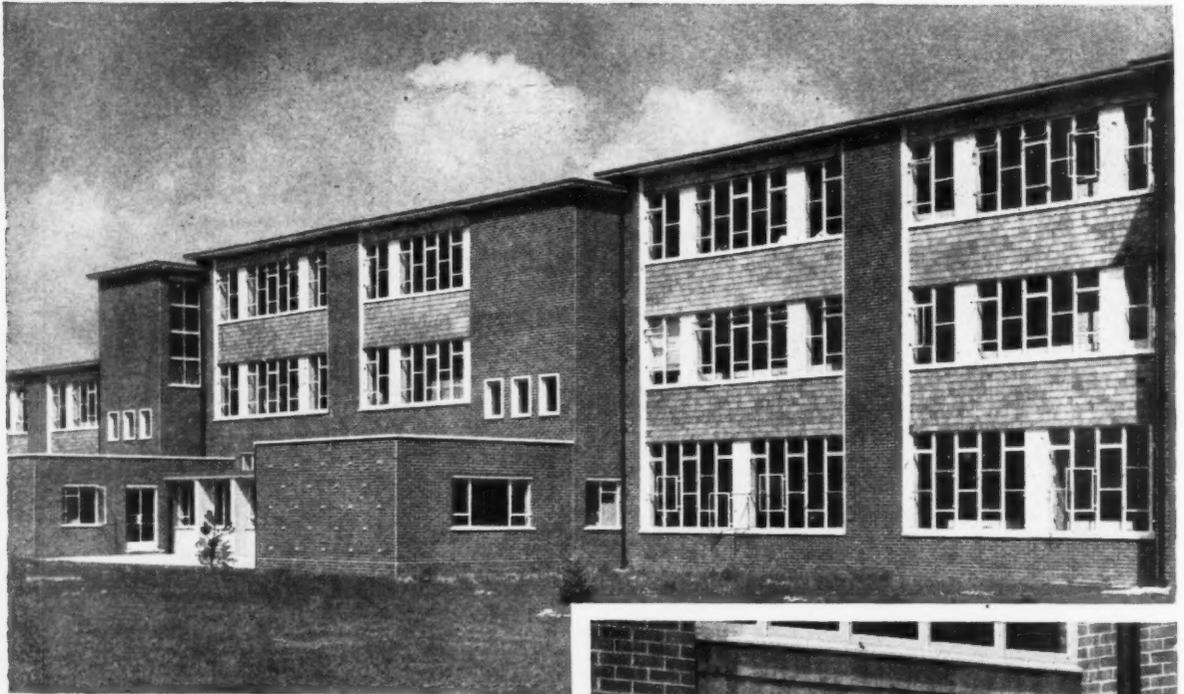
For service and immediate delivery from stock write to:—

Whitley Street, **BINGLEY**, Yorkshire 'Phone: Bingley 4401 (5 lines)

London Road, **GRAYS**, Essex. 'Phone: Grays Thurrock 2077 (5 lines)

Love Lane, Aston, **BIRMINGHAM** 'Phone: Aston Cross 3291 (3 lines)

COLT *Canadian Cedar Wood* SHINGLES



Southern Grammar School for Boys, Baffins, Portsmouth.
City Architect, Frank Mellor, F.R.I.B.A.

NEW STYLE WALLS with an old and well tried method. Weathering to a pleasant silver grey, Shingles are a most attractive method of providing a distinctive elevation. Nailed to battens on brick, breeze or timber studding, the construction is most economical and is completely weatherproof.

The high thermal insulation of Western Red Cedar makes Shingles a valuable addition to the Architect's vocabulary of modern cladding materials.



Send for full details to Dept. L.138/11

W. H. COLT (LONDON) LTD., SURBITON, SURREY

Telephone: ELMbridge 6511 (10 lines)

Fixing can also be undertaken if required

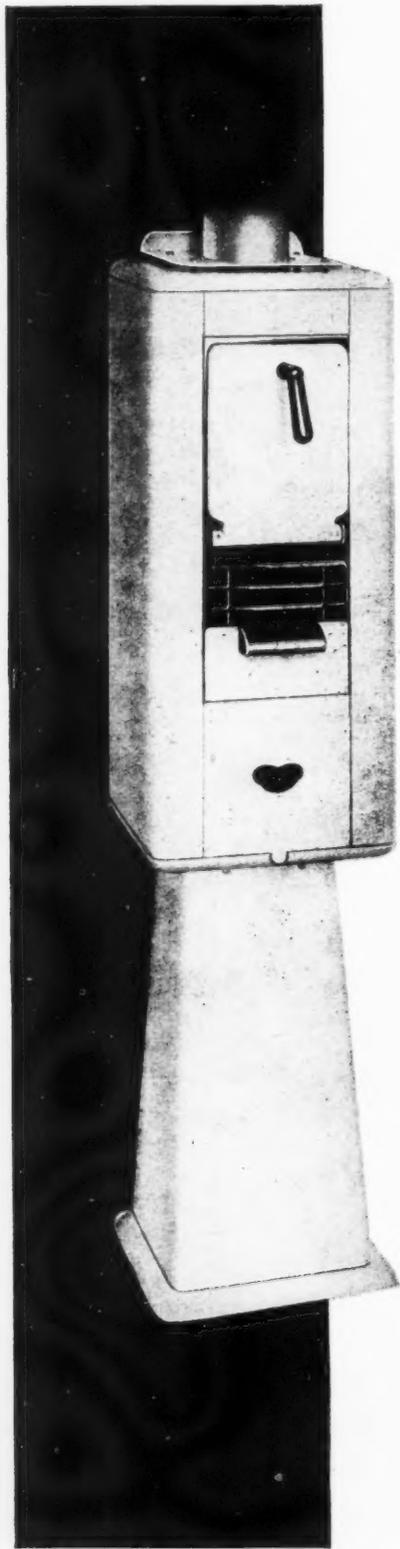
WHITES OF HEBBURN (ENGINEERS) LTD., PRINCE CONSORT ROAD, HEBBURN, CO. DURHAM

Firepak



FUEL OIL BURNERS *for central heating boilers.*

supported by 40 years experience and research in oil burning



*Safeguard
Public Health
Encourage
Personal Hygiene*

in FACTORIES · HOSPITALS · CLINICS
SCHOOLS · HOTELS AND OFFICES

Investment by British industrialists and others in modern equipment to safeguard the health and welfare of the vast and growing numbers of workers, has proved beyond doubt the wisdom of a policy both far seeing and democratic in concept.

The installation of Sugg's incinerators wherever women employees form part of an organisation is plain commonsense.

Our sales and technical staff will be glad to advise and co-operate.

*The Sugg
Incinerator*

Gas-Fired

WILLIAM SUGG & CO. LIMITED

(Incorporating Cowper Penfold & Co. Ltd.)

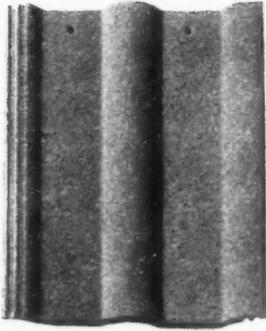
VINCENT WORKS, REGENCY ST., LONDON, S.W.1. Tel: VIC 3211



Redland '50'

Redland '50'— roman pattern interlocking tile,
for a good-looking roof at a moderate cost.

It has the traditional charm of the double roman
pattern plus the strength and impermeability of
all Redland tiles



Redland tiles



good — for 50 years and more

REDLAND TILES LTD

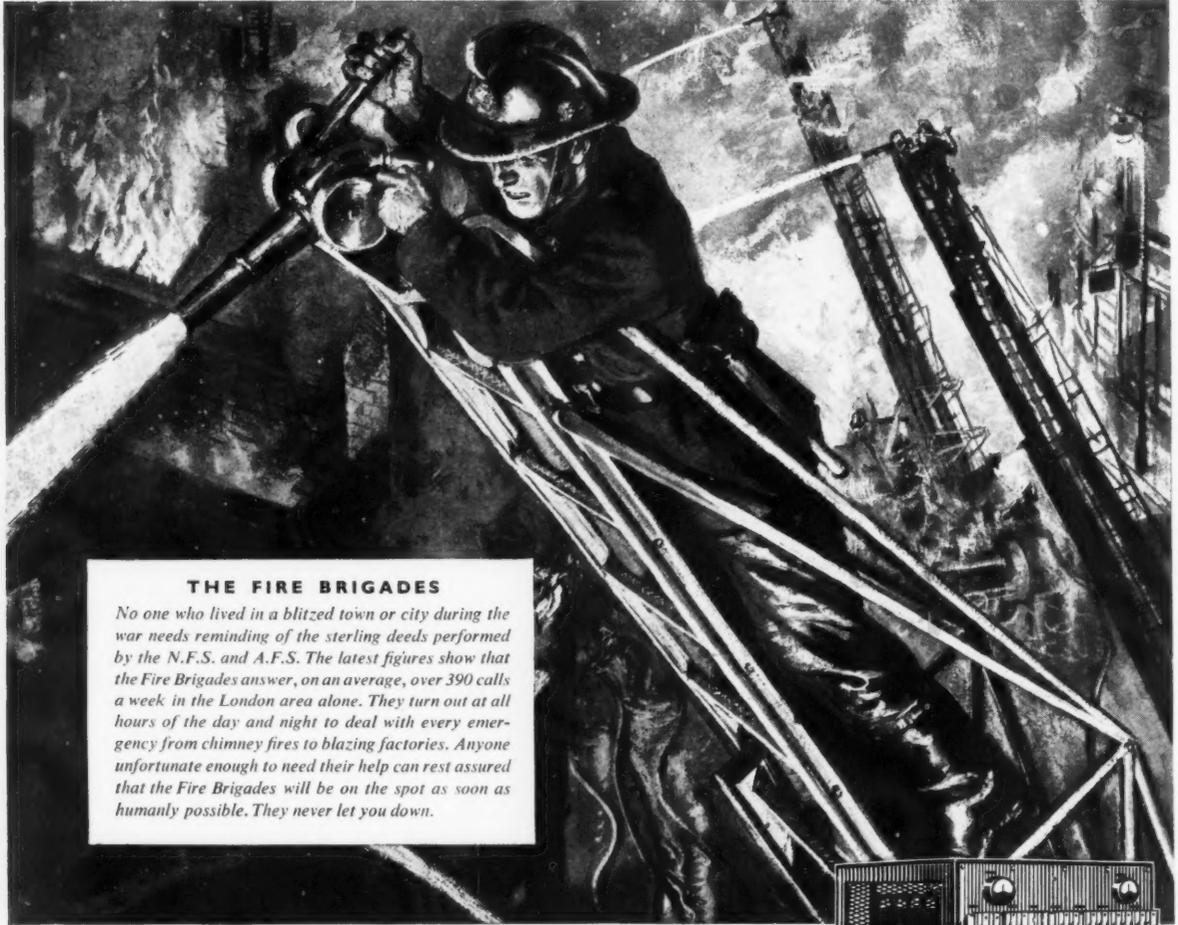
Moorhouse Nr. Westerham Kent Tel: Westerham 3206/9

A DIVISION OF THE REDLAND HOLDINGS GROUP

Houses at Potters Bar
Builders: Messrs MacManus



They never let you down

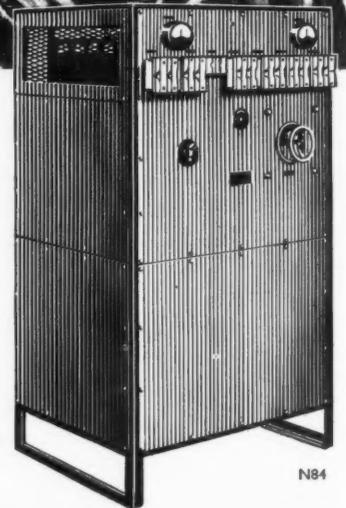


THE FIRE BRIGADES

No one who lived in a blitzed town or city during the war needs reminding of the sterling deeds performed by the N.F.S. and A.F.S. The latest figures show that the Fire Brigades answer, on an average, over 390 calls a week in the London area alone. They turn out at all hours of the day and night to deal with every emergency from chimney fires to blazing factories. Anyone unfortunate enough to need their help can rest assured that the Fire Brigades will be on the spot as soon as humanly possible. They never let you down.

YOU CAN BE CERTAIN TOO that Nife-Neverfayle Emergency Lighting Equipment will never let you down. *Whenever needed*, these reliable units will instantly, automatically, spring into action. That is the special advantage of the Nife Steel Alkaline Battery—it never deteriorates, even after long periods of inactivity.

Nife-Neverfayle units occupy only one-third of the space required by conventional equipment and, as they can be installed adjacent to other equipment, a separate battery room is not needed—a point worth remembering when planning new buildings. Maintenance costs are negligible—after years of trouble-free service you will realise just how economical your Nife-Neverfayle equipment has been.



N84

NIFE - NEVERFAYLE

THE EMERGENCY LIGHTING EQUIPMENT WITH THE **STEEL** ALKALINE BATTERY

NIFE BATTERIES · REDDITCH · WORCESTERSHIRE

NEW DEVELOPMENTS NEED NEW DEPARTURE BUILDINGS



B.R. Recruitment Centre,
Euston Station.



Medical Officer's Suite.
Sound proofed and
double glazed.



Main foyer and corridor

NEW DEVELOPMENTS in Commerce, Industry and Recreation arise from man's inherent instinct to reach New Horizons—the conquest of higher mountains; the harnessing of unleashed power of water, heat and the atom; and the exploitation of the earth's mineral wealth.

NEW STEPS towards any of these fruits of ambition call for careful planning and organisation. For many such projects Stephenson Developments have been proud to provide the first steps by designing and supplying the building accommodation.

NEW DEPARTURE Stress-bonded Timber Buildings have provided a superior standard of contemporary accommodation for British Railways as well as for electricity undertakings, government agencies, municipalities, educational, commercial, industrial and social organisations both at home and overseas.

NEW HORIZONS for you mean opportunity—and effort. Call in Stephenson Developments at the outset for technical advice and practical assistance with your accommodation standard.



Pent House Office—
Six storeys up at
Paddington Station. For
British Railways, Western
Region.

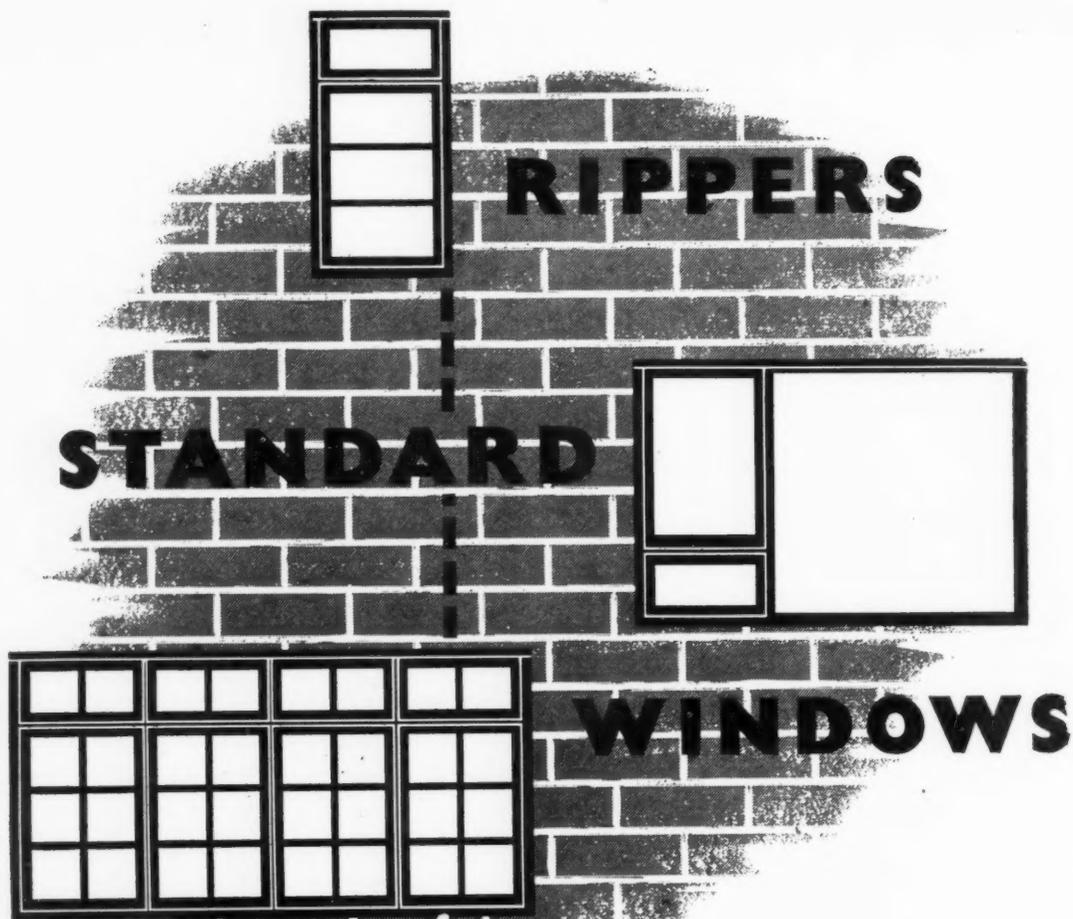


Signal Box at Stratford—
For British Railways,
Eastern Region.



BROUGHTON HOUSE, 6-8 SACKVILLE ST.,
PICCADILLY, LONDON, W.1. Tel. REGent 5860

GROSVENOR WORKS, LINTHWAITE,
HUDDERSFIELD. Tel. SLAITHWAITE 341-2



**'the
best in
the
business'**

When you order windows, external door frames, internal door frames or kitchen units, make sure you buy Rippers—the finest standard joinery obtainable. Over sixty years experience is behind Rippers quality—'the best in the business'. *Write today for our free Catalogue: it describes over three hundred designs from which endless window combinations can be arranged: and includes descriptions of all our products.* Apply for your free catalogue to Dept. AJ8/11.

**RIPPER
WOODWORK**

RIPPERS LIMITED

CASTLE HEDINGHAM, HALSTEAD, ESSEX.
TELEPHONE: NO. 191 HEDINGHAM (4 LINES)
TELEGRAMS: RIPPERS CASTLE HEDINGHAM.

LONDON OFFICE: 9 SOUTHAMPTON PLACE, LONDON, W.C.1. TELEPHONE: CHANCERY 8306/7

WHEATLY



triton

ROMULUS

tiles

on the Unitarian Church, Great Yarmouth

Architect: Clifford H. Dann, A.R.I.B.A.

Contractors: H. R. Middleton & Co. Ltd., Yarmouth

Tiles supplied by: Garson Blake & Son, Ltd., Yarmouth



Specimens of Wheatly burnt clay products may be seen at the Building Centre, London. They include Single-lap Roofing Tiles, Ridge Tiles (blue and red), Floor Quarries, Air Bricks and Briquette Fireplaces.

WHEATLY & COMPANY LIMITED

SPRINGFIELD TILERIES · TRENT VALE · STOKE-ON-TRENT

Telephone: NEWCASTLE (Staffs) 66251 Telegrams: WHEATLY, TRENTVALE

WI.82



A Ward-built siding is not only an example of first-class engineering construction—it is also a well-designed piece of industrial equipment, carefully linked to the production aim of the industry it is to serve. WARDS have been building sidings on this principle for over 60 years.

RAILS & SIDINGS

The photographs show recently completed sidings at the Phurmacite Plant, Aberaman, S. Wales, reproduced by kind permission of the National Coal Board.

Wards have specialised for many years in the supply of rails and track accessories for the private railway operator. The booklet "RAILS and RAIL ACCESSORIES" (now in its 4th edition) gives an idea of the extent of this service, with dimensions, form and nomenclature of equipment used in industrial sidings. "RAILWAY SIDINGS by WARDS," another booklet, gives descriptions and photographs of recent sidings undertaken by Wards. Please write for copies.



THOS. W. WARD LTD

ALBION WORKS • SHEFFIELD

TELEPHONE: 26311 (22 LINES) • TELEGRAMS: "FORWARD • SHEFFIELD"

LONDON OFFICE: BRETENHAM HOUSE • LANCASTER PLACE • STRAND • W.C.2

Sound Conditioning

by

HERMESEAL

means

★ HIGH ACOUSTIC EFFICIENCY

—absorption co-efficients increase progressively from 0.45 (250 c.p.s.) to 0.90 (4000 c.p.s.), the frequency range in which most common noise problems occur.

PLUS

★ LOW THERMAL CONDUCTIVITY

—a valuable secondary characteristic (0.35 BTU./IN SQ.FT./HR. °F diff.) which permits a high degree of heat conservation at no extra cost.

Surveys, estimates, designs and specifications without obligation.

Direct your enquiries to:

BRITISH HERMESEAL LTD • 2 PARK LANE • LONDON • W.1.

Telephone: GROsvenor 4324 (5 lines). Branches throughout the country





preparedness

THE squirrel 'looks ahead' and carefully prepares for its winter hibernation by collecting stocks of food. The squirrel makes these preparations for future needs by instinct and thereby enjoys the benefits of its preparedness when other creatures go without.

In industry, preparing for future needs is just as vital and can only be carried out by sound planning, not by instinct. Architects in this country and abroad aware of industry's need for buildings which will be not only ideal for today's production requirements but which will also allow rearrangement of offices

and workshops to suit future requirements are specifying Rowe Movable Walls for internal divisions. Rowe Movable Walls are essential for efficient production planning; they can be quickly erected, dismantled and re-erected to other layouts as often as required and are available in several grades. Full provision is made for doors, glazing, wiring and a complete range of fittings is available.

Architects wishing to advise their clients of the advantages of movable walls in industrial and commercial buildings are invited to write for further details.



Illustrated catalogue available on request

ROWE BROS. & COMPANY LTD.
PALL MALL LIVERPOOL 3 CENTRAL 5401

Also at Birmingham, Blackpool,
Bristol, Bridgend, Exeter, Glasgow, London, and
Vancouver and Toronto, Canada.
Factory at Kirkby, Nr. Liverpool.



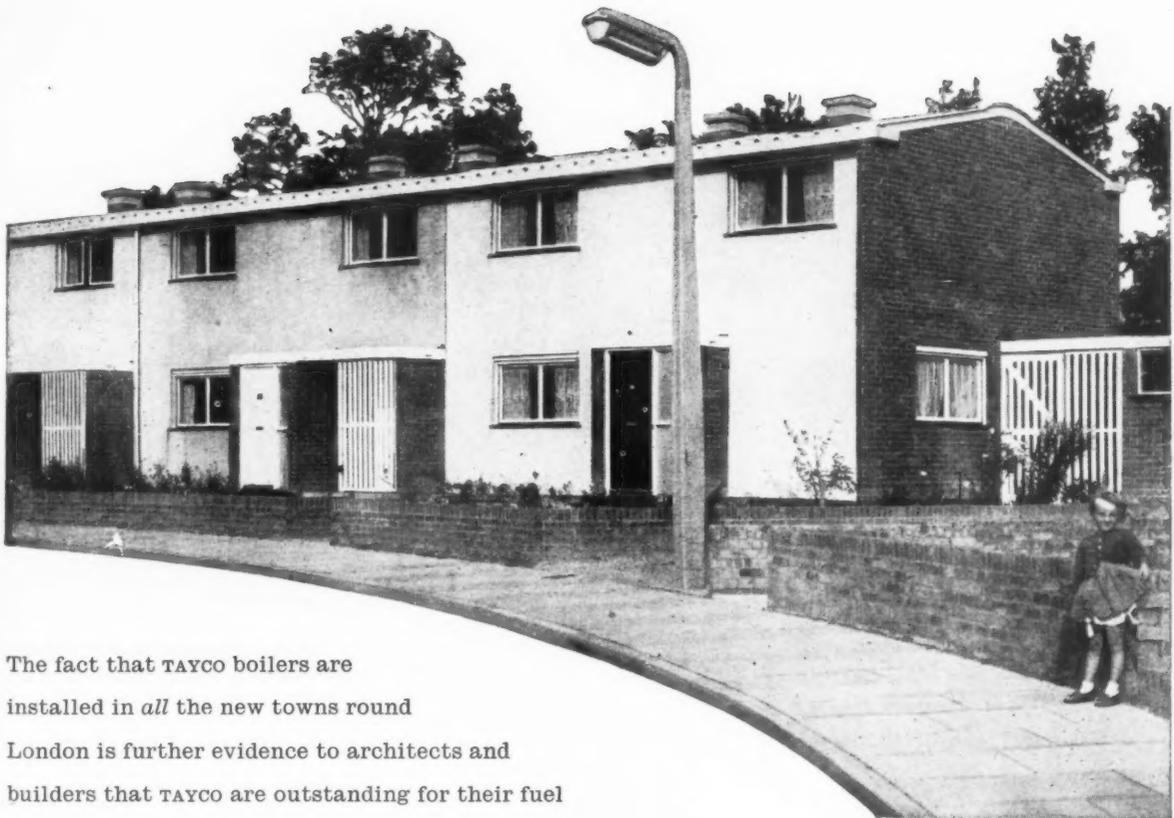
A product of the Rowe Manufacturing Division

TAYCO

domestic boilers

installed in

all the New towns



The fact that TAYCO boilers are installed in *all* the new towns round London is further evidence to architects and builders that TAYCO are outstanding for their fuel efficiency, their good design and their economic price.

For full details of all TAYCO 'approved' boilers, boiler-cookers and stoves please write to:

**STEVENAGE · CRAWLEY
HARLOW · HEMEL HEMPSTEAD
BASILDON**

ROBERT TAYLOR & CO (IRONFOUNDERS) LTD · (DEPT. M) · 170-172 VICTORIA ST · LONDON SW1 · Works: Larbert · Scotland
TBW41

CONCRETE CONTRIBUTIONS BY TWISTEEL

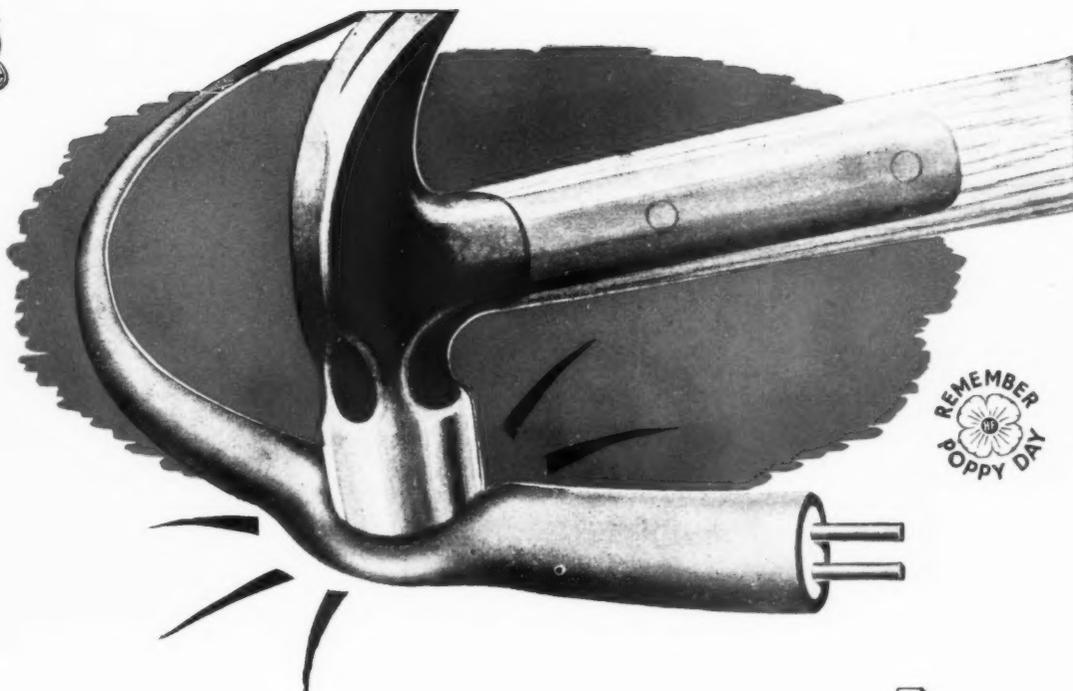


*Sulphate Store and Bagging Plant, Phoenix Wharf, East Greenwich. Designed in conjunction with : Engineers of South Eastern Gas Board.
Contractors : Demolition & Construction Co. Ltd.*

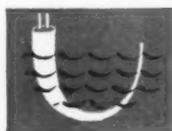
To make sure of the highest standards in concrete design and construction, at the lowest cost in steel, money and time, call in the TWISTEEL Design Service. Their specialist knowledge, backed by many years of practical experience, enables them to advise architects and engineers, with certainty, on every aspect of design and planning for every type of construction involving the use of reinforced concrete: and they can also supply the reinforcement.

TWISTEEL DESIGN SERVICE

43 UPPER GROSVENOR STREET, LONDON, W.1 · TELEPHONE : GROSVENOR 1216
AND AT BIRMINGHAM MANCHESTER GLASGOW



mechanically *tough*



WATERPROOF



FIREPROOF



NON-AGEING



EASILY INSTALLED

Oil-proof, vermin-proof, fatigue and corrosion resistant.

NEW FEATURES! SIMPLIFIED SEALING AND TERMINATING! WIDE RANGE OF SIZES!

New manufacturing techniques developed by the Company ensure accurate control of cable size, result in fully annealed copper conductors and enable a consistently high manufacturing standard to be maintained.

BICC M.I. Cables are available for immediate delivery in 250V and 660V grades with one, two, three, four or seven conductors. Full details, specifications and jointing instructions are available on request.

BICC M.I. Cables withstand bending, heating, twisting and high external pressures. Even if the cable is flattened, the conductors are also flattened, leaving the insulation between sheath and conductors, and between conductors, electrically intact.

In effect these cables are equivalent to armoured cables; oil-proof, vermin-proof, resistant to flame, corrosion and fatigue—virtually indestructible. A great advantage where cables are subject to 'hard usage' in warehouses, oil refineries, steelworks, foundries, and wherever cables of exceptional strength and electrical stability are required.

BICC *M.I.* CABLES



Mineral Insulated Cables with copper sheaths.

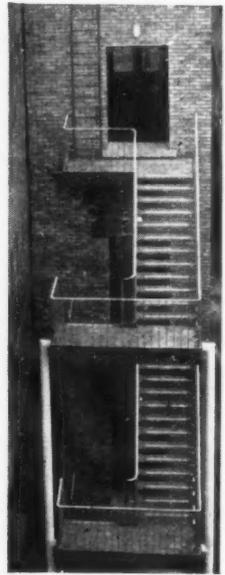
FOR LIGHTING AND POWER APPLICATIONS WHERE A HIGH SAFETY FACTOR IS ESSENTIAL

**BRITISH INSULATED CALLENDER'S CABLES LIMITED
21 BLOOMSBURY STREET · LONDON W.C.1**



Architects: James M. Mouro & Son, A.R.I.B.A.
Contractors: Messrs. Bovis Ltd., London

BRABY pressed steel stairs



The illustrations show a main staircase and external stair erected by us for the new Administration Block of the de Havilland Aircraft Co. Ltd., Hatfield. The mid-landings of the external stair can be seen supported by tubular struts, with the top floor landing cantilevered from outside the building.



for all classes of buildings

These strong, easily handled stairs, can be erected along with the structural steelwork and used to facilitate building operations. They are clearly marked before leaving our Works and can be quickly assembled at the site. Treads and landings may be filled with granolithic, terrazzo, marble, wood, etc., or prepared for rubber covering. Designs and estimates submitted on request.

OTHER BRABY PRODUCTS INCLUDE:

Copper Roofing · Metal Windows and Partitions · Structural Steelwork · Dorsetail Steel Sheets · Pressed Steel Door Frames · Tanks, Cisterns and Cylinders · Ducting



FREDERICK BRABY & COMPANY LIMITED

ECLIPSE WORKS, PETERSHILL ROAD, GLASGOW, N. TELEPHONE: SPRINGBURN 5151

OTHER FACTORIES AT: London Works, Thames Road, Crayford, Kent. TELEPHONE: Bexleyheath 7777

Havelock Works, Aintree, Liverpool, 10. TELEPHONE: Aintree 1721

Ashton Gate Works, Bristol, 3. TELEPHONE: Bristol 64041. And Falkirk

OTHER OFFICES: 352-364 Euston Road, London, N.W.1 (Head Office). TELEPHONE: EUSTON 3456

110 Cannon Street, London, E.C.4 (Export). TELEPHONE: MANSION HOUSE 6034

Queen's Buildings, 10 Royal Avenue, Belfast. TELEPHONE: 26509

Palace Street, Plymouth. TELEPHONE: 62261

AP 266/208



Architect: Alan C. Bayley Esq., A.R.I.B.A.

**Architects with an eye
for
modern
roofing
specify
Built-up Felt Roofing
Systems
laid
by**

PERMANITE

LIMITED

LONDON

BIRMINGHAM

MANCHESTER

November

CROSVENOR

ENGINEERING SERVICES by

Z.D.BERRY
& SONS LTD. Founded 1810

Complete Air Conditioning

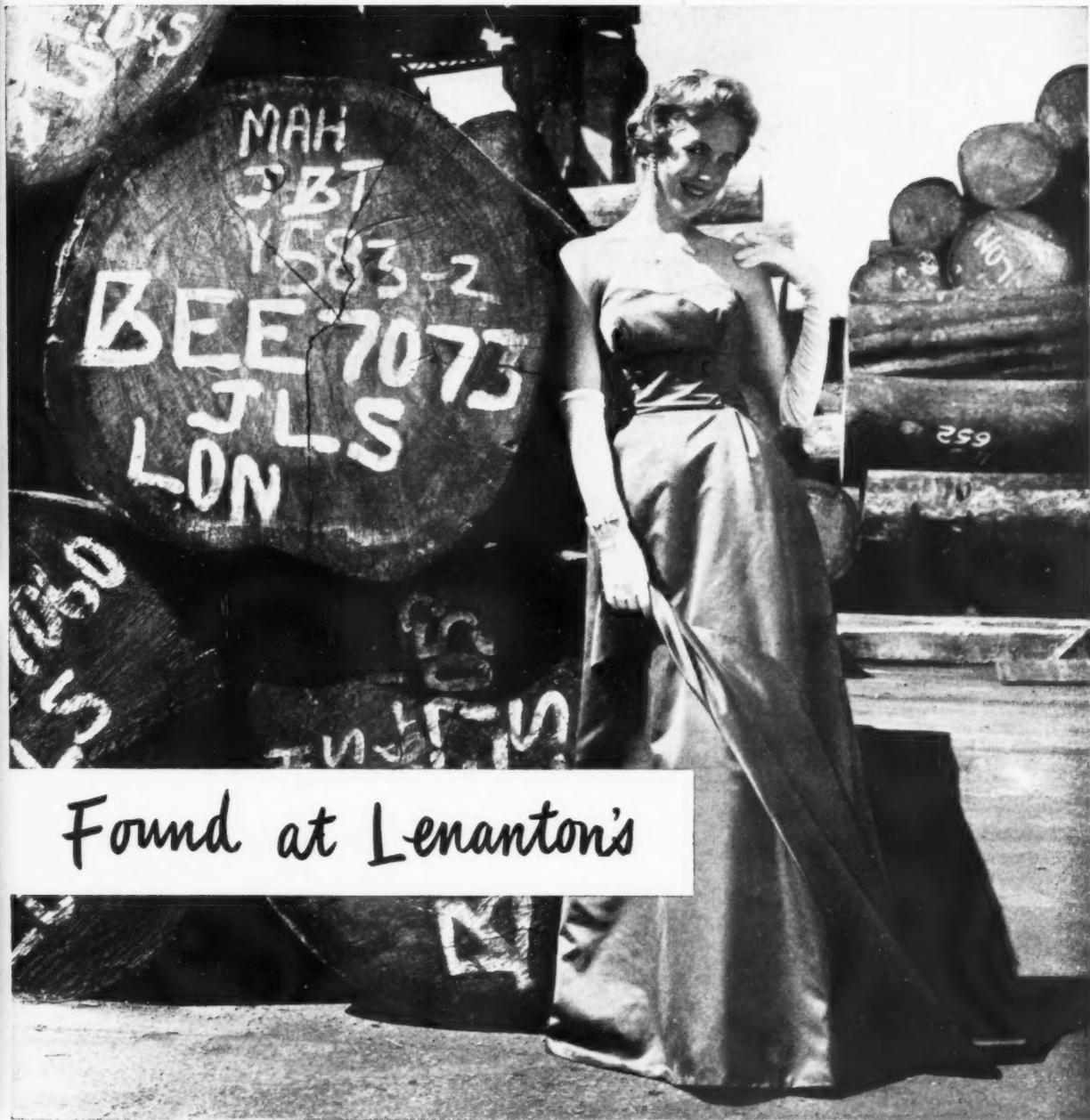
Installed by Berry in the ballroom and foyer of this world-famous hotel, keeps the atmosphere just perfect—whatever it's like outside.

Chartered Architects: Gordon Jeeves

Consulting Engineers: Winton Thorpe, Tunnadine & Partners.

1810-1956 · 146 YEARS' EXPERIENCE

**Z. D. BERRY & SONS LTD., 16 REGENCY ST., LONDON, S.W.1. PHONE TATE GALLERY 0201
AND AT WARRINGTON & DONCASTER**



Found at Lenanton's

With acknowledgements to
Susan Small Ltd., who supplied
the model gown.

The discriminating buyer will always find a variety of high quality timber at our wharves. Our modern mill will convert softwood or hardwood for any purpose and delivery is swift and efficient.
P.S. The young fashion model is in our picture just to remind you that although fashions change, there's nothing fickle about our quality and service.

**JOHN
LENANTON
& SON LTD**

BATSON'S AND REGENT'S WHARVES · MILLWALL · LONDON E.14
Telephone: EAST 1240

W&H

They're buying
a BILSTON—
the boiler
that looks
after itself!



Why are more and more people all over the country insisting on a *Bilston* Boiler? The reason's this. Here at last is a boiler that's not only highly efficient but simple and trouble-free to run—a boiler that looks after itself.

- ① The Bilston stays in for hours on end. Needs refuelling at most twice a day and is tremendously economical on fuel (burns coke, anthracite and manufactured fuels).
- ② The Bilston is designed to heat the water without fuss (enough to draw off a bath every half-hour *and* heat a radiator). Without dirt, too. The Bilston's dust-free riddling and emptying make a big appeal to the modern housewife.
- ③ The Bilston's exclusive feature known as Controllable Convection allows extra warm air to circulate in the room. A simple regulating device can thus control room-heat throughout the winter.

Add to this the fact that the Bilston is available in five modern colours, is easily installed and costs only £30 2s. od. It's little wonder they're choosing a Bilston, the truly *modern* boiler.

The Bilston Boiler

BILSTON FOUNDRIES LTD., BILSTON, STAFFORDSHIRE

ne
e-

is
)

th
ee

tra
rol

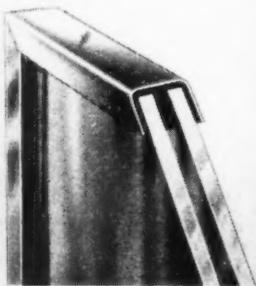
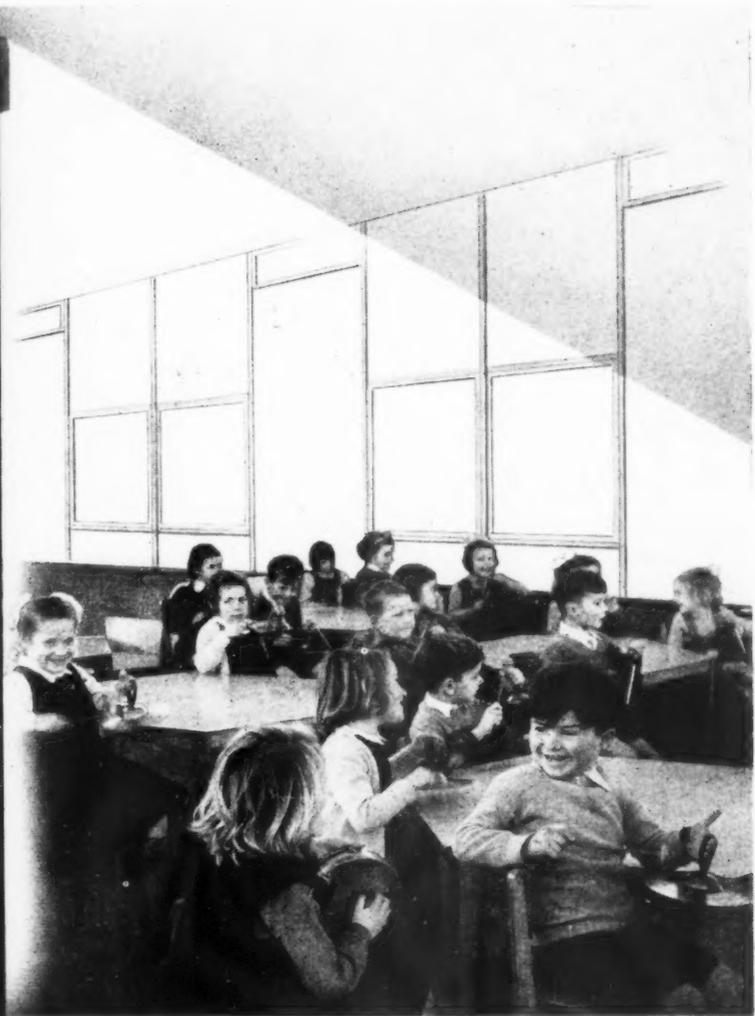
and
ler.

r

R E



**INCREASED
DAYLIGHTING
WITH
REDUCED
HEAT LOSS**



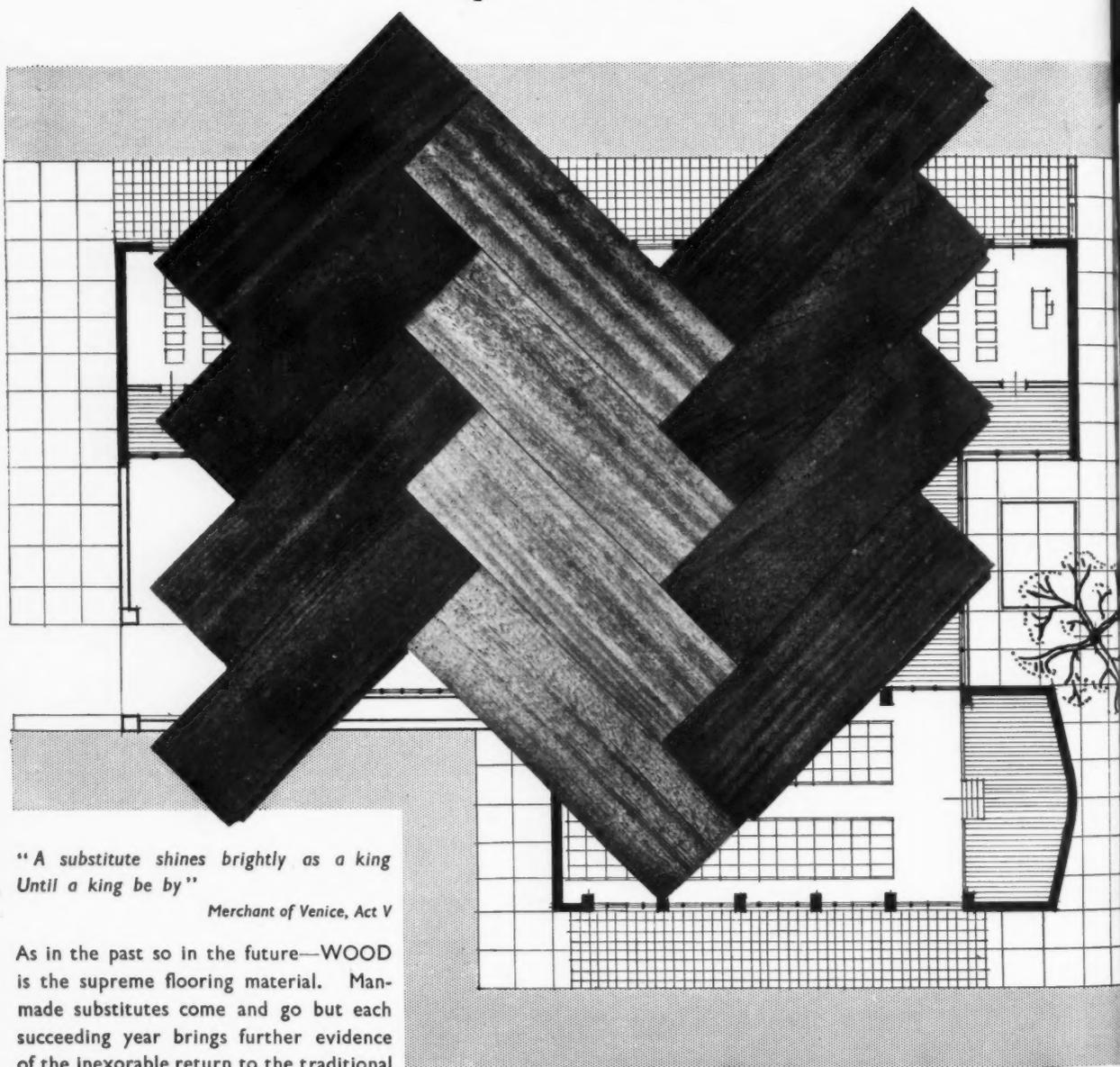
Hilsulate Double Glass Clear Panels have been designed to give greater daylighting over large areas with a high degree of thermal insulation. They effectively reduce heat losses up to 35% as compared with a single glass pane, and have an insulation value equivalent to a 4½ in. brick wall. The panels consist of two panes of glass set apart and continuously sealed to give an airtight cavity, with all edges protected by an aluminium frame surround. They are as easy to glaze as a single pane of glass into normal types of steel or timber frames, and are made to measure up to 48 in. wide, with an area not exceeding 25 ft. Further information may be obtained from your local area office.

HILSULATE DOUBLE GLASS *Clear* PANELS

REGISTERED TRADE MARK

HILLS (WEST BROMWICH) LIMITED - ALBION ROAD - WEST BROMWICH - STAFFS. Telephone: WEST Bromwich 1811 (15 lines)
LONDON: CHAPONE PLACE, DEAN STREET, W.1. Telephone: GERrard 0526 9
Branches at Birmingham (Midland 5175), Manchester (Blackfriars 3382), Bristol (24765), Newcastle-on-Tyne (25060), Glasgow (City 5564) and Belfast (26112).

FLOORS for the future . . . by HOLLIS



*"A substitute shines brightly as a king
Until a king be by"*

Merchant of Venice, Act V

As in the past so in the future—WOOD is the supreme flooring material. Man-made substitutes come and go but each succeeding year brings further evidence of the inexorable return to the traditional HARDWOOD for floors. Many excellent hardwoods are now available at moderate cost which combine BEAUTY, DURABILITY and COMFORT with ECONOMY.

SPECIFY—MADE IN ENGLAND

to ensure precision in manufacture, controlled moisture content and stability of the floor.

HOLLIS BROS. LTD.

LEICESTER • HULL • LONDON • BIRMINGHAM

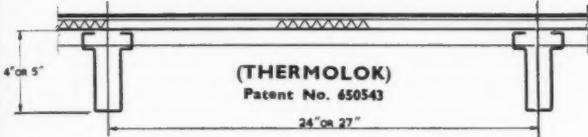


ANDERSON ROOF DECKINGS

flat or sloping roofs



ALUMINIUM 'B' DECKING



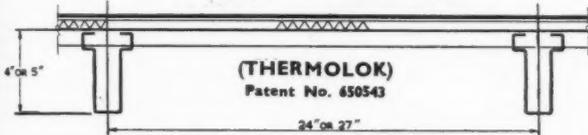
Weight, 4½-lb. per ft. super fixed complete.

Thermal Transmittance 'U' = 0.32

Standard Spans: 10ft., 11ft., 12ft. and spans up to 15ft. using Multi-Span system. Where required, can span from truss to truss eliminating purlins.

Flexible design permits variation to meet all requirements. Dry construction and top-fixing provides speedy erection. Finish—natural aluminium.

STEEL 'C' DECKING



Similar in design to 'B' Decking, but units in steel instead of aluminium.

Weight, 6-lb. per ft. super fixed complete.

Thermal Transmittance 'U' = 0.32

Standard Spans: 8ft., 9ft., 10ft., 11ft., 12ft. and spans up to 15ft., using Multi-Span system.

Finish—Galvanised or Red Oxide.

STEEL 'D' DECKING



Weight, 5½-lb. per ft. super fixed complete.

Thermal Transmittance 'U' = 0.32

Standard Spans: 6ft., 7ft., 8ft., 9ft., 10ft. for 2in. depth. 3ft. 4in., 4ft. 4in., 5ft. for 1in. depth.

Units 24in. wide by 2in. depth in 22- and 20-gauge. Also available in 1in. depth, mainly for sloping roofs on spans up to 5ft. Positive top fixing by hammer drive screws provides good anchorage, speedy erection and early protection for trades working below. Finish—Galvanised or Phosphated and Red Oxide.

ALUMINIUM 'E' DECKING



Similar in design to 'D' Decking.

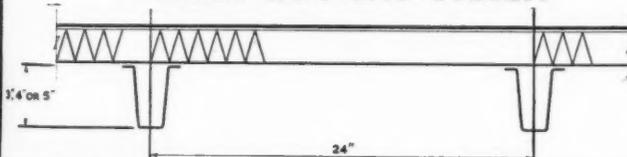
Weight, 4-lb. per ft. super fixed complete.

Thermal Transmittance 'U' = 0.32

Standard Spans: 7ft., 8ft., 9ft., 10ft. for 2½in. depth. 3ft. 4in., 4ft. 4in., 5ft. for 1in. depth.

Units 24in. wide by 2½in. depth in 18-, 19- and 20-gauges. Also available in 1in. depth mainly for sloping roofs on spans up to 5ft. Finish—natural or embossed.

ANDEK ROOFING SYSTEM



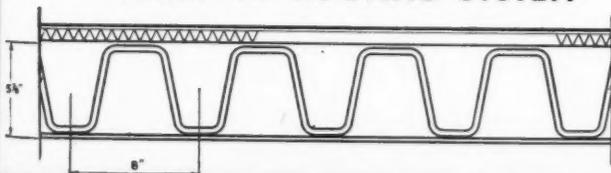
Weight, 14-lb. per ft. super using wood wool, 6-lb. using straw board.

Thermal Transmittance 'U' = 0.21. Insulation is continuous over points of support.

Standard Spans: 8ft., 10ft., 12ft. and longer spans, using the Multi-Span system. Where required, can span from truss to truss, eliminating purlins.

The standard system incorporates 2in. heavy duty wood wool finished with a ½in. cement sand screed. Other insulating slabs such as straw board may be used as required. Finish of Andek Bars—Galvanised.

ASBESTOS ROOFING SYSTEM



Weight, 12½-lb. per ft. super.

Thermal Transmittance 'U' = 0.2

Standard Spans: 6ft., 7ft., 8ft., 9ft., 10ft.

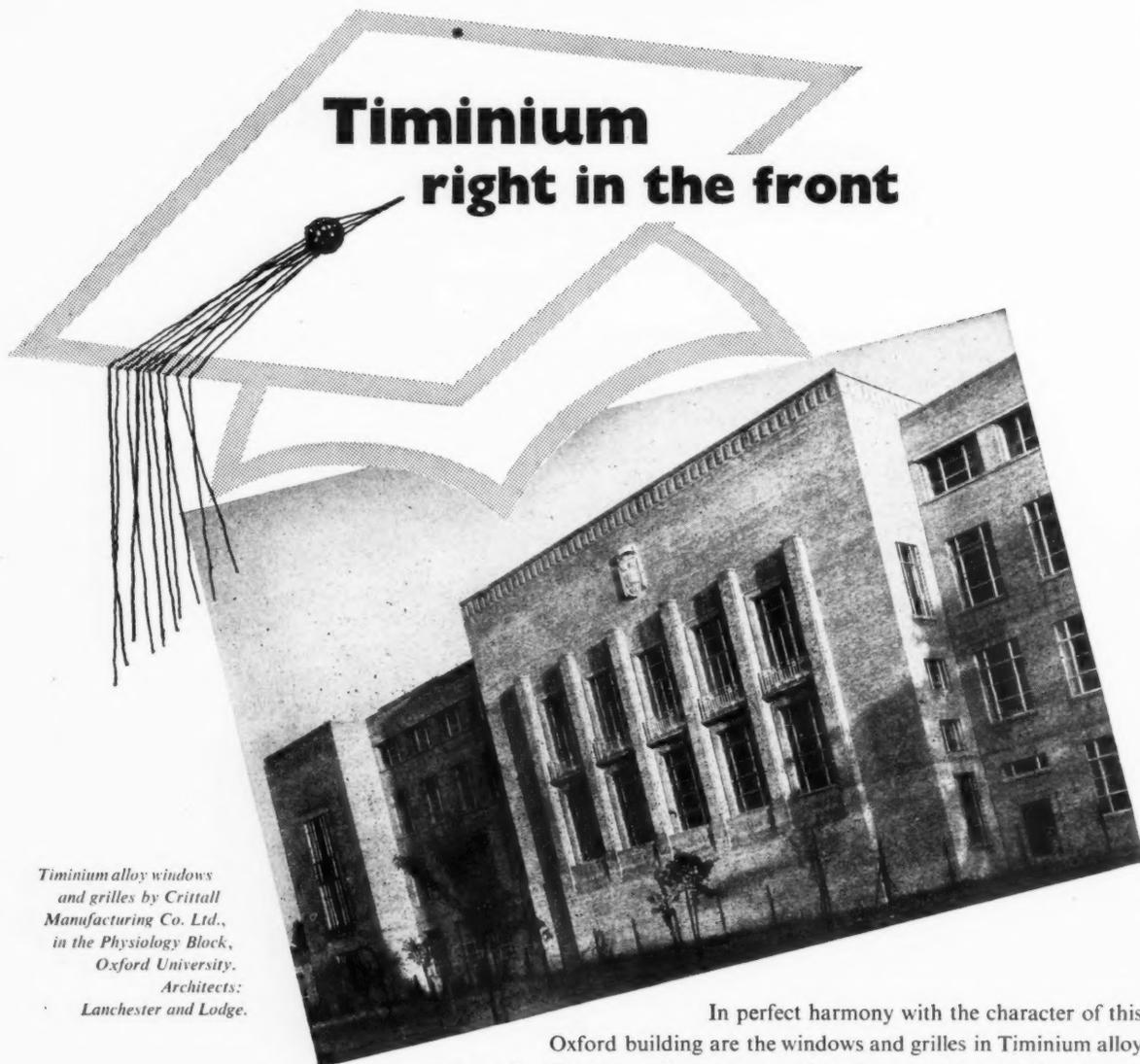
A roof decking and continuous flat ceiling in one operation. The upper section consists of ½in. fibre insulation board, the underside of which is dressed with hot bitumen and the top surface completed by a built-up roofing system. Dry, high speed construction. Convenient ducting for services. Finish—natural asbestos. (Ceiling can be painted to an appropriate colour if desired.)

Full details
on request

D. ANDERSON & SON LTD.

STRETFORD
MANCHESTER
Telephone: LONGford 1113

OLD FORD
LONDON E.3
AMHerst 2388



Timinium right in the front

*Timinium alloy windows
and grilles by Crittall
Manufacturing Co. Ltd.,
in the Physiology Block,
Oxford University.
Architects:
Lanchester and Lodge.*

In perfect harmony with the character of this Oxford building are the windows and grilles in Timinium alloy sections. But Timinium alloys do more than decorate. Because they cannot warp or rust and are so resistant to atmospheric corrosion, they save substantially on upkeep costs: they need no protective painting and next to no maintenance. Their excellent weathering, long life and attractive appearance commend them in an increasing number of applications to progressively-minded architects—and economy-minded clients.

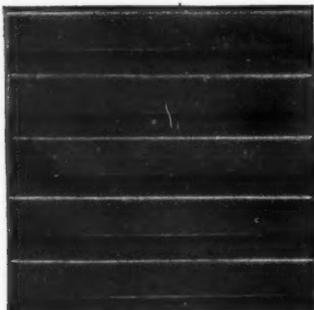
The Development Department of T I Aluminium Ltd., offers an advisory service covering all aspects of aluminium usage. Architects and builders are freely invited to make use of it.

T I Aluminium Ltd

ONE OF THE LARGEST U.K. MANUFACTURERS OF SHEET, CORRUGATED SHEET, STRIP, CIRCLES, PLATE, EXTRUDED SECTIONS AND TUBES IN THE TIMINIUM RANGE OF ALUMINIUM AND ALUMINIUM ALLOYS.

Head Office: Redfern Road, Tyseley, Birmingham 11. Tel. Acocks Green 3333

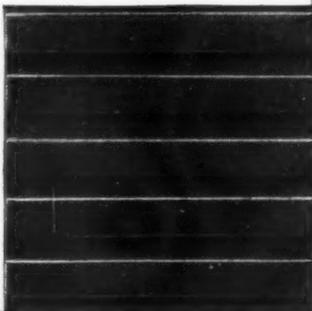
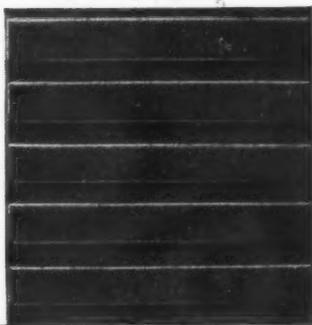
Offices in: LONDON · BIRMINGHAM · MANCHESTER · LEEDS · GLASGOW · BRISTOL AND DUBLIN



nothing is so quietly reliable as . . .

SUREFOOT TILES

non-slip, heavy-duty rubber flooring



Typical Installations

FACTORIES

Traffic lanes, ramps, store rooms, loading bays.

RAILWAY STATIONS

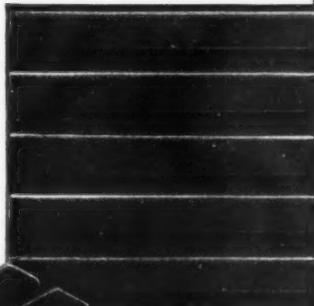
Booking halls, platforms, trucking ways, baggage rooms.

PITHEAD BATHS

Shower and changing rooms.

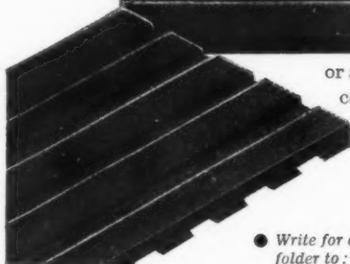
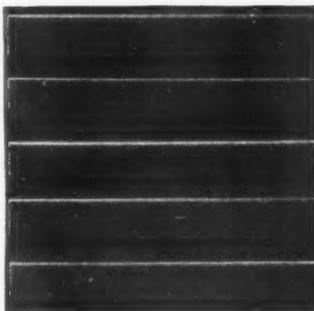
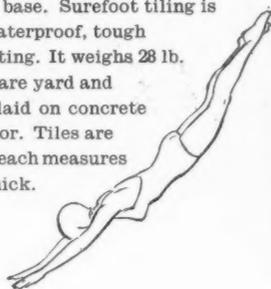
SWIMMING BATHS

Surrounds to pools and changing rooms.



Wet or dry . . . on the level or on the slope . . . Surefoot ribbed-rubber tiles form a robust yet quiet and resilient anti-skid surface. They may be laid as traffic lanes or as complete floor finishes. Besides being functional, the surface ribbing lends an attractive pattern to the floor. Dovetailed grooves on the underside of each tile ensure a firmly 'locked' setting in the mortar base. Surefoot tiling is fully waterproof, tough and lasting. It weighs 28 lb. per square yard and can be laid on concrete

or any similar subfloor. Tiles are coloured black and each measures 18" x 18" x $\frac{7}{16}$ " thick.

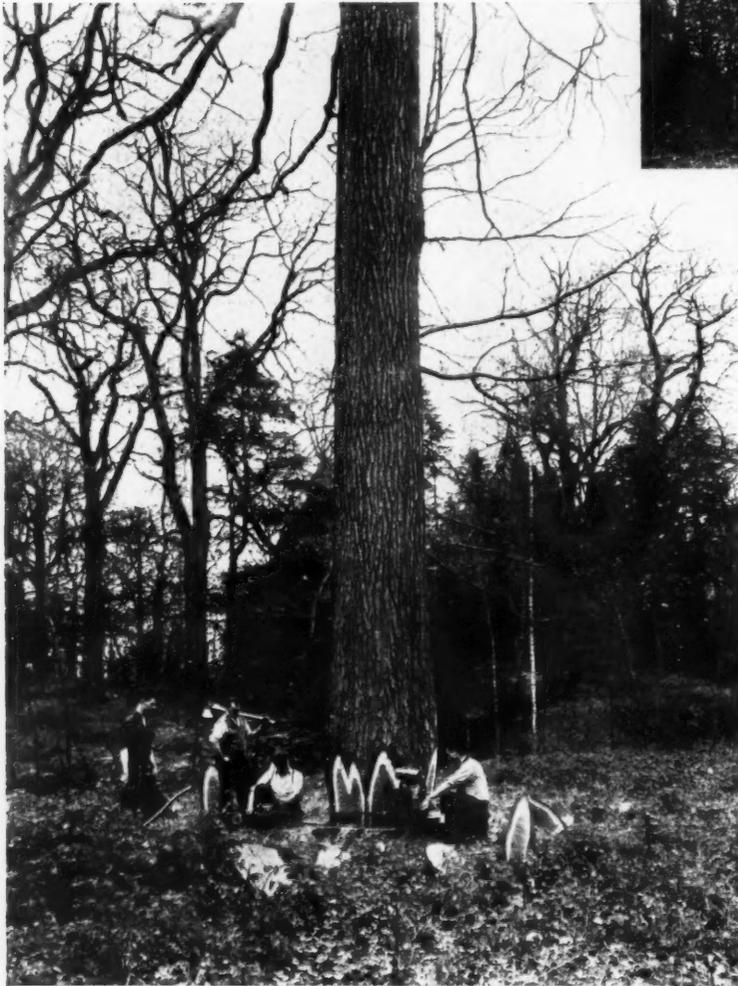


• Write for descriptive folder to:

SEMTEX LTD
THE FLOORING SPECIALISTS

• A Dunlop Company

SEMTEX HOUSE, LONDON, N.W.9
HENDON 6543



English Oak, the old man of the woods, strong, tough and hard. Ships of a past age and many of our famous old churches and cathedrals give testimony to its great strength and durability.

Because the Oak is a light demanding tree, the branches reach massive development when given full overhead light. Grown close together however, their struggle towards the roof of the forest reduces the number of branches and produces a straight cylindrical bole.

The timber is difficult to season and difficult to work but when once prepared satisfactorily it is probably the strongest and most durable of all.

Satisfaction and durability in craftsmanship and materials are also qualities associated with . . .

A Cromwellian Oak being felled at Fozley Park, Hereford, for Pollards Joinery

JOINERY BY

POLLARDS

E. Pollard & Co. Ltd., 159 St. John Street, London, E.C.1 Telephone: CLerkenwell 6701



NICKEY

oak

FLOORING

DIGNITY · BEAUTY · DURABILITY · INITIAL ECONOMY
EASY MAINTENANCE · REGULAR AND PLENTIFUL SUPPLIES

Long a favourite in America's design-conscious homes, Nickey Oak Flooring is
now available to British architects and builders.

Ideal for **HOUSES · SHOPS · OFFICES · SCHOOLS**
HOTELS · PUBLIC BUILDINGS · SHIPS

*For further details apply to your local merchants
or to distributors for the U.K.:*

Denny Mott & Dickson Limited

Adelaide House, King William Street, London, E.C.4

LONDON · LIVERPOOL · PRESTON · GLASGOW · HULL · BIRMINGHAM · CARDIFF · BRISTOL · SOUTHAMPTON
BELFAST

And

F. H. THOMPSON & SONS SKINNERBURN ROAD · NEWCASTLE-ON-TYNE 4

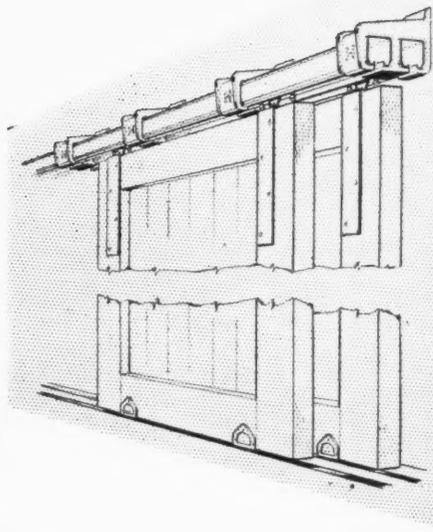
TUBULAR TRACKS

Straight-run Sliding Doors

TOP HUNG · SINGLE LINE · DOUBLE PASSING
TRIPLE PASSING

Ten sizes Copper-amalgam rust-resisting tracks, each with rounded troughs and offset for trolley clearance. Hangers with ball or roller bearings, rustless lubricators, positive vertical adjustment. Precision made for wood or for steel frame doors. Bottom Guide (many exclusive types) to aid sweet running and security, and to keep out weather. Drawing Office Trained Technical Representatives wait upon Architects anywhere and will, if required, visit the builder on site. They ensure the right gear is selected and correctly fixed to provide a faultless job.

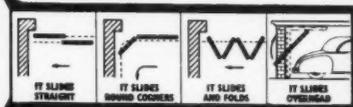
Send for
List 955.
Catalogue 55
(184P) also
available



Mulliners Ltd., Birmingham 8. Architect: Harry W. Weedon, F.R.I.B.A. & Partners. Contractors: W. J. Whittall & Sons Ltd.

Henderson SLIDING DOOR GEAR

P. C. HENDERSON LTD
HAROLD HILL, ROMFORD, ESSEX
Telephone: INGrebourn 4444



For any Door, Partition or Window that slides or folds





W

L
C

T
to
h
c
s
P

V

10

—



THE ARCHITECTS' JOURNAL

No. 3219 Vol. 124 November 8, 1956

9-13 Queen Anne's Gate, London, S.W.1. Tel. WHI 0611.

Subscription rates: by post in the U.K. or abroad, £2 10s. 0d. per annum. Single copies, 1s.; post free 1s. 3d. Special numbers are included in Subscriptions; single copies, 2s.; post free, 2s. 3d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for 30s.; carriage, 1s. extra.

NOT QUITE ARCHITECTURE

AN INNOCENT AT THE DAIRY SHOW

The posters were gay and had a feeling of fresh air about them. There was a dairy maid balancing two buckets from a yoke round her neck; and the Disneyesque heifer tossing a laugh over its shoulder seemed designed to conjure up pictures of the simple rural life which we all try to persuade ourselves still exists, even though we know we are fighting a losing battle. Mechanization has taken command. Ploughing teams have vanished. Farming is a stern, practical business, and the dairying side of it not least. So I set out for Olympia bent on discovering just how mechanized the dairy business has become. If combine harvesters are commonplace in the cornfield, why not automation in the cowbyre?

*

I pushed through the swing doors of the Empire Hall, and thoughts of automation quickly dissolved while I found myself wondering how anyone should suppose he could fill the cavernous spaces that confronted me with a show concerning itself simply with dairying. The answer is: no one had.

*

A pleasantly weatherbeaten man beneath a floppy grey hat was sitting on a packing crate selling Bladderwrack, and many other herbs, from a farm in Dorset. (Bladderwrack is that heavy seaweed that goes pop when you tread on it, and if taken as directed apparently replaces all those complicated slimming diets.) "Arts and Crafts of China" (and of Baker Street) have created paper lanterns of even greater variety and ingenuity than the ones that come from



Are you planning LARGE-SCALE CATERING?

Then you need this
Booklet

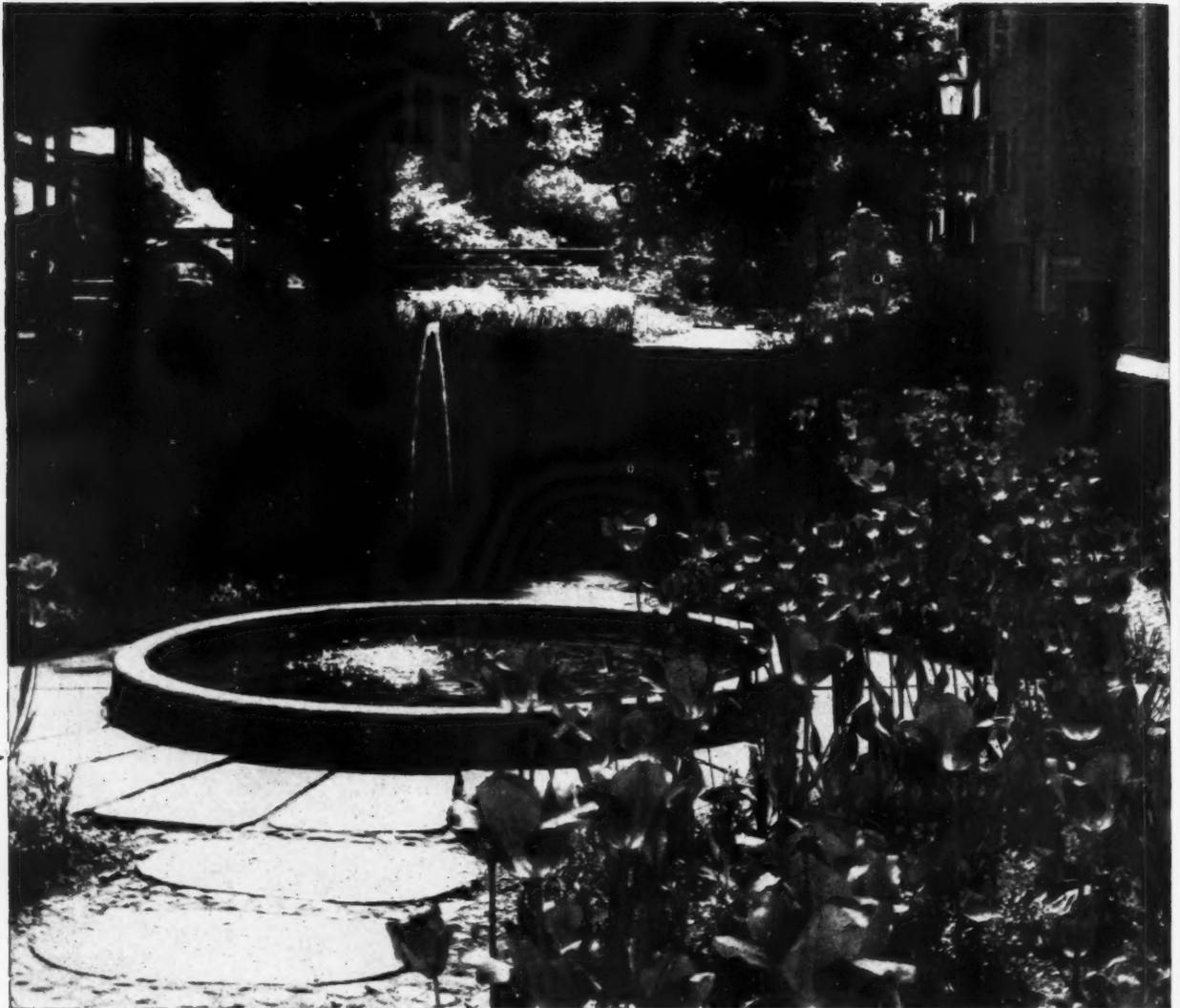
This 28-page booklet is a complete step-by-step guide to planning and equipping large-scale kitchens for schools, hospitals, hotels, restaurants, industrial and institutional canteens. Send now for your copy (ref. no. 11.K.P.) to be sent free of charge and remember that our Advisory and Planning Departments are always at your service.

"Stotts of Oldham"

VERNON WORKS, OLDHAM

LONDON OFFICE :

167, OXFORD ST., LONDON, W.1



What the New Towns didn't do

In recent years the attention of the sophisticated English architect has been directed to Italy and to the visually enclosed urban delights of piazza and court. However, as Holger Blom, the chief landscape architect to the city of Stockholm, showed architects at the AA, Bedford Square, last week, the lessons of Sweden have been ill-learned and ill-practised. A portion of the criticism of the English New Towns would have been stilled if the landscaping had been carried out with the skill in paving, contour planning and planting with which the Swedes embellish Stockholm. Above is a small garden in central Stockholm, with open-sided shelter, pools, sculpture, random-growing tulips (so much more effective than the English regimented beds) and neatly patterned footpath. On the left is a small shopping centre at Höckarängen, on the outskirts of Stockholm. Children are allowed to play in the triple-layer fountain while their parents shop. Holger Blom evidently agrees with Richard Neutra (see *ASTRAGAL*, page 654) that the architect's job is the arrangement of visual lures and stimuli, and the pictures he showed of Stockholm illustrated clearly the care he gives to exercising the aesthetic eye with contrasting long and short views, carefully related areas of high and low buildings and high and low planting, and with the splash and gleam of moving water to give life to the whole.

Denmark. ICI were there with Alkathene pipes and corrugated perspex. A stand displaying sheepskin rugs seemed very popular; but another which offered an astonishing variety of country wines was unaccountably deserted. You were given the opportunity of ordering your new set of chimney-sweeping brushes, or of laying in a stock of horse brooches from the stall which made it clear that mid-October was the time to "Buy your Christmas Gifts". To put the gadget designers on their mettle, a firm who produce folding chairs (the lightweight, brightly upholstered kinds that are now *de rigueur* for all up-to-date picnickers), was displaying a set of four chairs and table which all folded neatly away into a flat package measuring only 30 in. x 15 in. x 6 in., easily carried in one elegant feminine hand. And so, haphazardly, stands would continue to confront the eye without apparent rhyme or reason. That was both the first and subsequent dominating impression of the show. Among the affable goats, a sudden blaze of flowers. At the end of a parade of Aylesbury and Khaki Campbell ducks (warm and friendly fellows, but holding themselves stiffly, and very much on their best behaviour), a solitary woman selling combs of prize English honey. This was up in the galleries. But back on the main floor there was no more obvious thread to follow. At the moment when a portable grain silo, ingeniously constructed out of sheets of very light pressed metal appeared to merit a more detailed inspection, my eye was distracted by a stall doing a brisk trade in vintage cigarette cards. From that moment all was lost. Neither the milk float entirely moulded from fibre-glass, nor some interesting models of farm buildings displayed by the *Farmer's Weekly* could compete with "Girls of Many Lands" at 2s. a set; "Aesop's Fables" at 2s. 6d., "Notable M.P.s, 1929", going very cheaply at 1s. 6d.; or "Careless Moments (Pin-ups of 1924)", which promised even better value at only 9d.

*

If you were expecting to hear something about dairying, or something of immediate or practical importance to you, perhaps I have disappointed you. Perhaps the heifer on the posters had the last laugh after all. As I left the exhibition I sighted a large notice reading "Stairs Up To Gallery", and "Milk Going Up: Official" ran the heading on placards round about. It could have been a portent of automation, of course; but I suspect it may simply mean less work for dairy cows.

JOHN TRELAWNY-ROSS

EDITORIAL BOARD: (1) *Consulting Editor*, F. R. Yerbury, O.B.E., Hon. A.R.I.B.A. (2) *House Editor*, J. M. Richards, 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.

ASSISTANT EDITORS: (18) *Chief Assistant Editor*, Kenneth J. Robinson. (19) *Assistant Editor (Buildings)*, L. F. R. Jones. (20) *Assistant Editor (Production)*, W. Slack. (21) *Assistant Editor (Information Sheets)*, V. A. Groom. (22) *Assistant Editor (Costs)*, J. Carter, A.R.I.B.A. (23) *Photographic Department*, H. de Burgh Galwey, W. J. Toomey. (24) *Editorial Secretary*, Monica Craig.

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

The Editors

HOW'S YOUR BLOOD PRESSURE?

LAST week, when a one-day Conference was held at the Royal Society of Arts, 77 organisations sent representatives to listen to the nine speakers. Little labels flapping on the chests of the design-conscious showed that the Conference was of interest to Fisheries, Food and Forestry, not to mention the Girl Guides, the Brewers' Society, the Town Planning Institute and the RIBA. The subject conferred upon was "Perils and Prospects in Town and Country." After a day of speech-making it was clear that the perils were great and the prospects small. And the JOURNAL representative who had spent his day wedged between the YMCA and the Women's Institutes wondered who had benefited from the Conference. Did anyone leave the RSA with increased awareness of the horrors of Subtopia? Did anyone carry away the spark of an idea for combating visual outrages? Consider what was said during the meeting. The causes of Subtopia were listed as follows: (1) lack of agreed standards of taste; (2) lack of local men as planning officers; (3) lack of history teaching in architectural schools; (4) lack of pleasing environments in which people may acquire sensitive minds; (5) lack of the right people in the right planning jobs; (6) lack of aesthetic appreciation among the "masses," and (7) lack of aesthetic appreciation among the intellectuals.

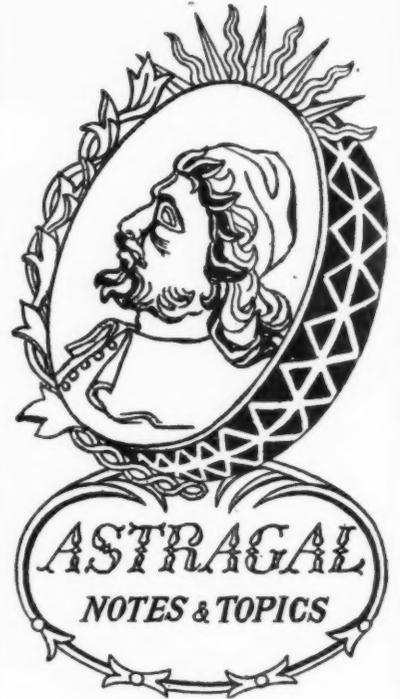
Several cures were mentioned at the Conference. Sir Hugh Casson wanted unceasing vigilance ("every citizen should speak up for beauty") and higher buildings. Sir Frederick Osborne wanted lower buildings. Lionel Brett said that 100 people in the right jobs "could make all the difference." ("The Ministry of Housing should use people of quality in the planning machine.") Desmond Heap said that better taste must be inculcated in people, and that the best way of doing it was to give them better buildings to grow up in. Lady Brunner thought that an exhibition of our history would help, by making us feel part of our heritage and of our future. Mr. Campbell, of the Outdoor Advertising Association, wanted "progress bodies" as well as "preservation bodies." Mr. Henderson, of the Council of Visual Education, put his hopes in the film-strip-fed generation of the future. Michael Dower, an undergraduate, who is also assistant secretary of the Cambridge Branch of the C.P.R.E., took one look at the over-40 audience and hastily expressed the hope that

young people might be inspired to do something or other. And John Betjeman, who thought that Local Authority Committees should each co-opt one local artist to advise them on matters of proportion in street furniture, expected much from those who are able to "open people's eyes."

How *can* people's eyes be opened to good design? Not only by carefully planning long-term education but also by encouraging people to take a pride in the good things around them. The most encouraging talks given at the Conference were by speakers who told of work done to interest people in preserving the amenities near which they lived and worked. W. L. Giffard talked about the "best kept" village competitions, which are being held annually in fourteen counties, and Sir Geoffrey Hutchinson told some good stories about the heights of diplomacy to which his Hampstead Protection Society had stooped to preserve its interests.

It is a pity there were not more speakers at the Conference who had tales to tell of successful anti-Subtopia campaigns. The horrors of "Outrage" have, by now, been talked about widely and often. And everyone knows that the preacher who dwells too much on the disadvantages of hell fire and says nothing about salvation is a useless bore. It is time we had some personal testimonies from people who have found the narrow gate leading out of Subtopia. The *Architectural Review*—the power behind the current interest in visual horrors—is aware of this, and next month it will devote a whole issue to illustrating the visually pleasing things that manage to get done in a country where most people are aesthetically blind. But what an opportunity the RSA has missed. It should not have allowed its Conference to be made up of a haphazard collection of good, bad and unconsidered theories. It should have given more of the organisations represented the chance of telling what they had done, or what they—as organisations—thought they *could* do, in the battle against Subtopia sprawl. And a more careful vetting of the speakers chosen to address the conference from the floor might have spared us much irrelevance ("They don't have pylons in Holland"), much embarrassment ("Welwyn Garden City is a very beautiful town") and much banality ("If we had all the right city and county clerks, architects and planning officers, more visual beauty would be assured").

If any conclusions can be drawn from the Conference—and not one was drawn by the chairman, Sir Stephen Tallents, in his closing remarks—it is an obvious one: that Government Authority can be influenced to do far more than the Public. The well-known, besetting ailment of the Public, known as apathy, was bandied about by several speakers, but only one speaker suggested a cure for it. "People are interested in themselves," said a Yugoslavian doctor; "And they are particularly interested in their health. So tell them that Subtopia is bad for them. Make this your slogan—'Beauty is Good for Your Blood Pressure'." Cynical, perhaps, but no less practical, and much more refreshing than anything else suggested at this well-meant but ill-considered Conference.



YOUR PRESIDENTS

The presidents of the RIBA, the IAAS and the AA have all been on their feet and talking hard in the last few days, and these, added to talks and discussion during the same period by Denis Clarke Hall, Sir Thomas Bennett, Robert Jordan, Richard Neutra, Whitfield Lewis, Sir Hugh Casson, Lionel Brett and Holger Blom, have caused some of ASTRAGAL's journalist colleagues to look somewhat fine-drawn. Of the presidents, the AA's Gontran Goulden was the best, when he gave his presidential address last Wednesday week. He had obviously been to great pains in preparing what he had to say, and if the result smacked slightly of a senior officer conducting a TEWT* the similarity is rather appropriate bearing in mind that President Goulden is as much a soldier as an architect.

*

He asked for training in leadership for architects, so that they could be worthy leaders of the building team. ASTRAGAL always feels small, dumb and rebellious at the first obvious sign of leadership in someone else, although willing to go along with anyone who is sympathetic and inspiring; but no doubt leadership is necessary for some people. However, he wholeheartedly

* Tactical Exercise Without Troops.

approves Goulden's proposals for a staff college to keep architects up to date and for improvements in architectural education as regards professional practice and business methods. Excerpts of this talk are printed elsewhere . . .

*

. . . as are some from the address of RIBA President Kenneth Cross. He mentioned that plans are being made, and money put aside for him (and Secretary C. D. Spragg, it is believed) to go abroad to visit some of the architectural institutes of the Commonwealth. This seems an admirable idea. But as the money for this kind of trip is not often available, it is to be hoped that every effort will be made for the representatives of the various professional bodies properly to exchange detailed information and experiences first-hand. With so many institutes and societies of greatly varying age and size there must be a good deal of useful information available on how to create an efficient profession which is widely used by the public. It is to be hoped that Mr. Cross will not allow his visits overseas to become merely a sight-seeing circumnavigation of the world, punctuated by speeches and dinners—a sort of commoner's version of a royal tour.

*

The third president to speak recently was Lt.-Col. A. E. Henson, the President of the IAAS, when replying to toasts to the IAAS, and the London branch of it, at a luncheon last week. Henson was full of enthusiasm for his re-awakening professional body. With a new headquarters, a new journal, new bye-laws and a fairly new secretary, the IAAS is, apparently, better equipped than at any time in the past. The LCC has recognized some of its surveying exams, and it is hoping one day soon to be able to hold its own recognized architectural exams, which would put it technically on a par with the RIBA. The IAAS, containing architects and surveyors, should encourage that unity within the building team for which so many are asking. Unfortunately it seems to be true that it is not having the right idea which counts in this world, but the right people having it, as well. Nevertheless the IAAS does a useful job as a faint prick to the RIBA conscience and as a forum for the vociferous whose vocal and organizing energies could not be entirely absorbed by the RIBA.

WHAT NEXT IN HONG KONG?

The unsatisfactory position about the status of Hong Kong University's architectural school continues. What they feel about it at that end may be gathered from the Vice-Chancellor of the University's speech at Congregation, held on October 25.

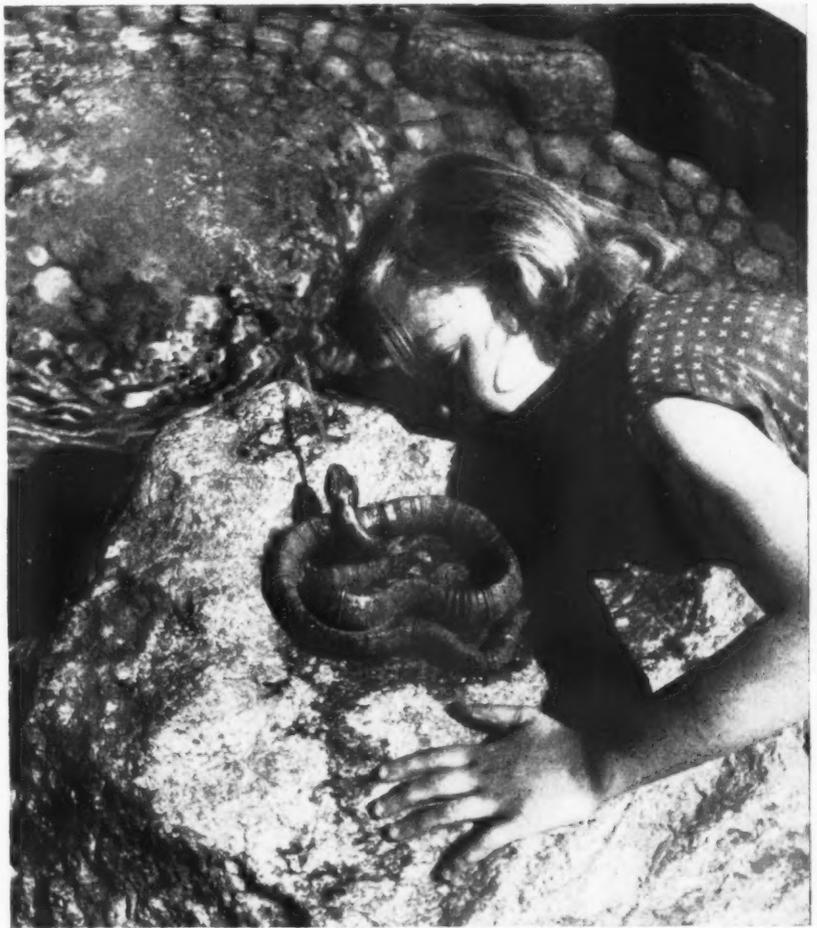
*

"The infant Faculty of Architecture," he said, "continues to flourish. . . . Although it has not yet gained recognition by the Royal Institute of British Architects, Cornell, Harvard and McGill Universities on the American continent, and the University of Liverpool in Great Britain, have recognized the status of our degree by accepting our graduates for post-graduate studies. . . . This tends to make one wonder whether this question of recognition by the Royal Institute of British Architects is not

bound more intimately with questions of British architectural politics and expediency, rather than with that of academic status; meanwhile the regional recognition of our course designed for tropical territories like Hong Kong and Malaya remains dependent upon regulations designed for British subjects practising in England. It is fervently hoped that we may soon be able to persuade regional governments in this part of the world to remedy this hardship under which our graduates labour."

*

The next move is surely with the RIBA, or a bad impression will be created that neither the Institute nor the Commonwealth can afford. And a similar problem may soon arise in Malaya, where the Technical College of Kuala Lumpur is embarking on a course, approved by the Government, aiming at intermediate level. When



One of the delights of modern Sweden is the use of simple, unprofound sculpture and water to interest and amuse children. The bronze snake (sculptor: Kalle Lodén) spitting water into a pebble-lined pool is in Stockholm. The pool was designed by Holger Blom, the city's chief landscape architect. See frontispiece, page 650.

RIBA approval is sought for this, the difficulty of applying rigid English standards to courses elsewhere in the Commonwealth may come up again.

WATER BOARDS, BASINS AND CLOSETS

ASTRAGAL spent an anxious evening at the Building Centre last week wondering whether Denis Clarke Hall was going to tell a packed and breathless audience exactly in what sense he found the standard w.c. seat uncomfortable. He was telling the Building Centre's Forum on Sanitary Ware exactly what he, as an architect, found wrong with our sanitary equipment, and very well he did it. He was followed by that very distinguished Scots sanitary patriarch, Alan Adams of Adamsez, who illustrated the morphology of the wash basin and the w.c. with drawings from his firm's old catalogues. There is something about this subject which rouses all that is best and most critical in architects and the trade, and this was by far the most eager of the BC's Forums so far.

When he had got the cigarette smoke out of his lungs, ASTRAGAL tried to sort out the major issues clamouring for settlement and was surprised to find that there were so many. We want a wider choice of semi-specialized equipment—sinks in which you can wash up without having to fetch a basin, and washbasins with more generous (and dry) shelving. We want all equipment to fit tile sizes. We want BSI to stop canonizing the designs of common items of equipment for no better reason than that most manufacturers make them that way and to issue performance standards instead. The manufacturers want standard water regulations so that they can be released from having to meet the vagaries of our 2,000 autonomous water boards.

Then there is this business of new materials. Gontran Goulden, speaking from the chair, told an incredulous meeting that he found urinals in Zurich and Geneva which were made from asbestos cement, and, because they were repainted every three months, did not smell. The trouble with our urinals, said Alan Adams sadly, is that they are made to last too long. Edward Mills made the excellent point that we want lighter equipment to fix to our lightweight partitions.

Lastly a man from MOW told of his Ministry's experiments with spray taps for hand-washing in offices: how they saved half the fuel and half the water and how civil servants took to them.

W.w.p.'s that gurgle, rimless w.c. pans that flush on to the floor, chains that bash the plaster and pull off in your hand, washbasin plug chains that catch in your sleeve and let the water out at the critical moment. . . . ASTRAGAL was overwhelmed by this picture of the mad dumb crambo of English sanitary life. But, as John Eastwick-Field pointed out, just imagine what this Forum would have been like in France. . . .

NEUTRA AT THE AA

In the AA school's lecture halls, so indifferently designed as regards sound and lighting, and accompanied by workmen's and students' noises off, Richard Neutra spoke caustic good sense in a leisurely broken-American drawl for two hours or so last Thursday. He criticized the American instalment-plan economy, and the mass of advertising of new technical novelties which fill the architectural monthlies (no reference to the weeklies) from which all young architects are suffering. He advised students not to concentrate on learning mere technics at school, which will inevitably become quickly dated, but to be enormously curious about men's physiological requirements and to be "in love with engineering and structure."

Neutra pointed out that the architect, by placing visual wires in space around a man, caused him to move and appreciate architecture. The architect, he claimed, induced tensions in the on-looker. Neutra derided the bondage of Euclidian geometric form for architecture, which "has no direction and knows no front or back." He advocated a safe and sound profession "which is not a fashion business" and which practises "biological realism." His attitude to modern architecture became more obvious, and logical, when he showed and criticized work by what he admitted were first-rate architects. Mies's flats in Lakeshore Drive he called "not related to nature: it's a crystal, indifferent to natural determinates . . . indifferent to the people inside . . . it is arbitrary regularity." And of Corbusier's Marseilles block: "it is arbitrarily irregular."

ASTRAGAL

NEWS

MANAGEMENT

Course for Architects

The York Institute of Architectural Study is to have a course of lectures on management for architects from January 4 to 8. The subjects will be: Briefing: whose responsibility? What information should it contain?; Work programming; Preliminary designing; Production of working drawings; Cost control; Storage of drawings; Filing of correspondence; Technical information; Co-ordination of consultants and specialists; Relations with Quantity Surveyor; Tenders; Site supervision: issue of A.I.'s, site meetings, site reports; Builders' claims; Architects' and builders' relations.

The lecturers will be: G. W. E. Airey, council member of Institute of Builders; J. M. Austin-Smith, A.R.I.B.A.; G. Grenfell Baines, A.R.I.B.A.; Eric L. Bird, A.R.I.B.A.; S. Jewsbury, consulting engineer; J. Nispet, principal quantity surveyor to the Ministry of Education; G. G. Pace, F.R.I.B.A.; Rex Proctor, A.R.I.B.A.; C. E. D. Wooster, A.R.I.B.A.; a Management Consultant from Urwick, Orr and Partners Ltd.; Filing and Recording Consultants from Roneo Ltd.

Hotel accommodation, at members' own expense, will be arranged by the Institute. The tuition fee is four guineas and applications should be sent to the York Institute of Architectural Study, Micklegate, York, before December 4.

PLUMBING

Mr. Sandys on Ice

Duncan Sandys, Minister of Housing and Local Government, wants to avoid a repetition of last winter's extensive icing-up of pipes in houses. The main suggestions, set out in a circular to water suppliers and housing authorities, are:—(1) All water suppliers should adopt the Ministry's model byelaw requiring that, whenever possible, fittings should be placed in positions where they are unlikely to freeze, or, if this is not feasible, that they should be protected. Compliance with the Code of Practice on frost precautions, recently issued by the British Standards Institution, will meet the requirements of the model. (2) In order to help the public to take suitable frost precautions, water suppliers should make more general use of their powers to supply, install, replace or alter fittings. (3) Wider use could be made of polythene pipes for cold water services in new houses, particularly for outside w.c.s, wash houses and similar buildings. (4) Closer liaison should be arranged between water suppliers and building byelaw authorities in order to tighten up the administration of water byelaws. (5) Housing authorities should consider issuing to tenants a printed card explaining where the stop valve is to be found, how the water system can be drained, and what precautions should be taken with the boiler.

The circular draws attention to the technical advice which is already available on frost precautions for new houses, and says that if official recommendations on thermal insulation are properly applied, they are adequate to meet conditions normally to be expected in this country. Although there is a limit to what can reasonably be done to alter the plumbing of existing houses, there may, says the circular, be opportunities for making improvements, particularly when repairs are being carried out.

RIBA

Mr. Cross Talks at No. 66

In his presidential address this week at the RIBA, 66, Portland Place, W.1, Kenneth Cross spoke of relations between architects at home and those in various parts of the Commonwealth, some of whom he hoped to visit during his term of office.

It was no longer sufficient, he said, for us to be a small learned society with our interests largely confined to London as we were in the time of Lord de Grey our first President. Neither was it sufficient for us to have our activities confined to the British Isles as was the case at the beginning of this century. By working for and getting the Registration Acts of 1931 and 1938 we had taken a different road, one that led to growth, consolidation and recognition at home and to expansion, breadth of view and freshness of vision under the stimulus of contact with our allied members overseas.

It had been said that the position of the RIBA was unique: that not only had we a series of architectural organizations allied to and federated with the RIBA at home, but that we could not go into any part of the Commonwealth, into any Dominion or Crown Colony without finding an organization of architects who were linked by practical as well as sentimental ties with the Royal Institute.

It was essential that we should devise machinery to ensure the fullest consultation with our allied societies wherever they might be situated in the Commonwealth. Mr. Cross hoped it would be possible for him, in company with the RIBA Secretary, to visit some of them in response to the warm invitations they had received. Plans towards this end were at present under consideration.

Mr. Cross spoke not only of the happiness that could be engendered in architects by visits from their colleagues overseas, but also of the happiness they could find in an enlightened public.

"If architects are to design happily," he said, "they must feel that they have the support and appreciation of the public for whom they work. In short not only architects but the public should be cultivated and knowledgeable. In the stress and struggle to keep going it is increasingly difficult for younger men and women to earn their living, run their homes, get their children educated and continue to find sufficient spare time in which to develop their tastes in the arts in general and architecture in particular. Not only is more leisure needed but also money for the purchase of books, pictures or other works of art. We must look to science to improve methods of production to such an extent that shorter hours can be worked and, in addition, we should call for the development of domestic labour-saving devices at low cost to alleviate the soul-destroying tyranny of housework. It might be possible to develop a social economy on these lines in which people can live a full life and enjoy a real appreciation of the arts."

DIARY

Modern Portuguese Architecture. Exhibition at the BC, 26, Store Street, W.C.1. Monday to Friday, 9.30 a.m.-5 p.m.; Saturday, 9.30 a.m.-1 p.m. Admission free.

UNTIL NOVEMBER 30

New Ideas in Old London. Talk by Sir William Holford. At Anglo-Belgian Club, 6, Belgrave Square, S.W.1. Chairman, Kenneth Cross. Tickets: 10s. 6d., 7s. 6d. and 5s. from Miss U. Z. Pompei, 10, Lowndes Square, S.W.1, and Miss Lawrence Jones, 15, Richmond Court, S.W.1. 6.30 p.m.

NOVEMBER 13

Last week Gontran Goulden gave his presidential address at the AA. Extracts from it are published below.

AA

What Gontran Goulden said . . .

. . . of the AA. "In spite of misinformed comment to the contrary, the AA is a dynamic, evolving and changing body which not infrequently leaves sparks and a whiff of sulphur in its wake, as it rushes across the heavens bound nobody knows quite whither."

. . . of the architect and the public. "The profession of architect is not very highly esteemed by the general public, still less by the world of industry and commerce. For this architects themselves are very largely to blame. In dress, language, habits and even in handwriting they are marked as beings apart making few concessions to the usually stuffy conventions of other professional or business people. Bowler hats are not common in the cloakrooms of the AA. This lack of esteem is of graver importance than is usually supposed, it is becoming more so every day. If architects do not quickly learn to talk to the rest of mankind in a language that can be understood (preferably by a child of four) they are doomed."

. . . of the architect as leader. "It has for some time been fashionable to talk of the building team. This manifestation of progress in the industry has taken the limelight for pre-planning although it in turn is being ousted by the consideration of elemental bills of quantities. It has been very loudly claimed that the architect should be the leader of the building team. In principle this is no doubt right because by his training, his education and his background he should be the person most suitable to lead. But whatever his artistic qualifications, whatever his technical ability he cannot lead the team unless he is a trained leader. Architects can have no right to lead the building team, they must be trained to do so, but I doubt whether the word leadership has ever been heard in the procrustean deliberations of the Board of Architectural Education. Architecture used to be a gentlemanly art, now it is hard business."

. . . of training for leadership. "In the long run architectural education may be expected to cope with leadership training. It will necessarily be in the long run. However something at least could be done at once. Aptitude for leadership could and should be taken into consideration when applicants for places in schools are interviewed. Educational and artistic qualifications are not enough. Competition for the best brains coming from our public and grammar schools is intense and becoming more so. The prospects in industry are well understood by careers masters and are attractive to boys. Knowledge of the prospects in architecture and the work of an architect, on the other hand, appear to be little known with the result that it is rarely that any but the arty boys take an interest in architecture. Headmasters particularly in boarding schools seem to me to live in blinkers. I would like to see them do a course of real life every five years.

"What can be done for the qualified architect interested in leadership and in learning the ways and language of the wicked world of commerce? I suggest a staff college where courses not only in leadership, but in business subjects would

be taught. Such a staff college should include all branches of the building industry and should be an independent organisation financed from the profession and the industry but with the blessing—more or less munificent—of the Ministry of Education.

"I do not suggest that the school of building management which has been so long discussed should be a part of the staff college. I am convinced that the place for the leading school of this kind is here and I am extremely sorry that so far no suitable formula has been discovered for its foundation.

. . . of Professor Sir Albert. "The President of the Royal Academy can fairly be described as an official body. As head art man of the nation he gets the press. He is in his own specialised field a most distinguished architect. It is therefore, in my opinion, a very great pity indeed that during his two years in office he has continuously and violently attacked modern architecture and by implication modern architects regardless of their actual merit and merely for being modern. This has done good architecture great harm among those who do not regard the Professor as a slightly irresponsible figure of fun. I do not mind admitting that I have a very soft spot for Sir Albert, but I think he is entirely wrong-headed in his policy. Surely he should have hidden his personal prejudices and taken the part of good architects and architecture. His chosen course has been nothing but destructive. It can be argued that Sir Albert's diatribes have put architecture in the news and made people talk. This may be perfectly true for readers of the three-penny plus newspapers but the masses always take a cheap jibe at its face value. As Abner, or was it Astragal, put it, 'The Professor not only plays to the gallery but to the bottomless pit as well.'"

. . . of the Royal Fine Art Commission. "This seems to me a purely negative leader. It is so balanced in its membership that anything like a well-defined decision is a practical impossibility. Its terms of reference and its solely advisory capacity make it a toothless organisation unable to exercise initiative. There is a growing and dangerous tendency for it to become an issuing office for architects of respectability for second-rate building projects. I would like to see the Commission reconstructed with a bias towards good modern architecture and with some provision for positive leadership."

. . . of transport design. "No other organization in this country has ever approached the overall design standards of London Transport in Pick's day. This does not mean that they could not have done so, it merely means that no person of Pick's standard of knowledge and leadership was ever placed in command and control. British Railways since nationalization have had a pitiful design record. This is the more lamentable when one remembers the great design traditions of the original railway companies. In fairness it must be said that the trouble was started when the railways were grouped between the wars.

"Very nearly everything that has come from railway designers since they were nationalized has been third or even fourth rate. Remember the odious tavern cars, still in service despite many statements that they would be withdrawn, the double jube-jube sign, the starving lion stretched over the wheel, the latest heraldic horror; the electric rolling stock on the Liverpool Street-Shenfield line, and the spate of simply dreadful posters, the horribly coloured drawings in the compartments and so on endlessly. Main line rolling stock of all kinds is to say the least undistinguished; refreshment rooms, though cleaner and brighter than they were, are so tricked out with bubbling commercially-sponsored, electrically-lit price lists, that any but the most insensitive traveller must wince on entering.

continued on page 661

The first public discussion of this subject was held at the Building Centre on October 24. It was organized by the Ministry of Works and the Brixton School of Building. We print below a shortened verbatim report of the meeting. Speakers: F. G. West, Deputy Architect LCC; James Nisbet, principal quantity surveyor MOE; P. E. Trench, Bovis Ltd. In the chair: Sir Thomas Bennett. On the right are dates of articles on the subject that have appeared in the JOURNAL.

September 16, 1954	Cost Analysis and elemental bills: Clifford Nott.
February 24, 1955	Cost Analysis: The Guest Editors.
July 14, 1955	The Quantity Surveyor's Control of Costs: The Guest Editors.
July 28, 1955	Cost Planning: The Guest Editors.
May 10, 1956	Cost Analysis and Cost Planning: James Nisbet.
May 24, 1956	Architectural Economics: Clifford Nott, Kenneth Norman and Derek Stracey.

COST CONTROL

F. G. WEST (Deputy Architect, LCC): I regard the general picture as being much more important than any part of it, and the general picture is this absolute need for more adequate and more resolute cost control in the building industry. I feel very strongly that that is so from the architect's point of view.

I have often seen frantic efforts made to adjust and control costs at the tender stage of the job. . . .

I suggest that that is all wrong, and that we have to do something about it.

When a job is mooted, the first thing to be assessed is a general cost limit which must be established for the job.

Within that yardstick the architect and the surveyor have to work together. The surveyor should produce for the architect a breakdown.

Whatever the elements are, they must be elements that an architect manipulates when designing his building . . . roofs, wall cladding, floors, staircases or whatever it may be. He then prepares schemes for various alternatives for these elements, and his quantity surveyor, I suggest, should be with him the whole time, assessing what he is doing in terms of a particular element. It may well be that, as this process proceeds, one element will be made more expensive at the cost of another, which must be adjusted to preserve the overall general balance.

If a job is worked out in this thorough fashion before the preliminary estimate is presented to the client, it will probably take somewhat longer than the old, rather slipshod method.

I feel that the attitude of surveyors in the past has been, particularly at this early stage of the job, to regard themselves as compilers of statistics for the architect, instead of realizing that they have a vital contribution to make to the development of the job. There is need for a reorientation of their outlook.

I regard it as important that every decision should be taken in full consultation with the surveyor, and not from information which can so easily be used out of its context.

If the present very haphazard methods of cost control continue, very severe loss of confidence on the part of the building owner will ensue, and some other arrangement for controlling the building industry may be devised which may not be so agreeable to us or to the general design standard of architecture.

JAMES NISBET (Principal Quantity Surveyor, MOE): Our Chairman, in April, 1946, at a general meeting of quantity surveyors at the RICS, drew attention to the fact that our costing arrangements in the building industry were on a vague and unsatisfactory basis. In ten years atomic energy has been harnessed for industrial use, yet our costing arrangements in the building industry have remained practically unchanged.

The architect is offered, on the one hand, a very simple and crude yardstick, something like a cost per cubic foot, and on the other hand an extremely detailed and complicated document, a bill of quantities. Cost per foot cube, even for buildings of the same type, can be very misleading, and the bill, written as it is by trades, does not give a common basis of comparison.

The total cost per square foot, however, does not give us the information which we need, and must be broken down into smaller and more convenient units, which we call elements. The definition of an element is "a part of a building which more or less always performs the same function or functions." For example, a building must always have a roof. It does not matter what the construction is; the cost of that element can always be examined and compared under

the element "roof construction." This type of unit has a further advantage, because the architect tends to design in terms of function, and the elements should tie up with function.

One advantage of this simple form is that it is very useful for identifying items of excessive or insufficient expenditure. It can save many hours of fruitless discussion and going through bills of quantities and the preparation of reduction bills. An example of this is a simple analysis which has been made covering three primary schools. The total costs for the three are very much the same, being 65s. 11d., 65s. 3d. and 65s. 4d. per square foot. The tenders were all received about the same time. The distribution of that total cost between the different elements, however, is quite different. We can probably learn something else from these analyses. We can, for example, relate the cost of an element to its importance as a necessary part of the building. . . .

In one school, for decorations the figure is 1s. 4d., and many clients and architects will say that that is too little to spend on a school, so that the decorations will be below standard. For the second school the figure for decorations is 4s. 3d., while for drainage the figure is 4s., which architects and clients may feel is far too much to spend on those elements.

This type of information allows the architect to draw up a plan of expenditure. He can see where the money has been spent in his previous jobs and use that information to get a better balance of cost in his next building.

I should like to emphasize that this is not a device to depress costs. To obtain a cost analysis it is necessary to prepare an abstract in reverse. We have to take the items in the bill of quantities and their costs from each trade and reassemble those items in another abstract under element headings. It was this operation which suggested that it might be a good idea to produce a bill which gave us this information straight away, and that is what led to the idea of an elemental bill. But, before anything was done about it, an architect and a builder were approached and the whole matter was discussed with them. In discussing the suggestion, it became apparent that this kind of bill might have a number of advantages.

The discussions also underlined the fact that, while the bill of quantities must remain a basis for tendering, it was now being used for a number of different purposes, and that it was the increasing complexity of the building industry, the diversity of materials and services, the introduction of scientific methods of design and construction and of programming and management, and the virtual absence of the specification, which were making the bill of quantities a very important document, but that this bill was making very few concessions to these new uses.

Elemental bills have been prepared for buildings of different forms of construction and for at least three different types of building—for schools, for houses, and for old people's homes. Where the builders have been consulted beforehand, there has never been any difficulty about tendering.

The elemental bill is a relatively simple thing to describe. Instead of being written by trades, it is simply

written up in a number of sections, each section corresponding to an element. Within each element, the items are billed in the trade order. This may mean that the same item may occur in a number of elements, but experience so far is that this is not a serious difficulty, and it is one which can be partially overcome.

The principal advantages of this form of bill are (i) that it provides a simple cost analysis as soon as the tender is in; (ii) the quantities in the bill can be readily referred to the drawings. This has a number of advantages to the architect and to the builder, and we may hear more of them later in the discussion. The quantity surveyor is in a fairly neutral position. The advantages to him are that he can provide a cost analysis for his architect straight away, without additional trouble, and, so far as valuations are concerned, it should assist him in preparing the valuation more quickly, and probably more accurately, and thereby reduce the retention money which is sometimes held. Finally, he may be relieved of the questions which he is often asked by the builder and by the architect, and which can be answered only by reference to the dimensions and the abstract.

PETER TRENCH (Bovis Ltd.): When I was asked to speak I was unaware that no public pronouncement had been made by a builder on this subject. I did not think that such passions could be aroused by such a very dry subject. I myself have been nobbled, rather like a racehorse, by private quantity surveyors, public quantity surveyors, private architects and public architects, and even by builders and builders' estimators; but, despite all that, what I have to say is said without duress. It is my personal opinion.

First, there is the estimating department. This room is packed with estimators! Whereas we ordinary mortals find it difficult to find our way about an ordinary bill of quantities, estimators do not.

With an elemental bill the collating of the items for inquiries to be sent to subcontractors and suppliers means much more work, because of billing in sections and not trades. Secondly, the insertion of rates in the bill by the estimator will take longer not only because of the greater number but also because of the repetitive nature of some of the items. Thirdly, the pricing out of the bill will also take longer, due to the increased numbers of items. The time allowed for tendering anyhow is notoriously short. I am only speaking from the estimator's point of view, so that those who think that I am going to condemn elemental bills had better sit tight!

In theory, the estimator should get a better picture of the building from an elemental bill, and should therefore have a better background for pricing. I think it is debatable whether the elemental bill will produce a more accurate price, and I think that possibly it will not, because the generally accepted method of estimating in this country today is pretty archaic anyhow. The only way to produce more accuracy is to base estimates not on built-up unit prices but on work values established from work measurement and method study.

This brings me to planning. Let us consider what happens in the big builder's office today.

Those who plan a project are not generally estimators, and they do not find it so easy to find their way round a bill of quantities. Many of them find it more difficult than *The Times* crossword. These people would find the elemental bill which I have seen of immense value, if the elements suited the builder's planners, and not necessarily the architect in his cost designing. Those elements may be quite different, and I suspect that they are. I suggest, however, that if we are going in for elemental bills, or are contemplating doing so, it is the builders who can reduce costs by better planning, whereas the architect can only get rid of those nasty shocks at the tendering stage. I suggest that if we are going to have elemental bills the builder should be in on the ground floor in deciding what elements should be used from the planning point of view.

The other departments in a builder's office are bonusing and costing, and contract management. From a bonusing point of view it is possible in the future that an elemental bill will facilitate the introduction of a pre-measured bonus system. On costing, I am afraid that I have a disappointment for the supporters of the elemental bill. I do not think that the elemental bill is likely to facilitate costing. By that I mean measuring work to see the actual cost against the estimated cost. It must be borne in mind that work on many elements is taking place at the same time, and what is required is not a yardstick of cost but a new and simple method of ascertaining the true labour cost of an operation. It is a myth that there is a standard method of costing in the industry and that it will ever be possible to produce a bill of quantities which will fit in with some mythical standard method of costing, which does not exist as yet. Valuation of interim certificates I leave for the discussion!

On the contract management side, which is the side of the builder's business which runs contracts, I think that a good elemental bill could help. It would help the site staff and the contract management, because an elemental bill does give a better view of what you have to build, and heaven knows we start sometimes without knowing what we have to build!

With regard to cost analysis, I do not know how the architect's mind works when he is designing from this point of view. I only know that many of us have been carrying out cost analyses for many years before an elemental bill was ever thought of.

The tender price is very different from the actual cost of the job. It may be that some people would like to use the elemental bill as priced for a cost analysis, but the elemental bill as priced is a theoretical estimate and not an actual cost. To get more accuracy you must at least bring that elemental bill to the final account stage and adjust it. You will never reach the stage of an elemental bill which has in it the actual costs of the elements which have gone into the job to which it relates.

Cost analysis and planning yield the greatest benefits, from our experience, when practised in a particular office or group and are most advantageous when used on buildings of a like nature. We have on many occasions used cost analyses for an approximate estimate. Probably once in ten times we have come a

frightful cropper, but an intelligent use of cost analysis, bearing in mind all the factors of the building, can give quite good answers for an approximate estimate. How architects use it when designing I should not like to say.

It is a pity to let ill-digested thought kill an idea without giving it a fair trial. We have not yet got the answer in £ s. d. to the builder's side of this business, but I think that we may get the answer if we persevere. It would be a great pity to condemn this out of hand, without giving it a chance.

THE CHAIRMAN: The matter is now open to discussion.

N. S. FARROW (Howard Farrow Ltd.): I think that I can reinforce to some extent what Mr. Trench has said, and perhaps vary it to a certain extent, because my company have undertaken a contract using elemental bills.

From the point of view of the builder who has used this tool on jobs, what strikes one immediately is that an elemental bill cannot be produced without complete drawings with details. That is a tremendous advantage that arises from the use of elemental bills, that you know exactly what you are going to build before you start.

From the estimating point of view, I agree with Mr. Trench; the estimating department are more likely to find it a more difficult and a more lengthy process than the normal process to which they are accustomed; but, once they have become used to it, I think they will find that in many respects it will help them to estimate in greater detail. It will cost more money to price elemental bills, and I suggest that, if they are used, competition should be limited to a very great extent, because it is going to cost the industry a lot of money if there is a large list of tenderers tendering on elemental bills.

From the planning stage we have found that elemental bills have been of tremendous advantage on the site. We have derived a great deal of benefit from their use, and everyone on the site has come to that conclusion.

As far as costing is concerned, we feel that elemental bills have been of considerable advantage, and not the disadvantage that Mr. Trench suggested might be the case. Interim and final accounts have been settled much more quickly as a result of elemental bills.

The conclusion to which we have come from the building point of view is that after the initial shock, when people have got over the new presentation of the documents, we feel at the moment that the system is well worth persevering with and that it will probably be of considerable advantage in the long run. We all realize that one of the important things for which we are striving is architect-builder collaboration, and I think that eventually we shall get architect-builder-quantity surveyor collaboration. That is what we want, and I feel that the use of cost analysis and some form of elemental bills may help us to achieve our object, which at the moment is bedevilled by our present tendering system.

I am reminded of a builder who comes to our com-

mittee meetings and says "I come here with a completely open mind, but I think that this is all damned nonsense." I plead with you to regard this with an open mind. It occurs to me that a subject such as this, which is being dealt with by three different organizations, deserves to be approached on the basis of it being a real research problem. I suggest that we should look on it in that way.

CHARLES CUTHILL (Herts CC): We have used elemental bills for about two years, and at the moment we use elemental bills throughout the office, with our chief's backing. Some builders have suggested that pricing is difficult with elemental bills, but always—and I say quite definitely, *always*—once they have got on to the site they were 100 per cent. in favour of them.

We do not really want to talk about elemental bills, however, but about cost planning. . . . If we can apportion the money to heating, plumbing, lighting and work below ground we shall have some idea of whether or not we shall get the building within the limit of cost. I support Mr. Farrow in saying let us try this in the industry and give it a fair chance.

M. H. THACKRAY (Chairman, Quantity Surveyors Committee, RICS): I am most grateful for the opportunity, so early in the discussion, to place before the meeting the position of the Royal Institution of Chartered Surveyors, and in particular of the Quantity Surveyors Committee of that Institution. Some months ago a Cost Research Panel was formed with very wide terms of reference; they involve consultation with all sides of the industry and a considerable amount of research. That Panel has not reached a stage, of course, where it is able to issue a report or any conclusions.

Arising out of that, three or four months ago a Sub-Committee was appointed to consider the narrower field of elemental bills. That sub-committee, through inquiry in the *JOURNAL*, has received an immense amount of very interesting evidence on this subject, both for and against, and with the passion to which Mr. Trench has referred. The sub-committee also has not reached the stage of presenting a report, but we hope that it will do so before very long.

The Elemental Bills Sub-Committee and the Panel are endeavouring to avoid falling into the age-old trap of saying "What has been good for us in the past is good for us now." At the same time, they are also trying to avoid the attitude "Here is something with a new look; let us grab it."

D. M. NENK (Administrator): It is good of you to allow a down-trodden clerk to speak in a gathering of this expert kind. . . . Cost analysis and cost planning fits into a rational system of administration. The administrator or the client says "There is this amount of money to do such-and-such a building." The architect and the quantity surveyor together, by cost analysis and cost planning, can then make their own decisions, in consultation with the client where necessary, on how that total amount is to be divided among the different elements, and in the end one hopes—and

practice, in my experience, has confirmed it to a large extent already—that the result is less frustration, less wasteful re-doing of work, quicker decisions, quicker approval by councils, Ministries and the Treasury, and a better disposition of the money in terms of value for the user.

D. W. MASSON (Institute of Quantity Surveyors): I have not had any experience in the preparation of elemental bills of quantities. . . . If by the preparation of elemental bills we as quantity surveyors, or contractors, are enabled to make more accurate estimates, well and good. But in this elemental bill we are getting a load of information which, if wrongly used, is going to be far more dangerous than published foot cube or foot super prices.

We have heard from the building side that contractors do think that it will enable them to plan their jobs better, and also to run them better. If that is the case, let us try it.

We in the IQS are ready at any time to co-operate with any other body in the industry in this matter of cost investigation.

F. J. MEEKINGS (Quantity Surveyor): We, in the building industry, have two types of employer: those that spend public money, and those that spend their own.

So far as the people who spend public money are concerned, what they want done should be done. The professions are concerned with giving good service to their clients. I wonder, however, whether Mr. Nisbet and Mr. West appreciate that such schemes will involve a greater expenditure in the payment of fees? Mr. Nisbet touched on an important point affecting our profession when he said that it would not affect the taker-off, but only the worker-up. I do not know any quantity surveyor who is not most anxious about the problem of working up. The profession is suffering not only from a lack of satisfactory working-up staff but from lack of a sufficient number.

In favour of Mr. Nisbet I should like to say this. I imagine that he is primarily concerned with a sequence of buildings of a similar nature, schools. If the architectural side of the schools programme will be consistent with their planning it is clear that the builder and the quantity surveyor can be consistent with the bill which they prepare and the cost which results. That is where the key lies.

Mr. Nisbet showed on the screen an example of what he had in mind, and there was one intriguing point about that which may have been noticed: sometimes the preliminaries were priced, and sometimes they were not. We quantity surveyors know the tussle that we have with builders over that, and I am pleased to see that Mr. Nisbet reflects it in his "cost analysis"—on which term I quarrel with him.

D. L. MEDD (architect, MOE): I have great admiration for and sympathy with quantity surveyors; they seem to me to have to spend so much time frantically measuring drawings—very often inadequate drawings—purely for one limited purpose, namely to get a price, and then it seems to me that quite often they have to spend months, and even years, of negotiation to clear

up the situation. Is this the best use of time and professional fees?

I think, however, that times have changed, and that we should look for new methods from the quantity surveyors to meet the new situations which are now confronting us. Mr. West said that the architect needs to know more about cost. Generally speaking, architects are weak on matters of cost. The normal rôle of the quantity surveyor, in my view, does not help the architect sufficiently in this matter of providing information, apart from countless *ad hoc* approximate estimates and reduction bills, which are no way of accumulating knowledge and experience.

The architect designs in terms of foundations, floors and walls, windows, ceilings and so on—the building elements, in fact—and not in terms of cubic yards of hardcore, foot run of “four by two” or square feet of glass. The grouping of quantities in terms of design elements, therefore, is giving information which is both directly ascertainable from bills and of direct relevance to design. For example, how can the architect know the cost of a heating installation when the builder's work for it is scattered amongst numerous items throughout the bill? It would be hard for any architect to say that he would not gain from such a re-shaping of bills.

So much for the design stage. What about the position during the contract? The first thing that comes to mind with regard to the elemental bill at the contract stage is its relevance to programming.

I refer to a programme which breaks the whole contract down into as many different clearly-defined operations as possible and equates them with time and labour. Add annotation to this, thereby removing the need for the separate specification, and we have the means whereby the progress of the work can be checked quickly and accurately during the course of the job.

Again, there is the ease with which variations can be handled. Their value can be assessed very much more quickly, and if it is desired to add a toplight or to subtract a toplight a quick single reference to the bill will show what will be added or saved. It is not necessary to go through the different trades to find out what the sum is. Some quantity surveyors may feel that prices should not be seen by the architect at all, but that is their own prerogative. I cannot agree with this secrecy, for, after all, the architect is supposed to be in charge of the job, and how can he direct the job intelligently if he is in the dark on matters of cost?

I plead with quantity surveyors to examine their century-old techniques and to ask whether they are serving present-day conditions in the most helpful way. Cost analysis, cost planning, and elemental annotated and indexed bills are welcome signs of innovations.

RICHARD WHITTINGTON (Wates Ltd.): From the point of view of a contractor's surveyor, I welcome this idea of elemental bills, certainly not from the estimating point of view, which is the only point of view on which I wish to say a few words. We do not want longer bills of quantities; everything should be done to keep them short, and shorter than we see

them at the moment. If elemental bills will mean longer quantities, I suggest that the opportunity should be seized to find some way of reducing the length of our bills, cutting out some of the items which are covered in our standard method of measurement. The two things should go hand in hand. This is an opportunity to review our system of taking off; let us use it to the full and not confine ourselves to one aspect which will particularly help the architect but which will not be of great assistance, though it may be of some, to the contractor.

E. W. HARVEY (T. R. Roberts Ltd.): I should like to suggest that at the tendering stage the bills should be sent out in the form to which we are accustomed, in bulk quantities, and that tenders should be based on bulk quantities. . . . I suggest that then, having obtained tenders on the basis of bulk quantities, elemental bills should be prepared from those bulk bills or rather from the bulk bill of the successful tenderer, by the successful tenderer working in conjunction with the quantity surveyor. This would get over the objection of the builder's estimator.

D. E. WOODBINE PARRISH: I want to refer to the rather loose use of the word “cost” which is evident even on the invitation card to this meeting. A word which would be more appropriate under economic planning would be “expenditure analysis.” Costs are things which accrue and they are privy to the individual who sees them accruing, and that is the builder. Quantity surveyors and architects very seldom have access to costs, but they have access to prices and to expenditure.

A. T. BRETT JONES (Quantity Surveyor): I agree with a great deal that Mr. West said, especially with regard to the need for cost control at the design stage, and I will go some of the way with Jimmy Nisbet on the need for cost analysis. He showed us on the screen the make-up of various elements. I wonder how true those figures were. As a quantity surveyor, I am very suspicious of figures and statistics. One heading was “doors.” Did that give the real cost of the door, or in other words the cost of the door together with the deduction for the brickwork which would have been there had the door not been put in, or was it simply for the door and the lining?

The elemental bill, moreover, does not seem to answer some of the most difficult problems which a quantity surveyor has to decide. One is what is the most economic level on which to put a building on a sloping site. It is not possible to tell that from an elemental bill. You have to take off approximate quantities and juggle with them until you get the answer.

K. C. EVANS (Architect): The elemental bill did not really emerge, valuable though it is, from an attempt to put current building techniques on a sounder footing. It emerged as an inevitable by-product of an attempt to think more rationally about the whole building process. The minute that one starts to do that,

one stops thinking in terms of trades, because one is thinking possibly in terms of trades as yet unborn. The fundamental difference between the elemental bill approach and the trade approach is that the one is open to the development of new methods, is a tool which can be developed—and the other is a well-tested tool, a good old pickaxe, but related to forms of building which—we may as well face the fact—are going out eventually. The real essence of the different approach lies in the fact that the elemental bill is allied to the future.

The CHAIRMAN asked the three opening speakers to reply briefly to the discussion.

F. G. WEST: I have not much to answer. One point which was raised, and a very serious one, related to the additional costs which, the speaker said, were bound to accrue if really detailed cost or expenditure planning is adopted. There will be additional expenditure of time on the part of professional people. The point is that the amount which indeed would have to be additionally expended in this way would be marginal compared with the enormous economic benefits which would come with a really economically controlled building industry. If we could bring our expenditure control within the limits of firm knowledge based on tenders, we should have gone a very long way, and it would be well worth doing even on that basis.

J. NISBET: Mr. Meekings said that the cost analysis is obtained only after the job is done. He is quite right, but where does the surveyor get his information? Is not it always after the job has been designed and the tenders are in?

Mr. Brett-Jones said the cost analysis is probably not much good to the quantity surveyor who has to decide

certain problems, such as the most economical way of building on a given site. These are problems which we are not able to answer. Whether we can answer them by cost analysis or any other means I do not know, but if we are going to do all sorts of haphazard exercises to try to get the answer it does not seem to me to be an efficient way of going about it.

P. E. TRENCH: I support Mr. Woodbine Parrish in thinking that there has been some woolly thinking on cost. Cost analysis or tender analysis or expenditure planning? I think we have to have some terminology on which we can all agree.

It would take a long time to explain the planning function in a builder's office. In the long term he has to build up a programme on the ascertained amounts of labour, material and plant required and have a good sequence throughout the operation. This is a very skilled job, and a bill of quantities in elemental form would be of considerable use to him.

The point made about bulk quantities is a very big one, but I suggest that it would be very helpful to an estimator to know the location of materials or operations on a job. Even with an elemental bill it is not easy to know in the case of a frame what floor we are talking about.

The CHAIRMAN: What has arisen from the discussion is a clear indication that these essential matters in the industry are actively in the minds of the members of all three sides of the industry. They are all concerned that something better should be produced; they are all determined to see whether better buildings at less cost can be built by the industry, either as it is at present constituted or as it might be altered to become a more efficient machine. That is surely one of the most healthy signs that we could find.

Continued from page 655

In marked contrast to this tale of woe the architecture of British railways is for the most part extremely good. The only trouble is that too little money is available to enable the many excellent schemes to be built. The reason for the contrast between the standards of architecture and industrial design in the same organization is difficult to imagine.

"But all is not lost. Last week a ray of hope pierced the sooty gloom. The British Transport Commission is to have a design committee. It has a distinguished membership with Mr. T. H. Summerson Chairman of the North Eastern Area Board and cousin of our John as chairman and Mr. Christian Barnan as executive member. This committee which also has Sir Gordon Russell as a member will deal with all matters of design excepting architecture and for this reason there is no architect member. This to my mind is a monstrous omission for a design policy must include architecture as an integral part. Mr. Summerson is reported as being a strong personality—he is also said to have read his cousin's books. I hope he will put the matter right and include the commission's admirable chief architect Dr. Curtis on the committee, otherwise a great opportunity may be lost.

... of other nationalized industries. "Of the remaining nationalized industries the Coal Board, having taken over the excellent traditions of the Miners Welfare Society architects' department, is setting a high standard in industrial development but

being in remoter coal fields it is little seen. The Central Electrical Authority has a record of sober improvement not only in the design of its power stations but also in landscaping and planting round them. The Gas Council on the other hand has never even aimed any higher than the pages of the less glossy women's weeklies. Its architecture in general defines description. There is however one exception of its sorry record. The South Wales Gas Board has a design policy and I believe a design committee. I wonder whether the Gas Council knows about it."

... of good design as good business.

"Although the board of a company may appear to the public to be a collective art patron this appearance like advertising is often misleading. Boards do not burst out spontaneously as art lovers or people who care about architecture or design. In a great many instances one man is responsible. When you think of the aesthetic receptiveness of the average company director you will I am sure agree that to make him and his colleagues believe that good design is good business is an undertaking of some magnitude. It has, however, been done in the past, is being done now, and is increasing, but very slowly.

"I am going to pick out two well-known examples of this modern form of patronage. The Orient Steamship Company has, since the completion of the *Orion* in 1935, specialized in ships whose interiors are among the finest examples of modern design in the world. Five ships have been built,

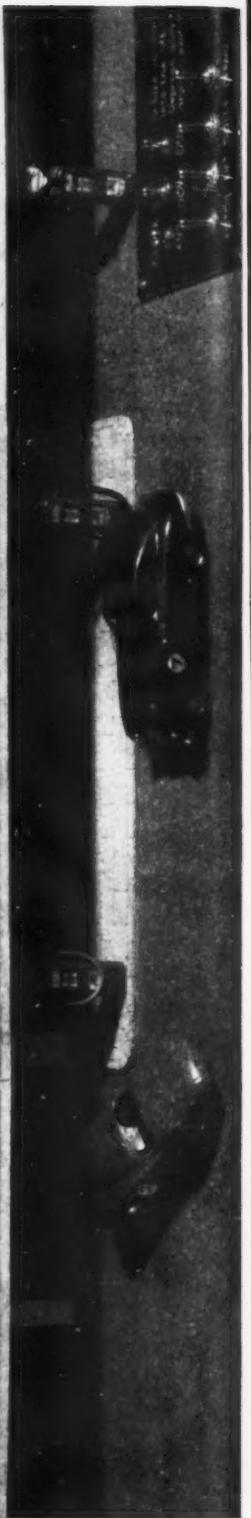
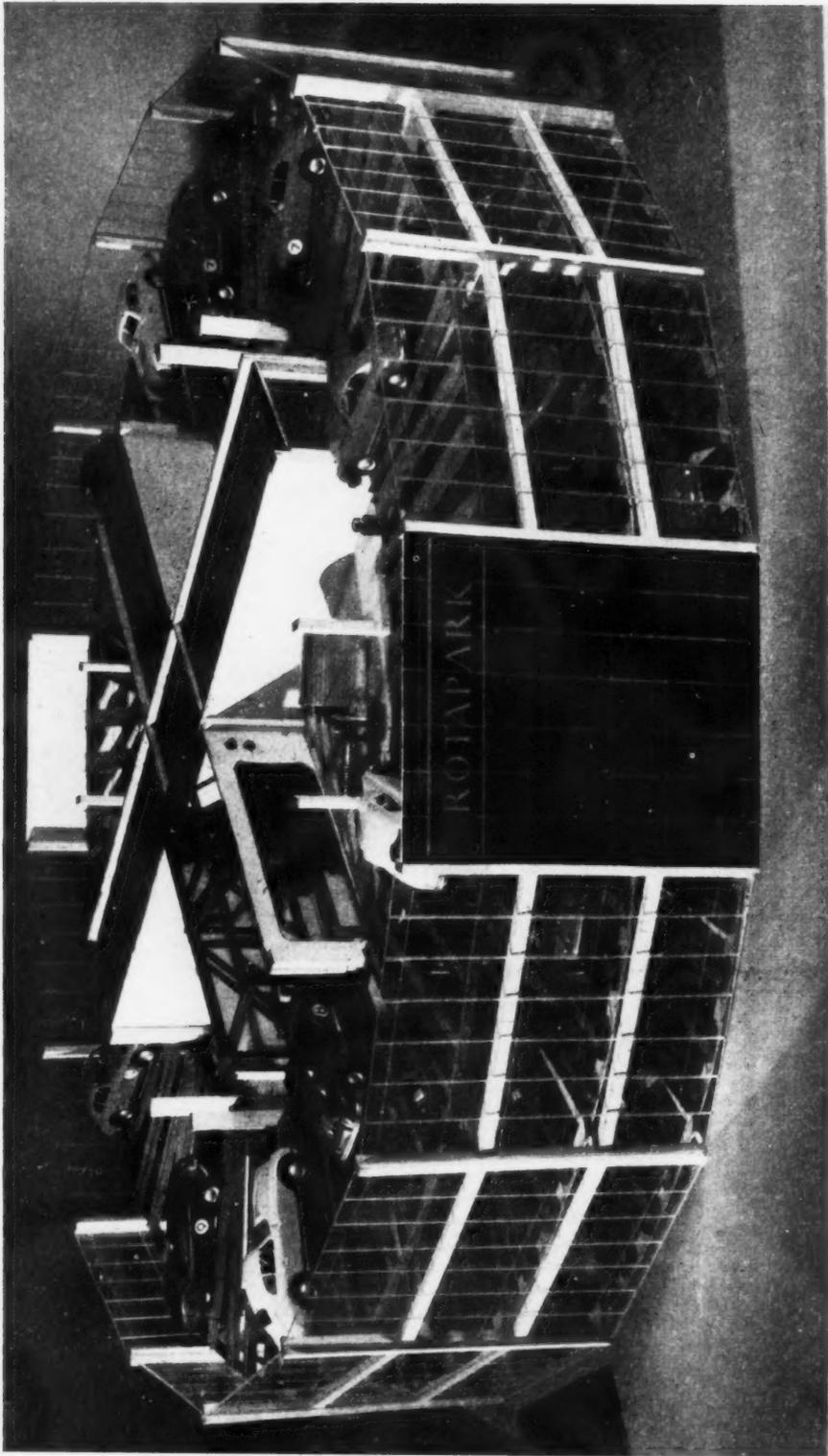
including one lost in the war and one to be named *Oriana* is ordered. These ships, in spite of half-baked but quite bitter controversy about the shape of their funnels, have been a tremendous success. This blow for modern design was struck by one man, Sir Colin Anderson.

"If you are like me you only go into a bank when you must. I suppose that as offices they are no worse than many others but for all their fresh paint and solid mahogany I find them about as depressing as the information which they usually give me. It has been left to a bank outside the big five to break with tradition and to give us the first series of modern branches designed by some of our best architects. No less than three past presidents of the AA are among them and the latest example of their work is within two hundred yards of this building. I am, of course, referring to Martin's Bank. I find the new branches a pleasure to visit and nothing less than revolutionary when considered by normal bank standards. We should very probably never have had this revolution if it had not been for the courage, enthusiasm and persuasive power of the bank's London district general manager, Edward Norman Butler, who acting as patron piloted the schemes through his board.

"Both Sir Colin Anderson and Mr. Norman Butler are by their patronage of architecture and design also leaders. Had Lord Nuffield been as great a patron of the arts as he has of medical science the problem of Oxford could never have arisen."

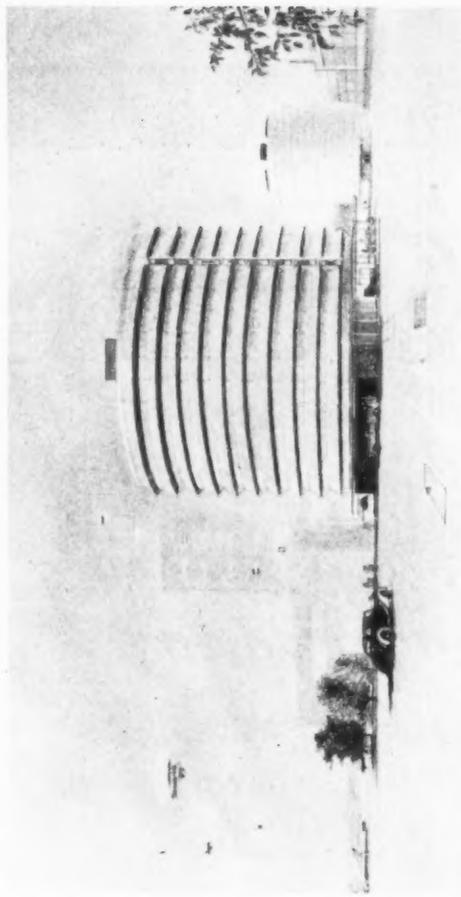
A CAR PARKING SYSTEM FOR THE CITY OF LONDON

Shingler and Risdon are the architects for this garage system, based on an American idea, which is to be used—subject to LCC approval—on two sites in the City of London. (One in Queen Street Place, the other in Aldersgate Street). Each ten-storey "Rotapark" would occupy a site only 100 ft. square, and would accommodate about 350 cars—the number that is normally parked daily between Piccadilly Circus and Hyde Park Corner. Thirty-two cars will be parked on each floor, so that each lift serves eight spaces on each floor, and the rails which support the cars need only rotate through 45°. In case of failure by one or more of the lifts, however, the rails will be able to rotate 360°.

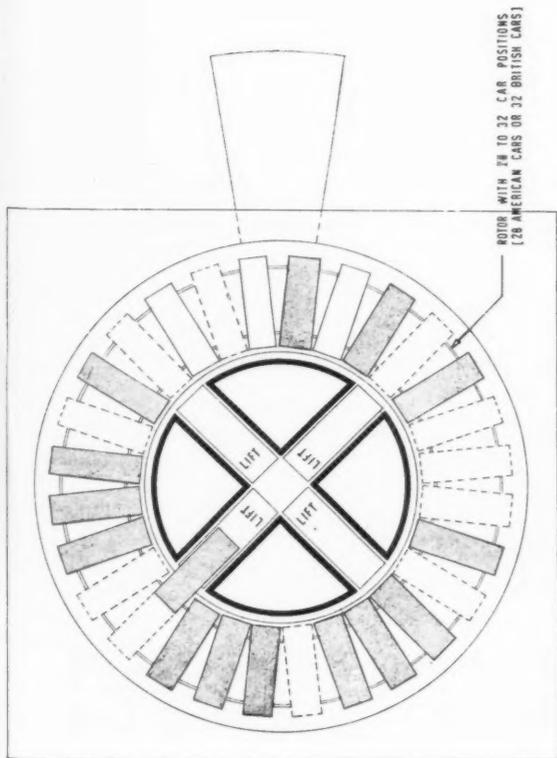


These rails are shown open on each floor in the model, but when the park is con-

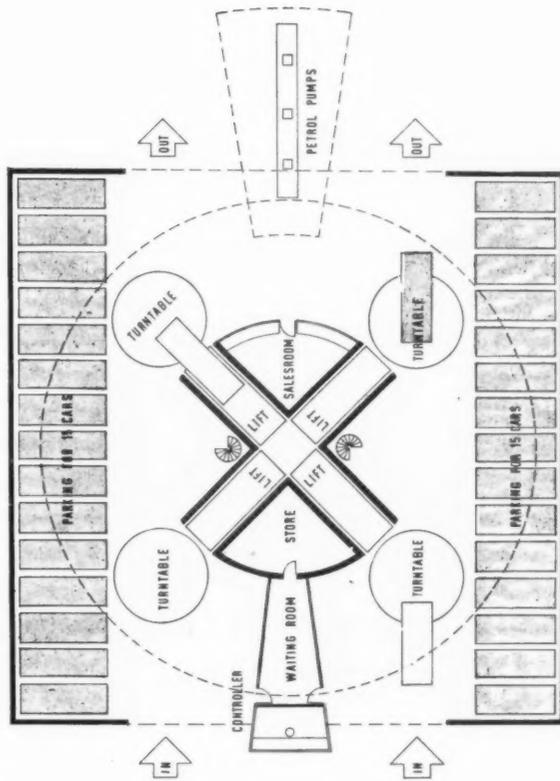
These rails are shown open on each floor in the model, but when the park is constructed there will be solid floors to provide a two-hour fire break. Although any normal type of car will be able to park on the upper floors, the open area on the ground floor will be used for cars of unusual shape, or for three-wheelers, and also for the stacking of cars waiting collection at a specified time. The driver of the car being parked leaves the vehicle on the ground floor, receives a punched card and the parking is then done entirely automatically, so no member of the public or staff needs to go on to the upper floors. The first two sites, one near Cannon Street Station and the other in the Barbican area, have been approved by the City Corpora-



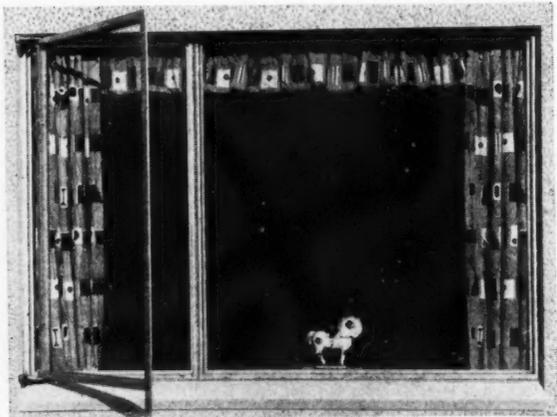
tion. The estimated cost of the first "Rotapark" is £200,000, which is £500 per car space, and includes an estimate of £25,000 for such items as a petrol station, etc. It is expected that the cost of parking will be about 2s. 6d. for the first two hours and 6d. per hour thereafter. The difference in external appearance between the perspective sketch, above, and the model, opposite, is the result of an LCC requirement that part of the cladding must consist of open louvers for fire fighting, instead of continuous patent glazing. The sponsors of the projects are Lex Garages Ltd., and the dollies, which automatically draw cars into the lifts and discharge them on to upper floors, were invented by Griggs and Son Ltd. (who will be the general contractors), in collaboration with G. Kirkland of R. Travers, Morgan & Partners, consulting engineers.



Typical upper floor plan



Ground floor plan

	January		February		March		April							
	<h1>HOPE'S</h1> <h2><i>Standard Windows</i></h2> <p><i>for lower cost and quicker delivery</i></p>  <p><i>Delivery ex-stock in standard sizes</i></p> <p><i>See Catalogue 284</i></p> <p>HENRY HOPE & SONS LTD <i>Smethwick, Birmingham & 17 Berners St., London W.1</i> <small>MEMBER OF THE METAL WINDOW ASSOCIATION</small></p>													
							May		June		July		August	

THE INDUSTRY

This week Brian Grant reviews a continuous ridge roof ventilator, a fire test on clinker blocks, plywood facing material, pitch fibre pipes and a glass sink trap.

ROOF VENTILATION

The photograph on the right shows a new type of continuous ridge ventilator which is intended for use on low-pitched roofs, with Universal troughing units. The ventilator consists of a box-shaped upstand having open sides, which is moulded integrally with the standard 6 ft. troughing crown unit. A cranked roof-piece rests on top of this upstand and can be seen in the foreground of the photograph. Channelled deflectors are fitted on both sides opposite the openings in the upstand and intermediate deflectors link the ventilators in series to give a clean unbroken roof line, as shown in the background of the photograph.

The units are fixed direct at the standard purlin spacings and no additional supporting structure is required; the deflectors and cranked roof-pieces are drilled at the works and all necessary bolts and nuts are provided so that assembly on the site is quite simple. In order that a continuous movement of air can be provided, the manufacturers recommend low-level air intakes which they suggest, should have twice the area of the ventilators. (*The Universal Asbestos Manufacturing Co. Ltd., Tolpits, Watford, Hertfordshire.*)

FIRE TESTS ON CLINKER BLOCKS

A BS 476 fire test was carried out recently at Boreham Wood on a panel of O.B.O. Clinker Blocks which had been built into an 11 in. cavity wall and with a plaster finish $\frac{1}{2}$ in. thick applied to the two outer faces in two coats consisting of a cement-sand mix in proportions of 2:7 by volume. A uniformly designed load of $8\frac{1}{2}$ tons was applied to the wall during the total time of the test, which was 4 hours 10 minutes. No

cracks or other signs of damage were observed on either face of the wall during this period and the only change measured was a deflection towards the furnace which reached a maximum of half an inch after two hours. A slight recovery occurred after three hours and by the end of the test the deflection was $\frac{3}{8}$ in. During the test the temperature of the unexposed face of the wall never rose above 61° C.

Forty-eight hours after the test the standard load of $8\frac{1}{2}$ tons was reapplied and this load was subsequently increased until failure occurred with a load of $45\frac{1}{2}$ tons. (*The O.B.O. Construction Co. Ltd., Ivy Bridge, London Road, Twickenham, Middlesex.*)

PROFILED PLYWOOD

Venesta Ltd. are now distributing in this country a new type of plywood facing material. The material, which is Scandinavian in origin, is known as Plyfa Profil and one face is finished in a variety of longitudinal ridges, the timber used being either mahogany or pine, or a combination of both woods to give a contrasting pattern. The standard width of all patterns is 24 in. and they are produced in lengths of 50 in., 60 in., 72 in. and 80 in., all with a thickness of $7\frac{1}{2}$ mm. The boards can be finished either with polish or by varnishing and owing to the pattern of longitudinal grooves and ridges butt joints are almost invisible. (*Venesta Ltd., Vintry House, Queen Street Place, London, E.C.A.*)

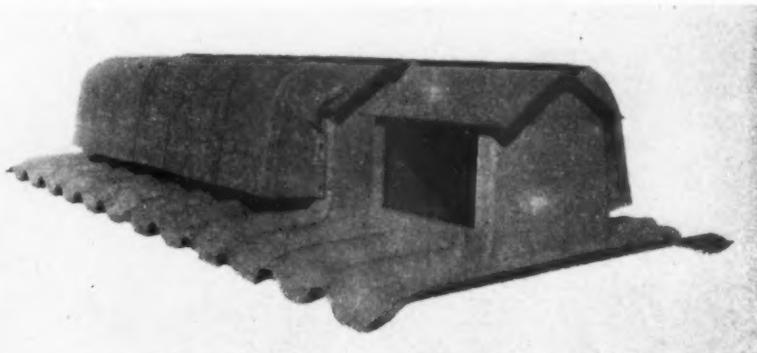
PITCH FIBRE PIPE

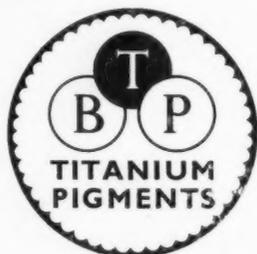
The Universal Asbestos Manufacturing Co.

Ltd. have recently formed a subsidiary company, Union Fibre Pipes (Great Britain) Ltd. for the manufacture of pitch fibre pipes. The pipes are at the moment being produced in three different forms: for drains and sewers, as cable conduit, and also as perforated pipe for sewage disposal and land drains.

The method of construction is comparatively simple, the first step being to make cellulose fibre tubes which when dried, are then pressure-impregnated with hot coal tar pitch. Both ends of all tubes are machined to a 2 deg. taper and joints are made with a sleeve machined internally to the same taper, the sleeve merely being tapped on to the ends of the pipe with a wooden mallet. Standard pipe lengths are 8 ft., but they can easily be cut to the required length with an ordinary woodworking saw and a new taper can be cut with an easily-operated hand tool. Drain pipes are made with internal diameters from 2 in. to 6 in. with the necessary bends and junctions and the composition of all pipes corresponds to BS 2760. For drainage work the advantage of these pipes is that they are slightly flexible and can as a rule be laid on a bed of sand, the usual concrete haunching being generally unnecessary. Since the joints are so easily made the pipe trenches can as a rule be made slightly narrower than with stoneware pipes and it is estimated by a firm of quantity surveyors that for 4 in. pipe a saving of about 6s. 6d. per yard run should be possible over best stoneware pipes on concrete. (*Union Fibre Pipes (Great Britain) Ltd., Tolpits, Watford, Hertfordshire.*)

A continuous ridge roof ventilator, for use on low-pitched roofs, made by the Universal Asbestos Manufacturing Co. Ltd.





The finest WHITE pigments

ARE IN ALL GOOD PAINTS

*because they give—brightest whites
cleanest pastel shades
greatest covering power
longest life with
complete protection
and they are—completely non-toxic*



are made in Britain by
British Titan Products Company Limited
the largest Titanium Oxide manufacturer
outside the United States

*Factories at Grimsby and Billingham and at Burnie, Tasmania
Agents in most principal countries*

**BRITISH TITAN PRODUCTS
COMPANY LIMITED**
COPPERGATE
YORK

technical section

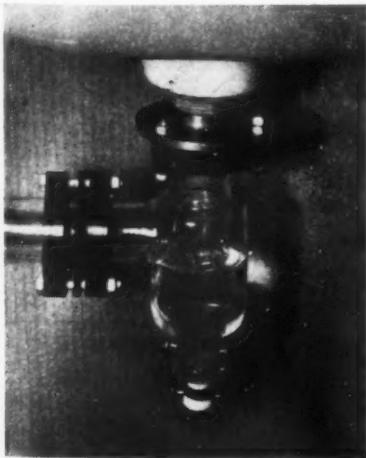


Machined ends of Union pitch fibre pipes and coupling.

GLASS TRAPS

Q. V. F. Ltd. are now producing a sink trap for laboratory use which is made entirely in heat-resisting glass. The trap is designed to fit all standard waste outlets and can also be used with the Q. V. F. standard range of visible flow pipe lines, so that a drainage system can be constructed entirely in glass. The trap has the advantage that glass is resistant to practically all chemicals and, being transparent, the trap can be easily inspected and blockages dealt with at the earliest stage. The cleaning eye consists of a porcelain stopper, toggle controlled, of the kind which one used to find on the old-fashioned lemonade bottle. (Q. V. F. Ltd., Stone, Staffordshire.)

The Q.V.F. glass sink trap.



INFORMATION CENTRE

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

6.53 planning: social and recreational
GARDEN DESIGN

Gardens Are For People. Thomas Church. (Chapman & Hall Ltd. for Reinhold Publishing Corporation, New York. 80s.)

Thomas Church, if not, in the words of the publishers' blurb, "the world's foremost landscape architect," is nevertheless one of the best known of contemporary American designers, with a well deserved reputation for liveliness and originality. This book illustrates examples of his designs (and only his) for private gardens, city, suburban and seaside, mostly in California. Its manner is rather that of the fashionable magazines, from which doubtless much of the material is culled, with its lavishness of illustrations, both plans and photos, interspersed with chatty, though usually apt and informative, snippets of text.

This will have been determined not only by the sources of the material but also by the purpose of the book; for it is specifically aimed at the owners of such gardens, or at least the owners of such as have not yet been transformed or created new in the Thomas Church style. That style, which has helped to mould what has become a distinct and easily recognizable American fashion, may not be to everybody's taste; and, as always, it must be remembered that these designs have been produced for a different climate and a much wealthier clientele than one has to cope with in this country. Nevertheless the text is full of good ideas; and the illustrations show many examples of ingenious detailing, in planting, structures and paving, all of which are well worth studying.

10.146 design: building types
FARM BUILDINGS

Farm Buildings, Conversions and Improvements. W. G. Benoy, A.R.I.B.A. (Crosby Lockwood, 28s.)

This book is written round a substantial core of particular examples selected from a fairly representative number of agricultural counties, most of them being by the author. Each example is described and illustrated before and after improvement work had been carried out and the implications of the improvements are fully recorded in each case. The impression given by this treatment is one of subtle and often extensive

surgery, a course of action well in the tradition of English agriculture.

The book deals with the conversion and adaptation of buildings for livestock, cattle, pigs, and poultry; for deadstock, implements and machinery; and buildings for handling (e.g., grain conditioning plant) and storage. In addition, there is a chapter on materials and constructional methods used in agricultural building which emphasizes the need for robust materials needing little or no maintenance, and for methods of construction which do not require skilled labour but can be carried out by the farm-workers themselves at slack periods during the year. Another chapter is devoted to the conversion and improvement of agricultural dwellings; it provides much useful information and advice but seems to lack sympathy with the particular needs of the country dweller, the need for a sense of enclosure and, more practically, for considerable semi-enclosed yard-cum-shed storage space. The architect reader will find much good sense but will be disconcerted by the poor visual quality of the improvements illustrated and will feel the need for a more systematic development of building components.

13.133 materials: timber
STRUCTURAL TIMBER

Glued Laminated Timber Structures. E. Niskanen. Aero Research Technical Notes, Bulletin Nos. 159 and 160, March and April 1956.

This is a translation of an article by Dr. Niskanen of the Wood-Technical Laboratory, The State Institute for Technical Research at Helsinki, first published in the Finnish journal *Paper and Timber*. It combines in readable form a quantity of technical information (bringing together the results of Finnish, Canadian and American research) and a review of the types of structure possible in glued laminated timber.

13.134 materials: timber
STRUCTURAL TIMBER

Working Stresses for Structural Softwoods. FPRL Bulletin No. 37. (HMSO. 1s. 3d.)

This is a report on recent researches carried out by the FPRL. Beginning with an exhaustive explanation of the methods used and assumptions made, it concludes with four pages of matter which will be of real use to the architect: a table of working stresses for two grades of twelve common species of softwood, the rules for these two grades, and formulae for the application of this information to beams, struts, and ties.

There is, however, no mention of BSCP.112, *The Structural Use of Timber in Buildings*, and readers may wonder how the two documents are related. The answer may be that the Code, although revised in 1952, does not yet recognise the grading rules which are at the moment advocated only by the FPRL. It is hoped that the continuation of the FPRL's work in this field will soon

There's something new in the pipe line



IT'S THE UNION PITCH FIBRE PIPE, the biggest news in piping since hollowed-out tree trunks became unfashionable. Light instead of heavy, resilient instead of rigid, tough instead of brittle, Union Pitch Fibre Pipes will do anything that conventional drain-pipes will do—and do it at much smaller cost. There are many reasons for their economy of working; the chief among them are:

1. Union Pitch Fibre Pipes are supplied in 8 ft. lengths with accurately machined ends to provide a simple driven joint.
2. They can be laid without any concrete bedding or haunching, and can be cut and machined on site where necessary. Moreover, they are so light that one man can easily carry 32 ft. of piping.

If you'd like to know more we'll gladly send technical literature. Union Fibre Pipes (Great Britain) Ltd., Tolpits, Watford, Herts. Telephone: Gadebrook 4551.

UNION PITCH FIBRE PIPES

save time and money



A MEMBER OF THE U.A.M. GROUP OF COMPANIES

technical section

have three much-needed results—a revision of the Code, the production of a really usable handbook for architects, and a general reform of timber-yard practice.

16.125 materials: miscellaneous

WATER FOR BUILDING PURPOSES

Analysis of water used or encountered in construction. BRS Digest No. 90. (HMSO 3d.)

Sets out to tell the architect what impurities the analyst should look for, but is very confusing.

17.107 construction: general

BUILDING CONSTRUCTION

Baukonstruktionslehre. Edited by Martin Mittag. (C. Bertelsmann Verlag, Gütersloh) The interest to English architects of this formidable German work of reference (first published 1952: now in its 7th edition) is twofold. First, it is the most ambitious (and the most successful) attempt to cover the whole field of post-war building construction in a single volume. Second, because this is done essentially by means of line drawings (there are 8550 of them) the book is therefore a possible reference even for the non-German reader. Though both text and illustrations are closely linked with the German codes of practice and therefore cover building construction in the widest sense, the chief use of the book is as a vocabulary of fixing. The text is critical in that the drawings commonly show "bad," "possible" and "good" practice, though value judgments are of course limited to strict function and are in no wise concerned with appearance. The authors boldly include proprietary components in their coverage, though it must be admitted that the traditional nature of the German building industry and building technique makes this less difficult to handle than it would be in this country. This—coupled with the fact that there is a larger potential readership for this kind of book in German speaking countries than in Great Britain—makes it doubtful whether a similar venture could be undertaken over here, but it would be certainly worth considering by English publishers.

17.108 construction: general

STRUCTURAL CHOICE FOR ARCHITECTS

Architectural Construction: The Choice of Structural Design. Theodore Crane. (Chapman & Hall Ltd. for John Wiley & Sons Inc., New York. 80s.)

One cannot afford to ignore a book claiming, as this one does, to deal "with the problems of making an appropriate choice for the structural portions of a building, as governed by the geographical location, site conditions, type of occupancy, equipment, and architectural design," and which claims also to present "a procedure for determining the type of building frame, foundation, floor, roof and wall construction most suitable to meet the requirements of any particular

structure." In broad terms the claims are met; but how *usefully* are the problems dealt with, and how valid to an English readership is the procedure suggested?

There need be no doubt about the author's authority: he is a consulting engineer and professor emeritus in architectural engineering of Yale. Professor Crane regards the word "structure" as applying not solely to the load-bearing elements of a building, and the work covers nearly all aspects of construction, including brick bonding and thermal insulation.

The first limitation to the value of the book lies in its attempt to provide "a comprehensive résumé of all the better types of construction on the American market, with recommendations concerning their specific applications." The text confirms what this implies; that the choice of structure depends largely on what the market has to offer. Markets are obliged to offer in the main what is economically attractive; and attractiveness in the USA, despite the wide range of its economic background, is far too intricately compounded to be easily translated into terms useful to non-American designers. And English architects and engineers are far more inclined, one would have thought, to approach problems fundamentally than to take even a careful pick from what was readily available on a plate. To them it would have been more useful if the examples in the résumé had been fewer and the recommendations for their application treated in greater detail. Thus, on page 41 we have the interesting suggestion that (in the USA) cold-rolled steel can compete with timber for certain light frame constructions. But no reasons are given and only three pages, mostly filled with uninformative photographs, are devoted to the subject.

The chief weakness of the book lies, however, in the attempt to reach too wide an audience. This is so common a fault in textbooks that one is forced to wonder why authors never pause to doubt whether in fact "students in architecture, architectural engineering, and building construction, and . . . practising architects and architectural engineers" all need the same kind of book. Obviously they focus their attention on a common object but each does so from a different angle. What for example, does the architect-practitioner in particular most require from a text-book? As a supposedly qualified man he should surely have mastered the essentials, and therefore his requirements are quite different from those of the student who is busy mastering them. If he is anxious to keep abreast of the latest developments, periodicals will serve him best. The purpose of a text-book should be to remind him of those matters which he cannot hope to keep always in the forefront of his mind, either because they are too complex, or because they occur too infrequently, and which might be overlooked in the process of design. *Architectural Construction* admittedly includes such matters, but they tend to get lost among items which, though important to the student, are, to the practitioner, platitudinous.

Professor Crane in a section ostensibly

devoted to Typical Applications of Steel and Concrete, switches rapidly from comparative merits of single and multi-storey planning to volumetric changes in roof slabs, and then to Residential Buildings, to Parking Garages and, finally, to Miscellaneous Uses. The thread is difficult to trace.

And where does the structural engineer come in? Does it help him to have to pick the bones out of a book containing *inter alia* detailed descriptions of brick bonding and two pages of Bemis's modular co-ordination, and to be shrugged off at the end of half-a-dozen paragraphs on shell-concrete roofs with the statement that "the choice depends primarily on architectural preference and relative cost?" Perhaps, but what constitutes architectural preference, and how is the relative cost to be assessed? The advice that "sketches should enable any competent builder familiar with the local situation to make a fairly accurate estimate of cost for each system" will sound hollow to any architect or quantity surveyor familiar with present-day techniques of cost analysis and cost control. If due consideration had been given to the parts played by engineer, architect, surveyor and builder in a sensibly phased design process, such banalities might have been avoided.

Nevertheless, *Architectural Construction* covers its chosen field with a thoroughness which could only be bettered by a collection into one volume of Fitzmaurice, the BRS Digests and the BSI codes of building practice. There are some surprising omissions—no reference to the plastic theory of design, no mention of the effect of certain soil or hard-core constituents on concrete; but anyone who had time to read carefully through its 421 pages, and to question every item of dogma, test it and relate it to English practice and a design sequence, would benefit from a most valuable educational experience.

26.124 services and equipment: miscellaneous

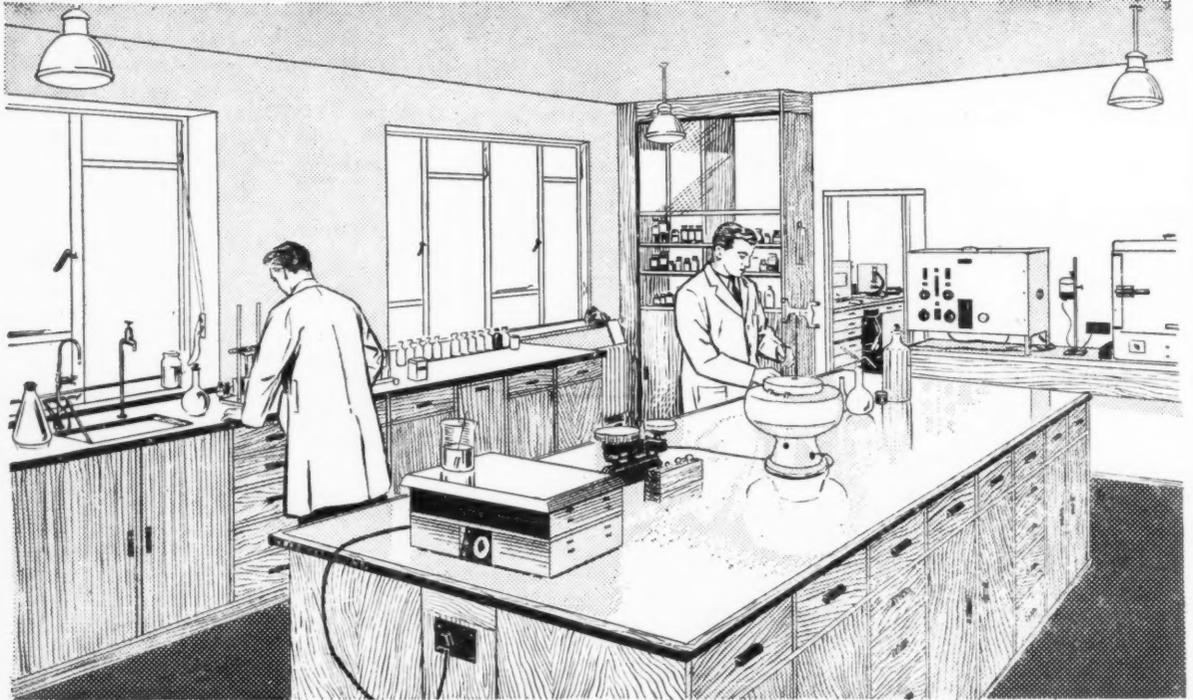
GAS COOKING FOR SCHOOLS

Gas and the School Meals Service. (The Gas Council, 3s. 5d.)

It occasionally happens through some mischance that a concern which usually lays excellent eggs, lays an addled one instead. Such an unhappy occurrence is the Gas Council's recent publication *Gas and the School Meals Service*, a booklet that is well presented but contains material that is ill considered. It compares most unfavourably with the earlier brochures *Cafés, Tea Rooms, and Milk Bars*, and *Planning for Industrial Catering*, by the same body and which set a high standard for this sort of advertising.

The present brochure sets out to describe the size and type of apparatus recommended for use in school kitchens, and to advise on kitchen layout with the aid of diagrammatic plans. It includes photographs of kitchens and schools that have used gas appliances, and the introductory leaflet assures architects and others that it will be of great interest.

Continued on page 669



Scientific protection

To safeguard your goodwill you must have paints which embody scientific protection. The answer is STORRILUX.

STORRILUX, a durable, full bodied paint, containing alkyd synthetic resins with Titanium oxide.

Washable without gloss deterioration. To all work, interior or exterior, on land or seagoing, STORRILUX imparts beauty and lasting power.

Our Research Division keeps STORRILUX ahead; our Production Laboratory checks every batch. Your reputation is safe with a House that has served the trade since 1831.

STORRY SMITHSON & CO. LTD.,

BANKSIDE WORKS, HULL. Tel. 34734

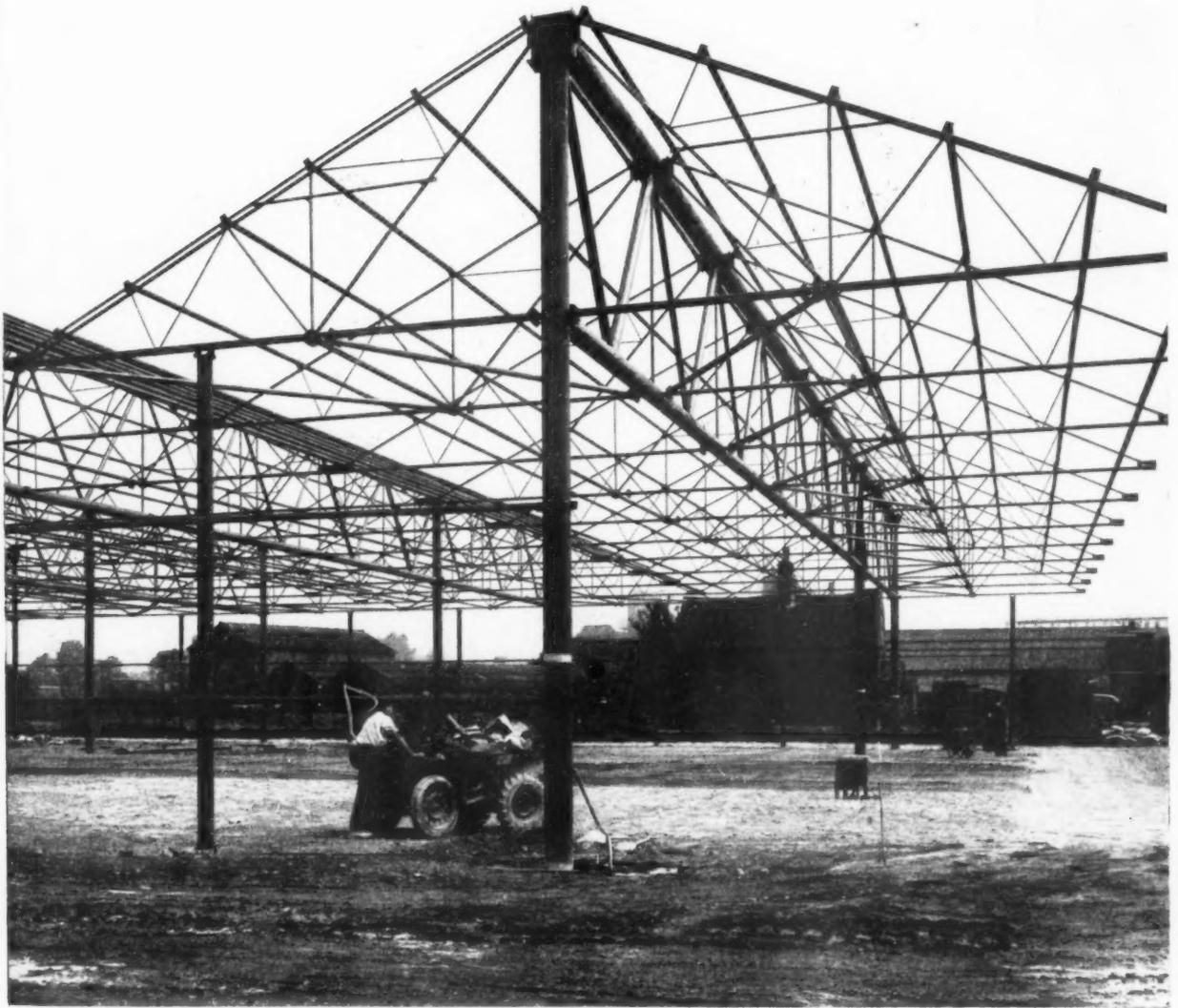
PAINT, ENAMEL & VARNISH SPECIALISTS SINCE 1831



LONDON. LIVERPOOL, GLASGOW, NEWCASTLE, CARDIFF & NEW YORK

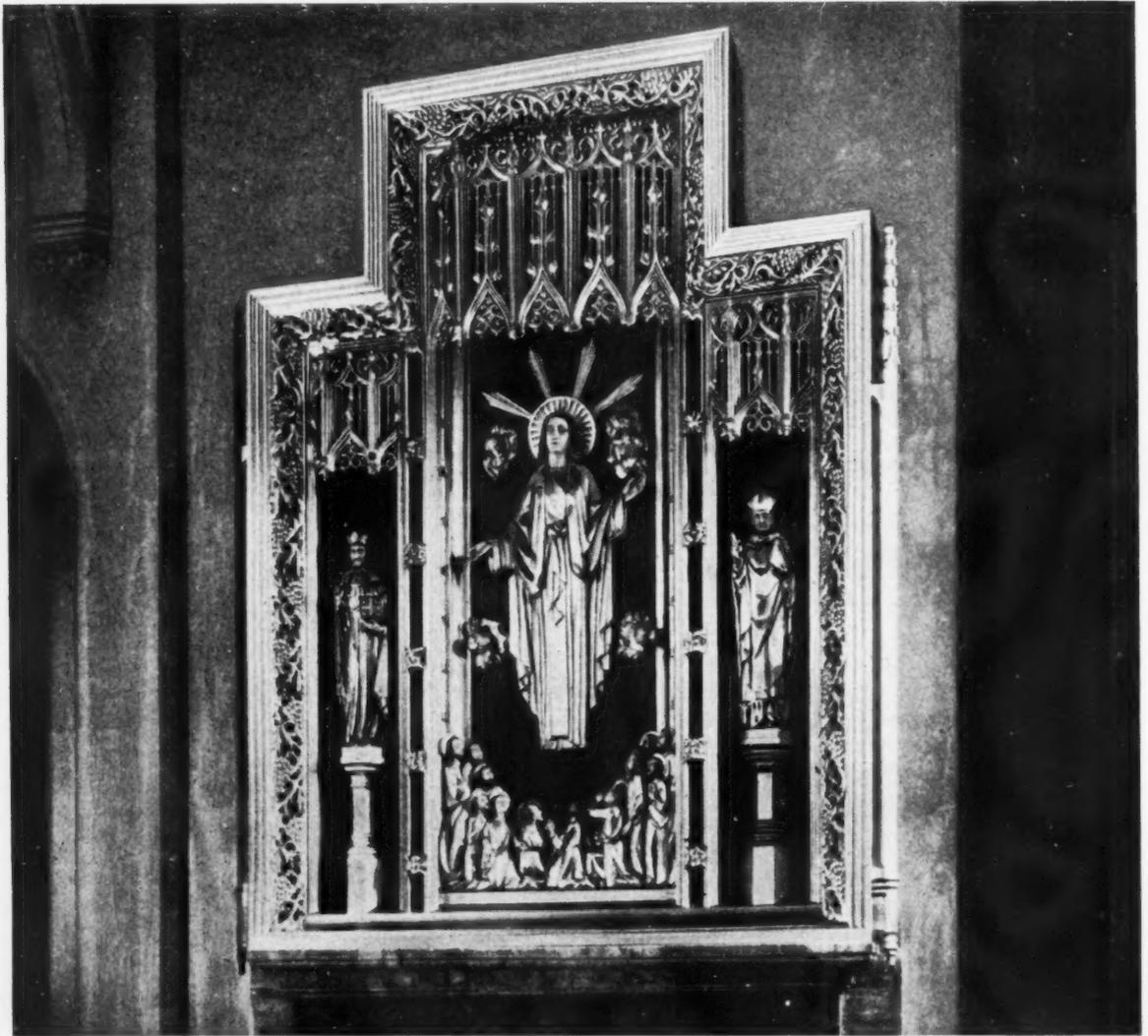
technical section

BUS GARAGE AT LEAMINGTON SPA, WARWICKSHIRE



Two interesting structural techniques have been used in the new garage for the Birmingham and Midlands Motor Omnibus Co. Ltd. at Leamington Spa, which was built during the summer this year. The roof is one of the first to be built in the "Umbrella" system, made and erected by E. H. Smith (Westhaven) Ltd., and the floor and road foundation consist of stabilised soil slabs, for which the Soil Engineering and Contracting Co Ltd. were consulting engineers. The architect for the project was A. B. Taunt, chief architect to the omnibus company. ROOF CONSTRUCTION: The "Umbrella" system consists of structural roof units of 40-ft. width and normally 75 ft.,

90 ft. or 105 ft. in length. These are each composed of a tubular steel lattice girder spanning the longer dimension between two tubular columns; from each side of the girder secondary trusses cantilever 20 ft. at 15-ft. intervals. These carry tubular purlins and have fish-plates at their ends for connecting to the trusses of the adjacent bay. The structure at Leamington consists of four units 105 ft. by 40 ft. covering the main garage area, and four 45 ft. by 40 ft. covering workshops. Above, an end bay of the "Umbrella" roof, showing the main lattice girder and cantilevered secondary trusses. The smaller "column" on the left is a cladding member and not part of the main



This pine and mahogany reredos was carved and decorated (with the exception of the figures) by Green & Vardy Ltd. under the direction of the architect, Adrian Gilbert Scott, C.B.E., M.C., F.R.I.B.A., for Upholland College, Wigan. The work is a typical example of the craftsmanship for

which Green & Vardy have become noted over the last decades.

Green & Vardy have carried out work on many fine churches and buildings throughout the country including the House of Commons.

For the finest interpretation of your joinery requirements, call in the craftsmen of Green & Vardy

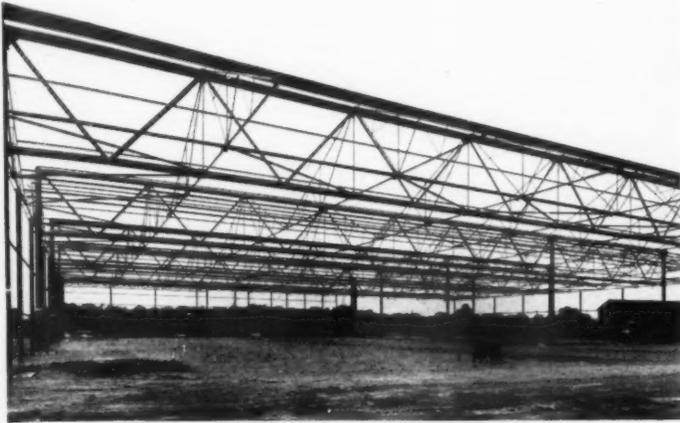
J. L. GREEN & VARDY LTD

Architectural Joiners

79 ESSEX ROAD, ISLINGTON, N.1. TELEPHONE: CANONBURY 3254

technical section

BUS GARAGE AT LEAMINGTON SPA continued



structure. Above, view under the 105 ft. span before the start of soil stabilisation. The roof is of 6-in. pitch corrugated asbestos sheeting with resin-bonded glass fibre roof-lights. FLOOR CONSTRUCTION: The essentials of soil stabilisation are, firstly, the sub-soil must be suitable for the stabilisation process and, secondly, all top soil must be removed and any organic matter in the sub-soil destroyed. Most soils are suitable for stabilisation; highly



organic soils are not. Chemical analyses of the sub-soil determine whether or not it is suitable, and if so a mix is designed to suit the nature of the soil and the loads proposed to be put on the slab. At Leamington, the soil was found after analysis to be suitable for stabilisation, certain areas only containing organic matter. These were afterwards treated with calcium chloride solution. The water content of the soil was determined and a mix designed to suit all the conditions. A certain proportion of water was added to the mix in this case, but it may be that no additional water is required at all. In some cases of very wet soils it may even be necessary to reduce the water content, and lime is generally used for this purpose. All the top soil was removed and the site reduced to the required level. One area of heavy clay was found and this was removed and replaced by good soil from a "borrow" pit nearby. The structure was then erected and all drains, etc., installed. The whole area of the site was churned up and pulverised by machine to a depth sufficient to allow for a slab of 6-in. thickness after compaction. Inaccessible areas such as those around stanchions and drain connections, etc., were rotovated by a hand-operated machine. Cement was then spread over the area in a ratio in accordance with the designed mix and the same machine again rotovated the whole area, at the same time adding the correct proportion of water. The machine used, one of the few in this country, is of American manufacture and driven by caterpillar tracks. It moves slowly along (left), thoroughly mixing the soil and cement, adding water if required and leaving a level surface behind it. The mixture was then compacted, first by light and then by heavy roller, to produce the finished slab.

continued from page 667

The description of apparatus is sound as far as it goes but it does not go far enough to be of use to architects, and the advice on planning is so scanty that it is useless where it is not actually misleading. The diagrammatic plans are not well thought out and the approximate dimensions shown will not bear examination. A fairly prominent note suggests that for full information reference should be made to M.O.E. Building Bulletin No. 11, *The Design of School Kitchens* (HMSO 3s.), but the irony is that so much of the advice offered by the Gas Council's booklet is contrary to that offered by Bul-

letin 11. It is reasonable to suppose that the purpose of this sort of publication is to encourage the use of gas equipment, and in fact there are several good reasons why its use is generally best, but unfortunately none is mentioned.

A great service that the Gas Council can do for themselves and the public in advertising of this kind would be to educate both user and supplier. Not all equipment that is marketed is good; little of it is as good relatively as that in the domestic field. It would therefore be of the greatest use to potential purchasers to be told what are the points to look out for when selecting appliances, such as whether an oven will

bake evenly on every shelf; whether the appliance will be easy to instal with simple and neat service connections; the points to check to ensure easy cleaning and maintenance; and so on, for in this business of large-scale catering the purchaser is rarely the actual user. There should then be illustrations only of those appliances that reach a high score of these desirable attributes, with explanations of why they do. If there are not many illustrations it will not be serious, for both the purchaser and the supplier would know the standard that was being sought, and soon the poorer appliances, those that give gas a bad name, would drop from the catalogues.

Announcing
the NEW
development



TROFDEK Mk II

LIGHTWEIGHT DECKING

Whilst hundreds of TROFDEK Contracts have been completed for Schools, Hospitals, Flats, Industrial and Office Buildings, etc., up and down the country—and abroad, development work has continued. The engineering principles, which four years ago led to TROFDEK, have been further developed to even greater advantage. TROFDEK MARK II now offers considerably increased spans—without adding to depth or self-weight. TROFDEK MARK II presents even greater savings in weight, cost, fixing time. Call our technical representatives to give you full details.

LOAD/SPAN TABLE FOR TROFDEK Mk. II

MAXIMUM UNIFORMLY DISTRIBUTED LOADS IN LBS. PER SQ. FT. (DESIGN LOAD—DEAD—LIVE LOAD)

Type	Depth Approx.	Wt. lbs. per sq. foot	Effective Span in Feet (Centre to Centre supports)																																						
			10'	11'	12'	13'	14'	15'	16'	17'	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'	40'	41'							
14	7 1/2"	3.0	32	30	28	26	25																																		
20	7 1/2"	3.5			74	59	48	40	33	28	26	25																													
24	9 1/2"	3.75					77	68	57	48	40	35	30	27	26	25																									
28	11 1/2"	4.0								76	65	56	49	43	37	33	29	26	25																						
35	15 1/2"	4.75															63	56	50	45	41	37	34	32	28	25															
41	15 1/2"	5.25																									41	37	34	31	29	27	26	25							

To co-operate with Architects who wish to avoid changing existing plans, production of the present Trofdek range will continue until January 1957.



Manufactured by the makers of CLADEK timber curtain walling.

H. NEWSUM SONS & CO LTD • GAINSBOROUGH • LINCOLN • Telephone 2391

London Office: 28 ST GEORGE STREET • HANOVER SQUARE • W.I. Telephone: MAYfair 3453

13 MATERIALS: TIMBER

Design and practice of joinery, 14

by John Eastwick-Field and John Stillman

THE ARCHITECT AND THE JOINERY INDUSTRY

The authors conclude their series of articles on the design and practice of joinery (which has been going since September 30, 1954*) with a review of the factors which have made for the present decline from earlier standards of joinery practice and by describing the different kinds of joinery firm which comprise the industry and how the architect can make the best use of each.

From time to time readers of this series of articles will have asked themselves the question: is it necessary for the architect to have more than a superficial knowledge of this subject? Joinery is now a specialized industry: can we not rely on the manufacturers for technical knowledge? Many architects in fact do no more than draw the profiles and leave the construction to the trade.

There are at least two good reasons why this is unsatisfactory and why some knowledge on the part of the architect is necessary. First, because without it he will not know whether what is being made for him is well done or badly done; and second, because, since it is not always possible to go to firms whose standing is such that it is in their own interest to produce only the best, he must be able to specify what he requires in sufficient detail to ensure that he obtains work of the standard which he has in mind, and that his specification and drawings contain sufficient information to permit fair tendering.

Apart from these reasons, it is our opinion that much joinery produced today is inferior in quality and design—though the best is as good as ever it was—and that the architect has a duty to help raise the general standard.

The factors which we think have contributed to a deterioration in the quality of joinery are:

1. *Bad timber*: most defective work is blamed on the poor quality of timber available, particularly since the last war, but it is by no means the only factor and it has been much exaggerated. Exploitation and bad afforestation have certainly resulted in the loss of most of the larger trees, particularly in respect of softwood: also many of the sources of supply for both hardwoods and softwoods are now denied us as a result of economic conditions. Best quality timbers from the Baltic ports have not been imported for some

time, and since the last war the principal familiar and well-tried hardwoods, particularly Honduras mahogany, Burma teak and good quality English oak have been either prohibitively expensive or difficult to obtain. Despite the excellent work of the Forest Products Research Laboratory and of the Timber Development Association in publishing reliable information about the behaviour of the unfamiliar species of hardwood now imported in large quantities and varieties, the timbers themselves are not all reliable and the trade has not yet had time to build up a working knowledge of all the varieties it may encounter.

2. *Seasoning*: the old methods of air seasoning have largely been replaced by kiln seasoning and although the latter is in theory no less satisfactory than air seasoning, it requires considerable skill in operation, and in practice this has not always been given. Many practical joiners are doubtful about its efficiency, and from experience claim that it makes their work less reliable. There is, however, no question but that kiln seasoning is necessary if only to obtain dry enough timber for use in centrally heated buildings. Central heating is in fact probably the cause of more trouble in joinery than anything else, because the low moisture content which it demands is so often ignored.

3. *Cheapness and the tendering system*: We now accept a standard of workmanship which would not have been accepted in the 19th century. Because of the demand for cheap standard joinery, techniques have changed and machine production has greatly increased. In a competitive market it is understandable that there is a temptation to employ relatively unskilled labour and allow very rough work to pass. New materials, such as plywood, chipboards and hardboard which, when intelligently used, are of great advantage, are often abused.

The development of competitive tendering has made it more difficult for the architect to work closely with the joiner. He is expected to complete his details before the contractor or joiner is appointed: thus he does not have the opportunity of discussing his proposals in detail with the joiner when he is working out the design.

4. *Labour*: In common with most building crafts, there is a shortage of men who are really highly skilled, and the present wages are based rather on quantity of production than on skill in workmanship. The number of manufacturers, therefore, who are qualified and willing to take the trouble to produce good joinery, is probably less than it was in the past.

5. *Architects' education*: When architects were trained in offices they learnt their joinery by the experience of detailing. Joinery was a very important part of architectural design and if they were lucky they will have benefited from the knowledge of their principals in whose offices there may well have been a strong tradition.

Today, most architects are trained in schools where a multitude of subjects is taught over a relatively short period, and joinery which in any event does not lend itself readily to theoretical teaching, is often given insufficient attention.

* Previous articles in this series appeared September 30, 1954; November 28, 1954; January 13, 1955; March 24, 1955; July 21, 1955; August 25, 1955; September 1, 1955; December 15, 1955; May 3, 1956; May 10, 1956; May 17, 1956; August 16, 1956; August 30, 1956; September 13, 1956.

Moulding the future...

No dog, no vanman, no load—yet.

When they come, this B.R.S. van, built by Holmes Ltd. of Preston, will have a hard life. And from road to roof it is ready to take it.

The translucent roof especially: it is tough enough to take a poke from a pole or a bang from a box.

It is made of Fibreglass Reinforced Plastic, the material that doesn't drum, dent or corrode, that can be moulded to complex shapes in one piece—without high pressures or costly equipment.

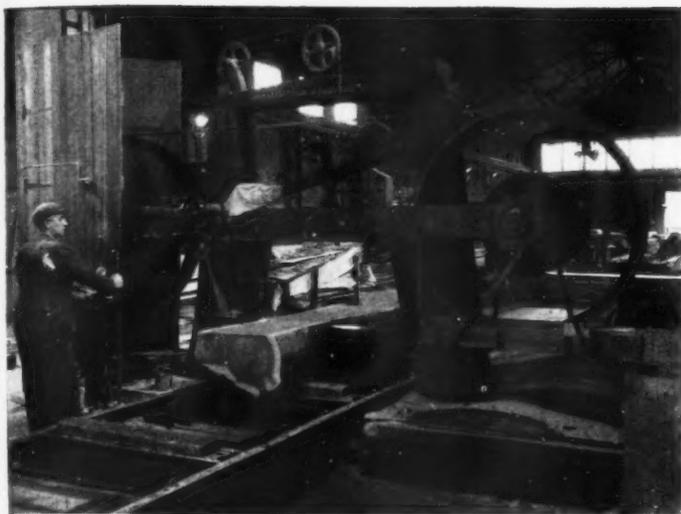
Fibreglass have an F.R.P. advisory service which is expert, confidential and free.



FIBREGLASS
TRADE MARK

the backbone of Reinforced Plastics

technical section



Although timber sections are always made by machinery, and joints almost always, the fitting together, glueing, wedging, cramping and finish is almost invariably done by hand.

Above: a band saw converting logs. Below: staircase strings for winders being made by hand.



6. *Departure from established practice*: Formerly there was more timber used in any one building than there is generally today, and fairly elaborate joinery such as folding shutters, cornices, porches, panelling and so on, held an important place even in humble domestic work. To architects, joinery was of importance as a means of aesthetic expression since it contributed greatly to the character of buildings: and to the craftsman it provided a test of skill. The incentive to produce good work was strong, and there was a correspondingly greater need for expert knowledge. Because the components commonly used in the 18th and 19th centuries are both too elaborate and too expensive for general use today and belong to a different aesthetic, it has become more necessary to invent new designs for joinery. The architect will, however, not find books on the subject which do more than repeat the traditional patterns—sash window, battened door, panelled door, etc.—showing sizes and shapes of sections, but giving little guidance on the principles on which they were originally designed.

The industry

At this point we propose to say something about the people who make the joinery and their factories and workshops because we feel that to know something of them will enable the architect to avoid impracticable details and waste of time and material, and will also enable him to take proper advantage of the widely differing kinds of joinery works of which the industry is composed. For example, a particular design for a handrail terminal for a housing estate which the architect might think would be simple to make but which has not only to be put many times through a machine but also to be finished with a spokeshave by hand, would not take advantage of the machine production desirable for this class of work.

When one comes to consider what kind of firm shall undertake any particular work, one finds that, very broadly speaking, there are at present three classes of joinery works, each of which is best fitted to do certain kinds of work: the small builder's shop, the independent joinery works together with shopfitters and joinery works belonging to large firms of building contractors and finally works organized for mass production.

The small builders' joinery shop, traditionally a part of every builder's organization, is mainly used nowadays to carry out small scale work in which there is no great quantity, and to be to hand for repairs. The quality of the work varies and depends on the extent to which the builder has retained a traditional organization, employing skilled craftsmen and having some system for obtaining properly seasoned timber. Within limits of quantity and for the class of work which they are equipped to undertake, it is possible for such shops to turn out work equal in quality to that of large factories with elaborate machinery, and to do so very economically. They have, however, little capacity for working out the construction from a design drawing and are unlikely to produce work satisfactorily which relies on modern techniques. On the other hand,

technical section

although they would possibly not learn much from the architect about traditional forms of joinery such as double hung windows, they would nevertheless welcome and expect from the architect full size details, particularly for anything which departs at all from the conventional. They will normally produce their best work if the architect discusses the job with the actual joiner who undertakes the work and who is, incidentally, probably the same individual as the man who fixes the joinery in the building, and with whom the architect will inevitably come into contact on the site. By no means all builders do, however, nowadays have their own joiners' shops, and it is likely that the number who do will decrease. Builders find it difficult to provide a steady flow of work for their shops, particularly since doors and windows can be purchased more cheaply from factories where they are mass produced to standard designs.

In the second class, there are the independent joinery works, which may vary considerably in size but which are generally bigger and more fully equipped with machinery than the average builder's shop. They now supply the bulk of the joinery for the building industry—acting as sub-contractors, sometimes nominated by the architect but often approached by the builder as a matter of course. Because of the volume of work which they handle they are able to work more efficiently and economically and to take advantage of more elaborate and expensive machinery than the small builder could afford. Sometimes they are able to maintain their own timber stocks and kilns and in our opinion this gives them an obvious advantage. The best and some of the worst joinery is produced in these independent joinery works, and it behoves the architect to find out any particular firm's reputation before entrusting his work to it or allowing his builder to do so. Most of the large contracting firms maintain joinery works, under separate management, which, whilst being a part of the concern, are in no way comparable to the small builders' shops, and do in fact supply joinery on a large scale to the trade in general, as well as to their own firms. They can therefore be considered in the same category as the independent firms and are accustomed to giving estimates in competition with them. Within the general category of "independent" firms there are some which specialize in very high class and complicated joinery both for modern buildings or for restorations, where much of the work may have to be carried out by hand, if not actually carved. It often happens, too, that the work which these firms undertake extends to furniture and cabinet making—and the furniture may range from individual designs by architects to mass produced articles such as wireless cabinets. A number of the larger firms, which are sometimes owned by the principal furnishing stores, have gained reputations for work requiring special knowledge, such as the interior fitting of ships, hotels and board rooms, and are able to call upon associated departments to enable them to carry out the whole of the interior furnishing, including, if necessary, its design. Slightly different in character

are the "shopfitters," since such firms employ craftsmen in many trades in addition to joiners. The different trades work together in the same building to produce the often intricate fittings which are used in shops, and which incorporate glass and metals and plastics, as well as timber. These firms and others similarly organized carry out exhibition stands and often design them themselves. The standard of workmanship is usually high, and for work involving the combination of several materials and the use of new techniques such as might be required in a showcase or counter, it would be appropriate for the architect to ask them to undertake the work, although because of the organization and labour which they have to maintain they may be more expensive than other joiners. Finally, in the third class there are firms who are specially organized for the manufacture of standard articles by methods of mass production. Since the demand for standard joinery components is mainly confined to doors, windows, skirtings, staircases and cupboard fittings made to BS and EJMA specifications and are largely for housing estates, such factories aim at producing the components as cheaply as possible.

Machine production

Having mentioned machines in connection with mass production we must avoid giving the impression that only in works of this kind are machines used extensively. In fact all joinery works and shops—except the smallest of local builders—are equipped with machines which perform a number of basic functions (sawing, planing, moulding, joint making) and, in the main, the large machines for mass production are designed to perform the same functions, but to perform them more quickly.

It can be taken that under today's conditions, timber sections are always prepared by machinery: that is to say, they are cut from the logs, thickened, planed, moulded and sanded by machine. Having obtained the required section, the joints are also nearly always cut by machinery. Incidentally, the joints which the machine makes are, with few exceptions, almost identical with those traditionally made by hand, and their design is, broadly speaking, conditioned by the timber and not by the tools.

After the joints have been cut, however, their fitting together, glueing, wedging, cramping and finishing is almost invariably done by hand. Only in certain works where mass production is fully exploited, as in the manufacture of flush doors (and very rarely in casement windows) are there machines which do the whole operation, so that this general pattern of work is departed from.

Lastly with greater mechanization there has come about a distinct division of trades into "woodworking machinist" and "carpenter and joiner" even to the extent of allegiance to different unions. The craftsman joiner, who used to carry out the whole operation, now receives the sections fully prepared with the joints cut by the machinist, and his work is thus restricted to the putting together and finishing.

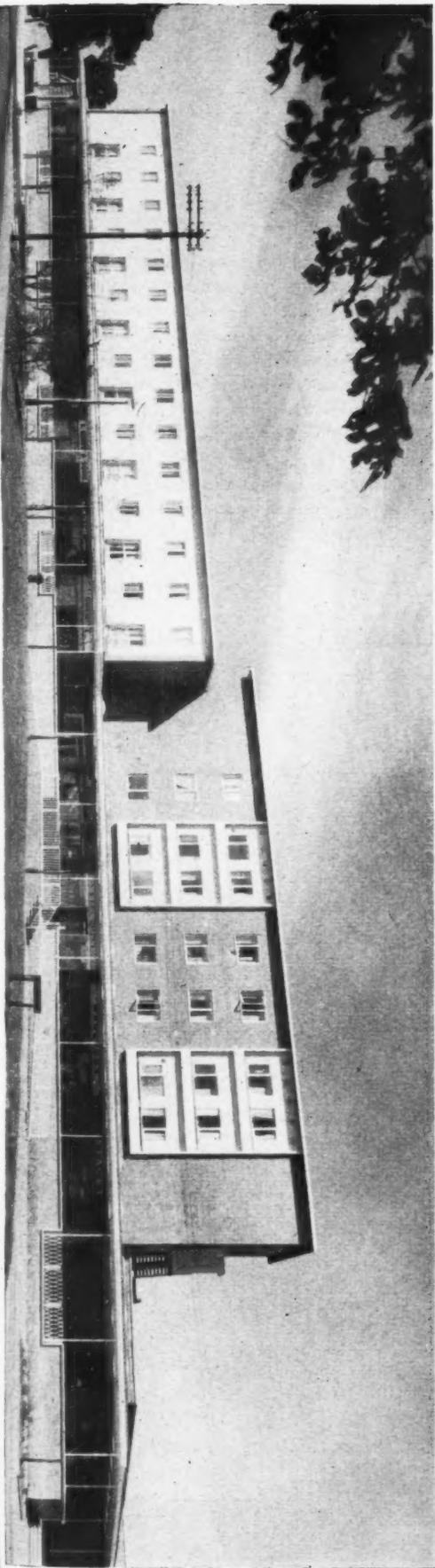
building illustrated

SHOPS and MAISONNETTES

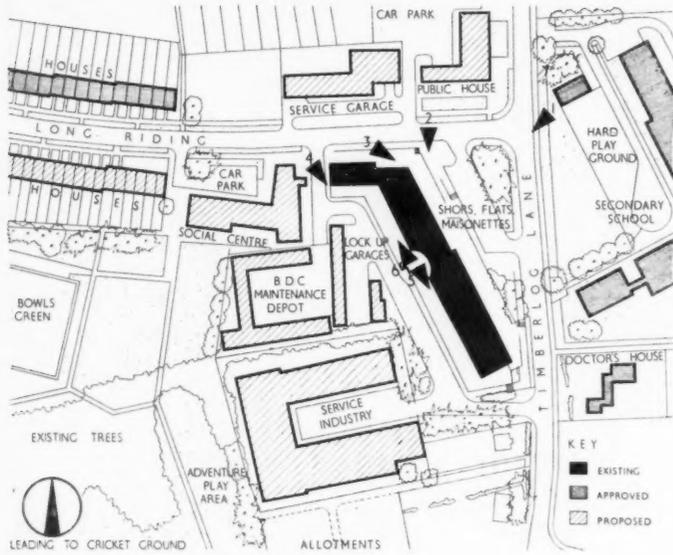
at BARSTABLE NEIGHBOURHOOD, TIMBERLOG LANE, BASILDON NEW TOWN, ESSEX, for the BASILDON DEVELOPMENT CORPORATION designed by NOEL TWEDDELL, chief architect; A. B. DAVIES, deputy chief architect; J. FARBER, senior architect; quantity surveyors E. C. HARRIS and PARTNERS

This block of shops, with flats and maisonnettes over, is the first to be analysed in the JOURNAL and it forms the nucleus of the neighbourhood centre as shown by the site plan on page 678. The shops have mainly been in use just over eighteen months, which is long enough to prove they are holding their own against old-established shopping centres of Vange and Piscea, a 3d. bus ride away. The block which has 16 lock-up shops, 2 four-roomed flats, and 12 five-roomed maisonnettes, appears to be an excellent start to what should prove a lively neighbourhood centre. The structure is simple and the block has been built at a very economical price. The question must arise, however, whether standard size shops are a flexible enough solution for the unpredictable shopping needs of a rapidly developing centre. The Corporation consider that this problem will be solved when the wider variety of shops are built at the town centre. Framed construction would give more flexibility, but be too costly.

Viewpoint 1: the principal shopping frontage. On the right is a single-storey wing without living accommodation.



building illustrated

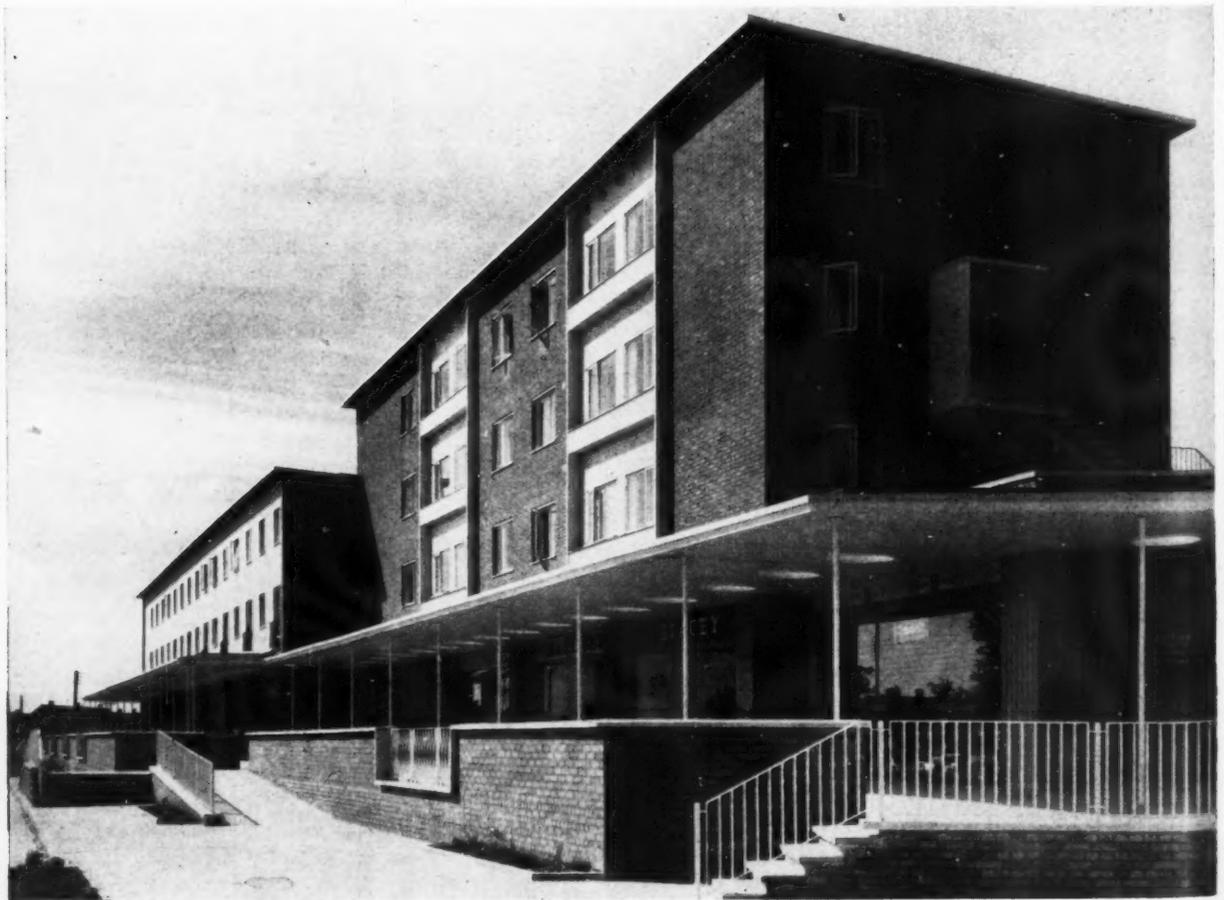


Key plan showing photographic viewpoints

The key plan (left) shows the location of the building within the other proposals for the neighbourhood centre. The shops are now all occupied, but neither the neighbourhood nor the other facilities in the centre are fully developed. Below, viewpoint 2: a closer view of the east and north facades. The upper floors on the left are faced with light coloured rendering and those on the right with red facing bricks. There are blue tiles round some of the windows. The canopy is such a bold feature that it enables different shop front treatments to be used without creating a discordant effect. The architects have not attempted to guide the tenants in the use of standardized fascia lettering.

SHOPS and MAISONNETTES

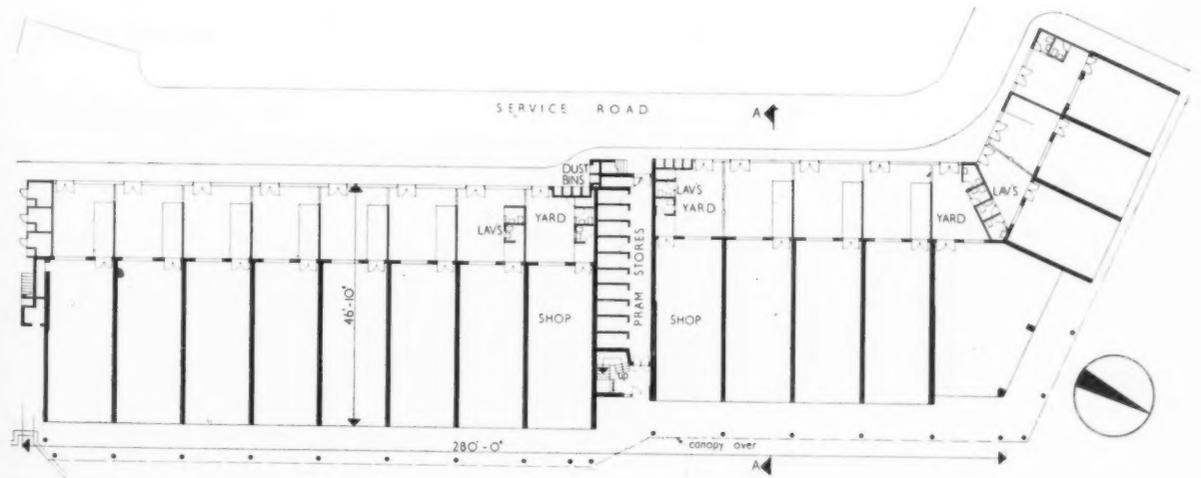
at BARSTABLE NEIGHBOURHOOD
 BASILDON NEW TOWN
 designed by NOEL TWEDDELL



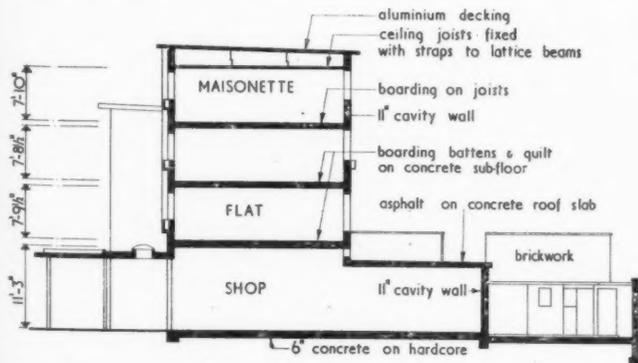
building illustrated



First and typical upper floor plans



Ground floor plan [Scale: 1/4" = 1' 0"]



Section A-A [Scale: 1/4" = 1' 0"]

The ground floor plan shows the layout of the shops and the approaches to the dwellings above. Note the approach from the front of the parade, the row of stores for the dwellings, and the dust-bin lockers on the service road.

building illustrated



Above, viewpoint 3: a near view of the north-east corner shop. The canopy, which is constructed of timber and carried on tubular steel stanchions, is prevented from looking too heavy by the watch-glass roof lights and inset fluorescent fittings. A successful solution seems to have been reached in this scheme to the problem of attaining visual lightness and the required standard of durability in a building that suffers rather rough usage. Below right, the north-east corner of the block. The wall on the left screens the access to upper floor maisonettes.

SHOPS and MAISONNETTES

at BARSTABLE NEIGHBOURHOOD,
BASILDON NEW TOWN
designed by NOEL TWEDDELL



building illustrated



Below, viewpoint 4: the approach to the maisonettes on the west side of the block. The backs of shops always present a difficult problem; although the upper level approach to the dwellings, viewpoint 5 (above right), is not unpleasant, the view from the high level approach, viewpoint 6 (right), into the shop back yards is less satisfactory. Shop yards, unless covered over, are never likely to provide a very tidy appearance, but a screen along this maisonette approach perimeter would have helped to mask them. The architects point out, however, that a screen would hide the view of the social centre and other future development to the west of the shops.



analysis

CLIENTS' BRIEF: their stated requirements

To provide a block of 16 lock-up shops, two of which are used as a Crown Post Office, with 12 maisonettes and two flats over which will form part of the Barstable Neighbourhood Centre.

SITE: topography, surrounding, access planting

Area, 1.6 acres. The site was partly covered with low density sub-standard dwellings, some of which served as existing shops. The site is fairly level with no marked features. Some of the existing dwellings still remain in this area

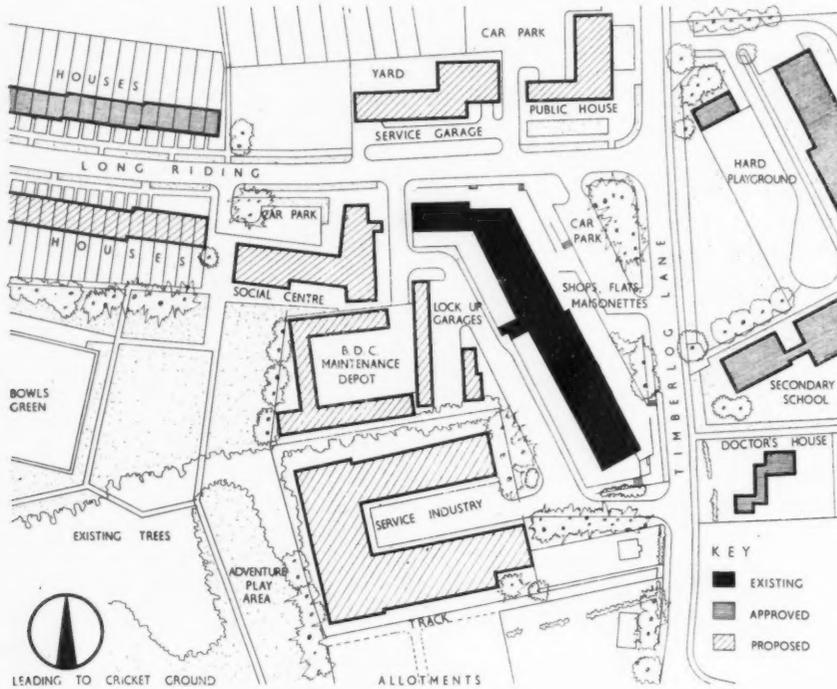
and they will be cleared as the neighbourhood centre is completed. Access is from Timberlog Lane, which links the Barstable and Vange Neighbourhoods, and from the spine road which links Barstable Neighbourhood with the town centre. Planting has been used as an integral part of the forecourt treatment. Many of the sound existing trees are retained.

PLAN: general appreciation and relation of units

The shops have been designed as one side of a square which forms the main part of the neighbourhood centre. The necessity of closing this square has determined the elongated "L" shape of the block. The completed neighbourhood centre will include a public house, filling station, a secondary modern school, a doctor's house and a community centre. The main part of the block is three storeys high, but this changes to four storeys at the northern end, emphasizing the corner of the square which leads to the main spine road of the neighbourhood.

MAIN CONSTRUCTION: general appreciation

Construction generally is of load-bearing brick cross walls with floors spanning between them. Floors between flats and between maisonettes are reinforced concrete. Floors within maisonettes are timber joist and boarded. Roofs are aluminium decking on lattice beams.



Site plan

	cost per sq. ft.	s	d
preliminaries and insurances			1
contingencies			
<i>N.B. based on final figures</i>			

STRUCTURAL ELEMENTS

Work below ground floor, level, foundation type, basement

Location	Materials	Finish	Reasons and comments
Strip foundations	Throughout under main cross walls and rear walls	Reinforced and mass concrete	All slabs and floors span to cross walls
work below ground floor level 4 10½			

External walls and facings

Location	Materials	Finish	Reasons and comments
Flank and party walls	Shops and flats	Brickwork	Facing brick
External and party walls	Maisonettes	Brick and clinker block cavity	Special aggregate rendering
Front panels	Flats and maisonettes		Tile facing
external walls and facings 9 9			

Frame or load bearing element

Location	Materials	Beam spans	Column grid	Reasons and comments
Load-bearing brickwork	Shops, flats and maisonettes			Load-bearing cross walls were found to be economical at these spans and for this type of loading
frame or load bearing element — —				

Upper floor construction

Location	Materials	Finish	Reasons and comments
Slab	Shops and flats	Reinforced concrete	Timber on battens
Timber	Maisonettes	Timber joists	Timber boarding
Canopy	North and north-east acades	Timber and steel framing	Wood-wool and felt
upper floor construction 5 11½			
canopy 2 9			

analysis

<i>Staircases</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Reinforced concrete	Main entrance and externally		Granolithic internally, asphalt externally	Fire resistant construction for communal staircase

Height, floor to floor = average 7-9 ft.

staircases 9½

<i>Roof construction</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Monopitch	Throughout	Aluminium decking on lattice beams		This roof construction gives the architectural effect desired and also allows the running of services in the roof space

roof construction 2 7

<i>Roof lights</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Dome lights	In canopy	42 in. diameter clear glass	Plywood lining	To increase daylight on shop fronts and to release the monotony of a long length of canopy

roof lights — —

<i>Windows</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
	All floors	Timber	Oil paint	
	Main stairs	Metal	Oil paint	Timber windows generally of E.J.M.A. sections

windows 11½

<i>External doors</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
	Throughout	Plywood faced flush	Oil paint	Economy and ease of maintenance

external doors 9

<i>Glazing</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Windows and doors	Throughout			Generally clear glazing in 24 and 32 oz. Obscured glass to balconies and sidelight to main entrance doors
	Main staircase	Patent glazing		

glazing 2½

PARTITIONING

<i>Internal partitions</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Clinker block	Throughout		Plastered and distemper	4-in. blocks in load-bearing walls, 2½-in. blocks in non-load-bearing walls

internal partitions 1 1

<i>Internal doors</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Flush	Throughout	Timber	Oil paint	Economy and easy maintenance

internal doors 8½

<i>Ironmongery to internal doors</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>
Knob and lever furniture	Flats and maisonettes		SAA	Standardised ironmongery whenever possible

ironmongery to internal doors 3

<i>Metal balustrades</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	
	Main stairs and external stairs	Wrought iron	Oil paint	

metal balustrades 1 3½

analysis

FINISHINGS

<i>Floor finishes</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
	Shops	Concrete	Finish by lessee	Concrete floors between flats have insulating quilt with timber floor on battens laid on top		
	Maisonettes and flats	Timber on fillets				
					floor finishes	9½
<i>Sound insulation</i>	<i>Location</i>	<i>Insulation standard</i>	<i>Reasons and comments</i>			
Glass fibre blanket	1st and 2nd floors over flats		To reduce sound travel between flats		sound insulation	
					2½	
<i>Wall finishes</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Plaster	Generally		Distemper and emulsion paint	Hard wall plaster generally		
Vermiculite plaster	Main stairs		Oil paint	Vermiculite plaster on stairs to reduce noise echoes		
					wall finishes	1 2½
<i>Ceiling finishes</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Concrete soffit	Shops and flats		Plaster and distemper	Natural domestic construction		
Timber floors	Maisonettes		Plaster-board and distemper			
					ceiling finishes	11½
<i>Decorations</i>	<i>Location</i>	<i>Paint types</i>	<i>Munsell or other ref.</i>	<i>Reasons and comments</i>		
Walls and ceilings	Throughout	Distemper and emulsion paint				
Woodwork	Woodwork generally	Oil		All wood work generally painted white with contrasting colours on doors		
					decorations	1 3½

FITTINGS

<i>Office fittings</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Special fittings, decorations and heating	Post office					
<i>Other fittings</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Cupboards and shelving	Maisonettes and flats	Timber	Oil paint			
					Post Office and other fittings,	2 11½
<i>Kitchen equipment</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
EJMA units	Maisonettes and flats		Oil paint	Normal domestic standards		
					kitchen equipment	1½

SERVICES

<i>Rainwater disposal</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
External pipes		Cast iron and steel	Oil paint			
					rain water disposal	8
<i>Plumbing internal: waste disposal</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Single stack		Cast iron		Special pre-fabricated units to take waste connections		
<i>Hot water storage</i>	<i>Location</i>	<i>Materials</i>	<i>Capacity</i>	<i>Reasons and comments</i>		
Cylinders	Linen cupboard	Copper		Standard domestic specifications		
<i>Cold water storage</i>	<i>Location</i>	<i>Materials</i>	<i>Capacity</i>	<i>Reasons and comments</i>		
High level tanks	Indoor flats and maisonettes	Asbestos cement	40 gall.	Asbestos cement c.w. tanks are used generally to avoid electrolysis		

analysis

					s	d
<i>Plumbing: sanitary fittings</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Glazed earthenware			White	Standard domestic specifications		
plumbing internal: waste disposal, hot and cold water storage, plumbing: sanitary fittings					2	0½
<i>Heating installation: heat exchanger type</i>	<i>Location</i>	<i>Criteria temp.</i>	<i>Air change rate</i>	<i>Reasons and comments</i>		
Approved appliance open fire	Living room of flats and maisonettes			Standard domestic specification		
<i>Boiler type and capacity</i>	<i>Location</i>	<i>Heat load and fuel type</i>	<i>Stoking method</i>	<i>Reasons and comments</i>		
Back boiler	Living room of flats and maisonettes	Solid fuel		Standard domestic specification		
heating installation, boiler type and capacity					8	
<i>Drainage: type of system</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Soil and rainwater to separate main sewers		Glazed stoneware				
drainage					1	6¼
<i>Kitchen ventilation</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Larders		2/9 in. × 6 in. air bricks	Plaster louvres internally			
kitchen ventilation					—	—
<i>Gas installation</i>	<i>Location</i>	<i>Materials</i>	<i>Finish</i>	<i>Reasons and comments</i>		
Domestic				Cooker, refrigerator, jig fitting for heater and wash boiler point, gas ignition to fires		
gas installation					4	
<i>Power supply type</i>	<i>Location</i>	<i>How distributed</i>	<i>Reasons and comments</i>			
Ring main to flats and maisonettes						
electrical installation					1	3
<i>Paved areas</i>	<i>Location</i>	<i>Materials</i>	<i>Reasons and comments</i>			
Forecourt	Front elevation		Car parking planting and hard paving provided			
paved areas					2	3½
total net cost per sq. ft. of floor					48	4

THERMAL INSULATION

<i>Type</i>	<i>Location</i>	<i>U-value</i>	<i>Reasons and comments</i>
Vermiculite screed	Rear access terrace at first floor		To prevent condensation at rear of shops
Insulation board	Main roof decking		To give necessary heat insulation to roof

FIRE

<i>Planning precautions</i>	<i>Access for fighting</i>	<i>Means of escape</i>	<i>Reasons and comments</i>
		Main access terrace at 1st floor served by 3 staircases	

REFUSE DISPOSAL

<i>Method</i>	<i>Type of refuse</i>	<i>Waste recovery</i>	<i>Materials and installation</i>	<i>Reasons and comments</i>
Individual bins	Domestic, trade	Weekly collection		Refuse collection is made only from ground floor level

analysis

TIME SCHEDULE

<i>Tender date</i>	<i>Contract signed</i>	<i>Work commenced</i>	<i>Work completed</i>	<i>Type of contract</i>
April 1, 1953	October 12, 1953	September 3, 1953	Taken over January 17, 1955	Lump sum

RATIOS

<i>Area of enclosing walls</i>	= 0.696	<i>Area of windows (incl. ext. doors)</i>	= 0.099
<i>Total floor area</i>	= 1	<i>Total floor area</i>	= 1
<i>Area of solid wall</i>	= 0.598	<i>Total roof area</i>	= 0.348
<i>Total floor area</i>	= 1	<i>Total floor area</i>	= 1

COST ANALYSIS

<i>Total floor area (excluding basement)</i>	<i>Tender date</i>	<i>Tender cost of superstructure</i>	<i>Installations and finishings</i>
27,597 sq. ft.	April, 1953	£45,838 6s. 6d.	£8,864 4s. 10d.
<i>Tender cost of foundations and basement</i>	<i>Tender cost of ancillary buildings and external work</i>	<i>Gross total cost</i>	<i>Cost per sq. ft. super of floor</i>
£6,703 2s. 5d.	£5,216 2s. 8d.	£66,621 16s. 5d.	£2 8s. 4d.

COST COMMENT

It must be appreciated that in assessing the values of this cost analysis for making comparisons of any kind with other analyses, there are three distinct building types concentrated in this neighbourhood block, i.e., flats and maisonnettes, shops and a post office. Each one of these types contain its own individual problems of design but the analysis shown gives the overall and all-embracing picture of the cost level for each of the various elements. Further investigation and analysis would be necessary before these costs could be used, especially if taken out of context, in planning for other and similar forms of building projects. The quantity surveyors state that, in this instance, separate bills of quantities were not prepared for the shops and living accommodation above.

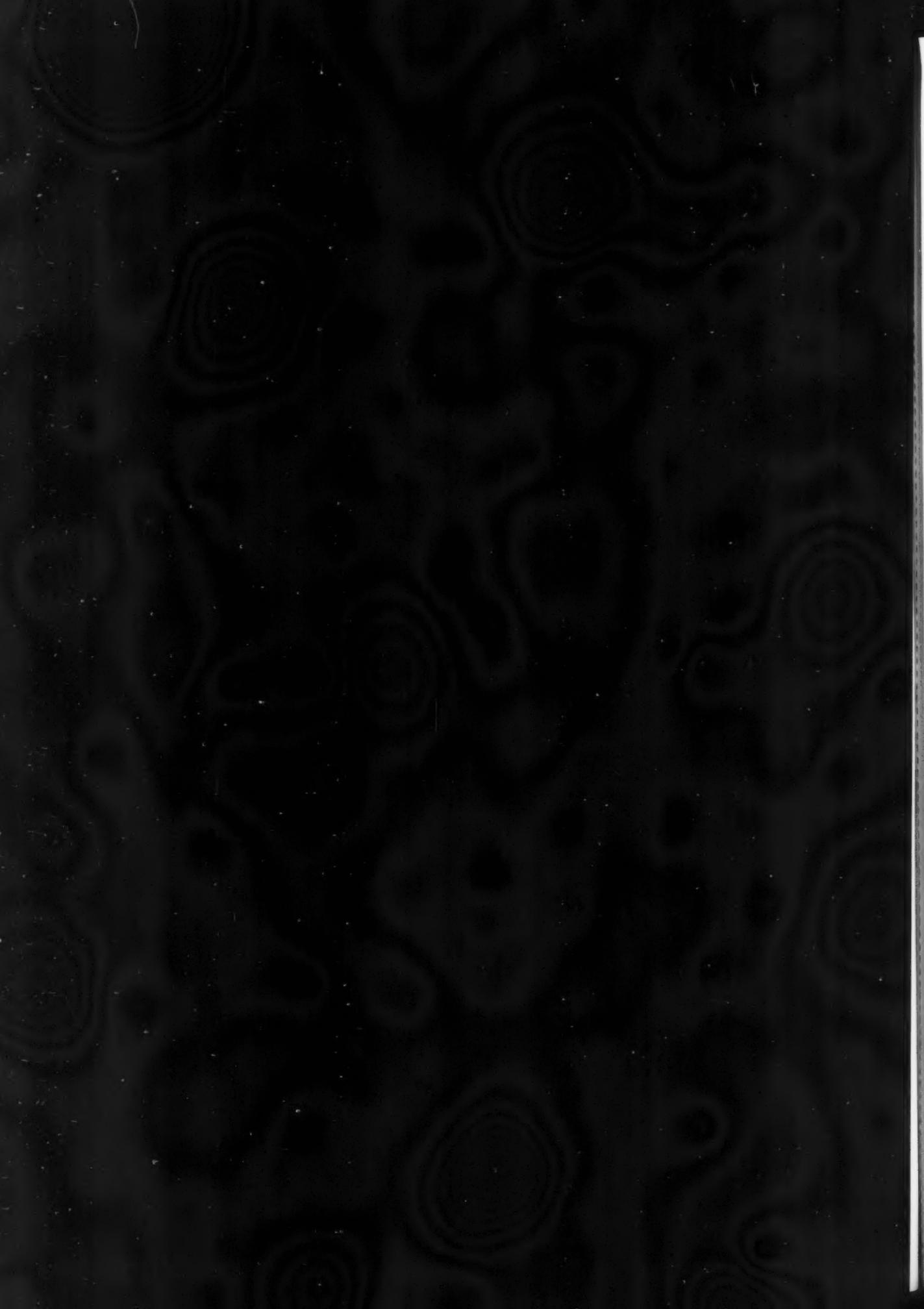
SITE ORGANIZATION

Site, labour and equipment: labour was organized on the site by a general foreman. Two hoists—8 months, three mixers—10 months and one R.B.10—3 months. *Sub-letting:* plastering. *Job management:* incentive bonuses to all trades other than plasterers. Visiting contracts manager twice each week.

CONTRACTORS

Clerk of Works: J. W. Reid. *General contractors:* J. & J. Dean Ltd. *Sub-contractors:* *Special roofings, roofing felt:* William Briggs & Sons Ltd. *Glass:* Mustill Wallis & Co. Ltd. *Patent glazing:* Williams & Williams Ltd. *Structural steel and balcony railings:* Clark Hunt & Co. Ltd. *Stoves, window furniture, sanitary fittings:* B. Finch & Co. *Metal door frames:* Henry Hope & Sons Ltd. *Patent flooring:* Frazzi Ltd. *Gas fixtures and gas fittings:* North Thames Gas Board. *Plumbing:* A. J. Thomas & Co. Ltd. *Casements:* Duncan Tucker (Tottenham) Ltd. *Joinery and shop fittings (post office):* J. & J. Dean Ltd. *Wallpaper and paint:* Imperial Chemical Industries Ltd. *Reinforced concrete:* Richard Costain Ltd. *Ventilation:* Greenwood & Airvac Ventilating Co. Ltd. *Plaster:* Alfred Charldwood & Son Ltd. *Asphalt:* Webbs Asphalt Roofing & Flooring Co. *Concrete blocks:* Churchill Johnson Ltd. *Bricks:* Brick & Tile Co. Ltd. and London Brick Company. *Electric wiring:* Westons (Westcliff) Ltd. *Tiling:* B. Finch & Co. Ltd. and R. Passmore & Co. Ltd. *Artificial stone:* Costain Concrete Co Ltd.





BALCONY: OFFICES IN LONDON, S.E.1

Frederick Gibberd, architect



All beams and columns are encased in polished precast terrazzo slabs in which Portland stone aggregate was used. Wires cast in these slabs were attached to the main reinforcement and the joints between slabs were pointed in cement. Conduit serving the lamps was cast inside the beams.

WALL PANELS: POLICE HEADQUARTERS AT WELLINGTON, SALOP

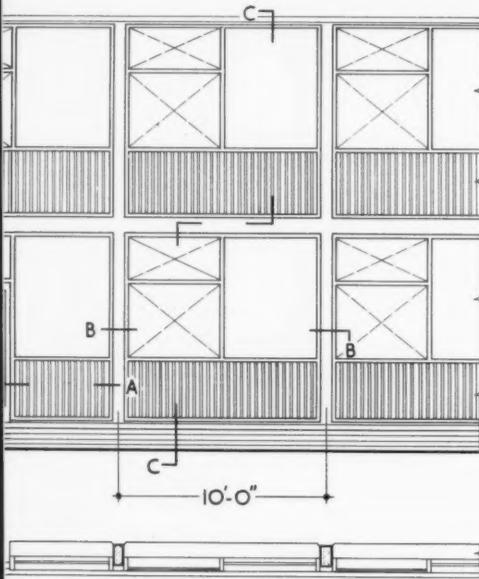
C. H. Simmons, architect to the Salop County Council

The softwood frames enclosing these inset panels are fixed proud of the supporting beams and columns and are painted white so that they and not the in-situ concrete structure determine the character of the facade. A deep upstand beam is concealed behind the panel at first floor level.

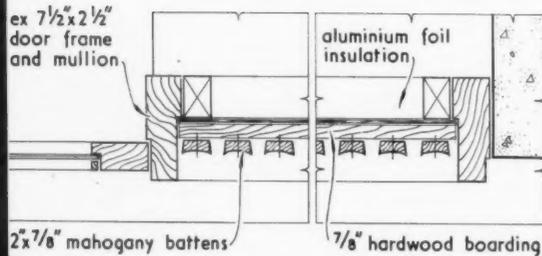
working detail

WALL PANELS: POLICE HEADQUARTERS AT WELLINGTON, SALOP

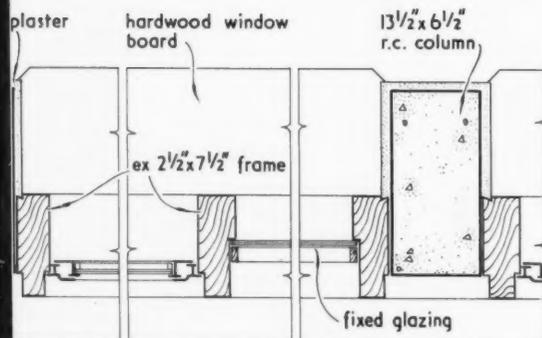
C. H. Simmons, architect to the Salop County Council



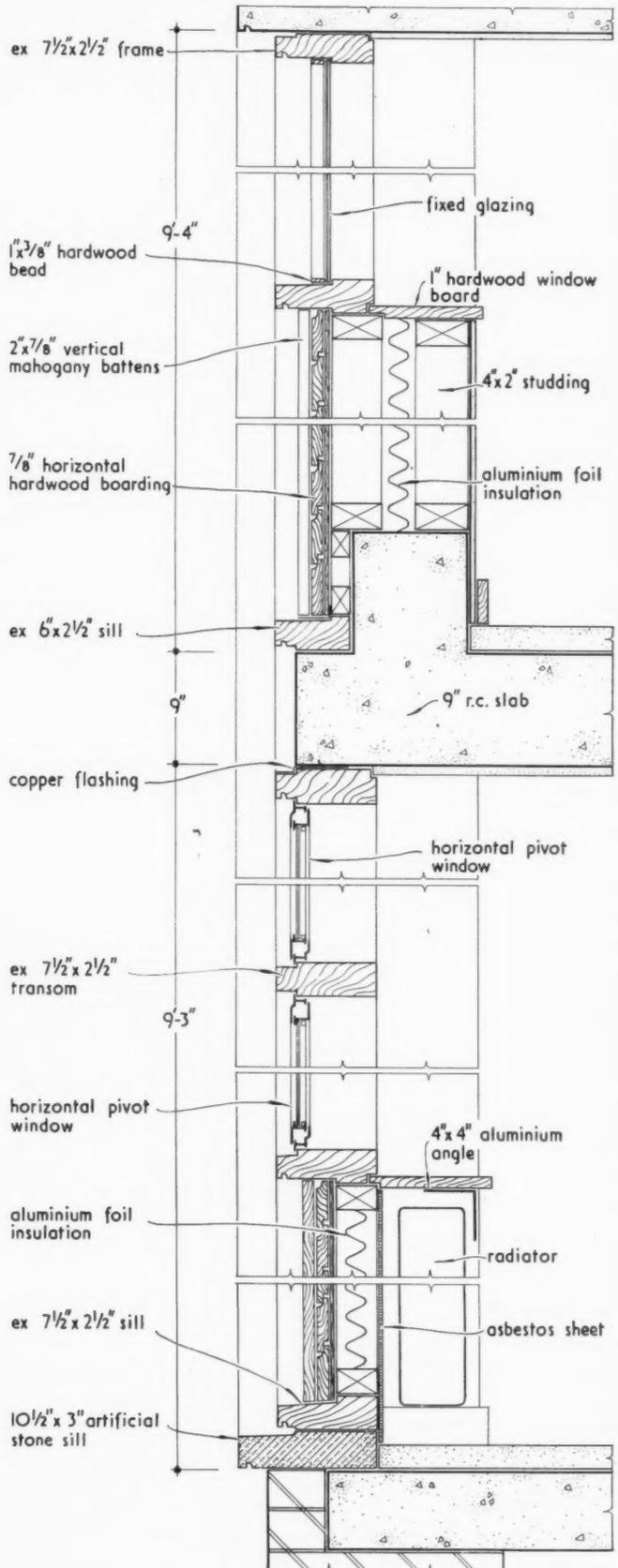
KEY ELEVATION AND PLAN. scale $\frac{1}{8}'' = 1'-0''$



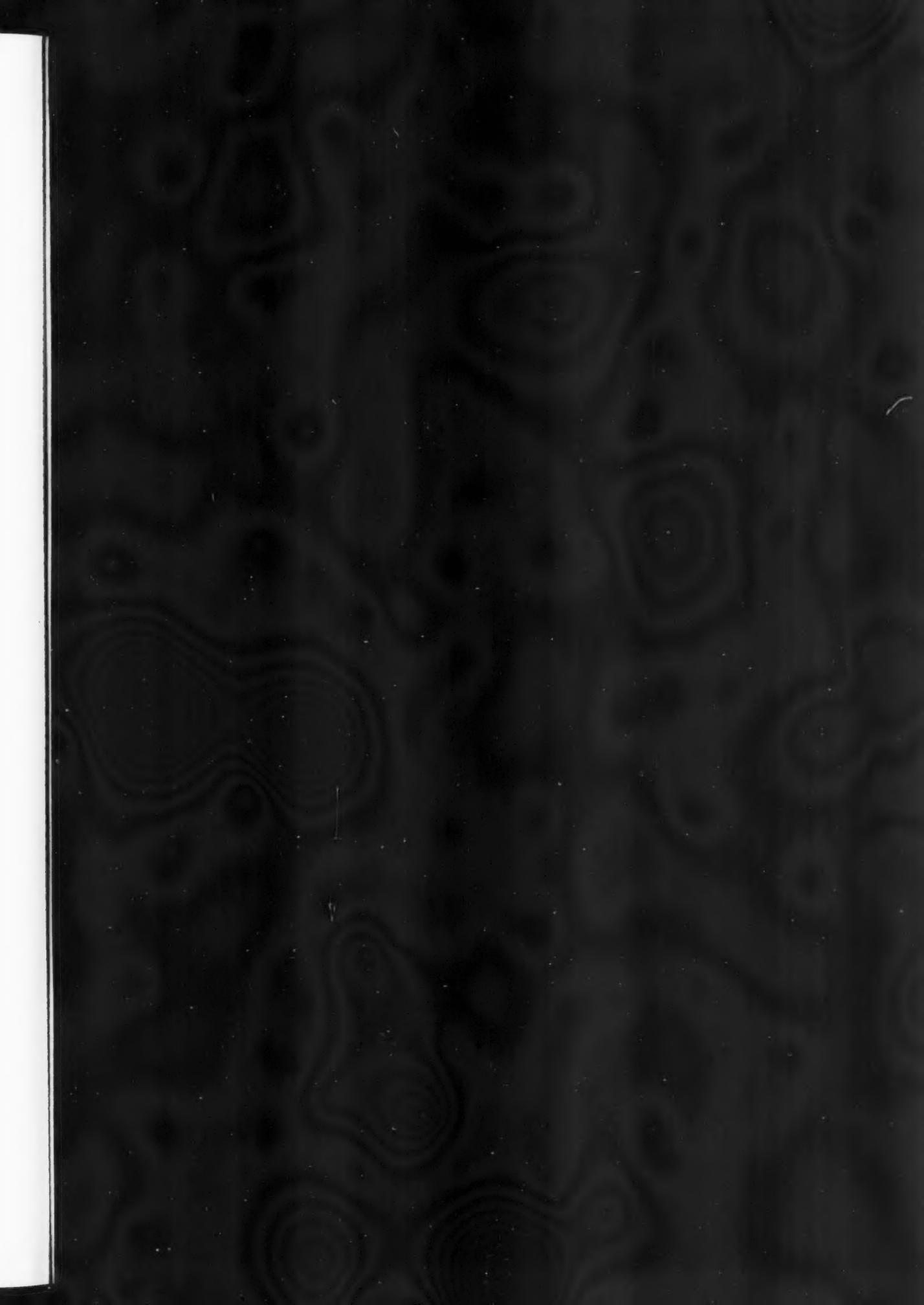
SECTION A - A.



SECTION B - B.



SECTION C - C. scale $1'' = 1'-0''$





DRAFTSELE LIMITED **INSULATION DIVISION**

44, DEAN STREET,
NEWCASTLE UPON TYNE, 1.
TELEPHONE: 23696.

Specialists in ...

SUSPENDED CEILINGS, THERMAL & STRUCTURAL INSULATION.
ACOUSTICAL CORRECTION AND SOUND DEADENING.

Contractors to ...

The Admiralty.
The Air Ministry.
The Ministry of Supply.
The Ministry of Works.
The National Coal Board.
The Territorial & Auxiliary Forces Association.
★ ★ ★ ★
The City Engineer, The City of Carlisle.
The County Architect, Cumberland
County Council.
The Borough Architect, The County Borough of
Darlington.
The County Architect, Durham County Council.
The County Architect, Glamorgan County Council.
The City Architect, The City and County of
Newcastle upon Tyne.
The County Architect, Northumberland
County Council.
The County Architect, Northamptonshire
County Council.
The Borough Architect, The Borough of
Stockton-on-Tees.
The Engineer and General Manager,
Tees Valley Water Board.
The Borough Engineer, The Borough of
Thornaby-on-Tees.
The Borough Architect, The County Borough of
West Hartlepool.
The County Architect, Westmorland County
Council.
★ ★ ★ ★
J. Gerrard & Sons Ltd.
Holland & Hannen and Cubitts (Scotland) Ltd.
John Laing & Son Ltd.
Leslie & Co., Ltd.
Sir Alfred McAlpine & Son Ltd.

Sir Robert McAlpine & Sons Ltd.
A. Monk & Co., Ltd.
Sir Lindsay Parkinson & Co., Ltd.
Taylor Woodrow (Building Exports) Ltd.
George Wimpey & Co., Ltd.
★ ★ ★ ★
Beecham Foods Ltd.
Bristol Aeroplane Co., Ltd.
Clarke, Chapman & Co., Ltd.
Cowan, Sheldon & Co., Ltd.
Fodens Ltd.
Hawker Aircraft (Blackpool) Ltd.
John Haig & Co., Ltd.
Thomas Hedley & Co., Ltd.
High Duty Alloys Ltd.
Sir James Laing & Sons Ltd.
Jackson The Tailor.
John Mackintosh & Sons Ltd.
Handley Page Ltd.
A. Reyrolle & Co., Ltd.
Rowntree and Co., Ltd.
Ruston & Hornsby Ltd.
Rylands Bros., Ltd.
The Birmingham & Midland Motor
Omnibus Co., Ltd.
The Metal Box Co., Ltd.
The Sunderland Forge & Engineering Co., Ltd.
Johnny Walker & Co., Ltd.
Whitbread & Co., Ltd.
Wright Anderson & Co., Ltd.
Imperial Chemical Industries Ltd.
(Specified Sub-Contractors)



BISON multi-unit slabs are complete floor units needing only 3 in situ operations:

1. HOIST 2. LAY ON BEARINGS 3. GROUT JOINTS



CONCRETE LIMITED

THE LARGEST PRECAST CONCRETE MANUFACTURERS IN THE WORLD

LONDON: Green Lane, Hounslow, Middlesex. Hounslow 2323

LEEDS: Stourton, Leeds 10. Leeds 75421

LICHFIELD: Dovehouse Fields, Lichfield, Staffs. Lichfield 2404

FALKIRK: Etna Road, Falkirk. Falkirk 1930

or

S:

TS

In a
for
peop
a la
Dep
(Pho



COVENTRY LOOKS AT ITS FUTURE

Announcements



In a section of Coventry's precinct some rather ramshackle buildings have to remain for a time and in order to hide these, and also (and this is more important) to give the people of Coventry an idea of what their new shopping centre will eventually look like, a large poster has been erected. This was designed by the Architectural and Planning Department, and was carried out by Mills and Rockley, the advertising agents. (Photograph by Coventry Evening Telegraph.)

TRADE

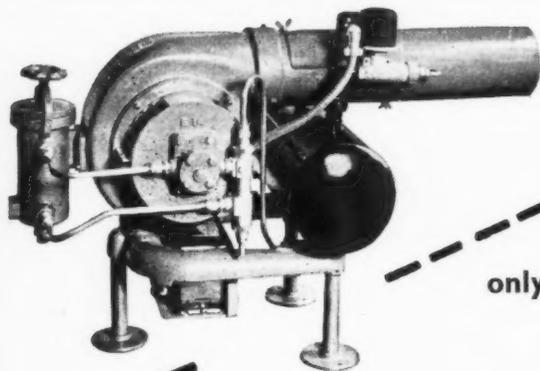
Mancuna Engineering Ltd. have recently moved their London Sales and Design Office from Oxford Street, W.1, to 59, Victoria Road, Surbiton, Surrey, telephone: Elmbridge 9793. This office covers the southern half of England, including South Wales and is under the management of R. A. LePage. N. S. Stedman, B.Sc., A.C.G.I., A.M.I.MECH.E., who has recently joined the Company, will be responsible for the design work of the London office. He has spent a lifetime on air handling work and in particular, has specialized for many years on de-dusting problems.

British Insulated Callender's Cables Ltd. announce the appointment of K. Collinson, A.M.I.E.E., as Branch Manager, Leeds, in succession to J. R. Tommis, whose death was recently announced.

Colt Ventilation Ltd. have recently carried out extensive market research in America and following this they are opening a new branch of the Company in Los Angeles; the address is: Colt Ventilation of America Incorporated, P.O. Box 27101, 4652, Hollywood Boulevard, Los Angeles, 27 (telephone Normandy 1-0261). H. M. McLean, who was previously Area Manager for Scotland, has recently left for Los Angeles and will manage the company's affairs there.

Correction

In the Cost Analysis on page 573, AJ October 18, the lift speed was given as 200 ft. per second. This should, of course, be 200 ft. per minute.



NOT JUST ANOTHER
OIL BURNER

only CTC oil burners have these advantages

- HIGH PRESSURE, adjustable up to 300 lbs. p.s.i., ensures complete atomisation and better combustion without blockages.
- NEVER VARY. Pressure once set by Heating Engineer gives constant flame. Jets GUARANTEED for capacity ± 5 per cent. with spray angles accurate within 5°.
- EASY INSTALLATION. Compact unit with fuel pump permits oil storage above or below ground. Fully automatic, negligible maintenance.
- MODELS FOR 40,000 up to 3,000,000 B.T.U.s. per hr. INSTALLATION AND MAINTENANCE SERVICE. OVER 10,000 IN USE.

Complete range for Domestic or Industrial use, burning Gas oil (35 secs.) or heavier oil (200 secs.). These quality burners are available at the right price and are backed by 25 years' experience and a complete service organisation. To save time, just write "Oil Burners" on your letterheading for full details for your files.



HEAT LTD. 17 SLOANE STREET, LONDON, S.W.1
BELgrave 3478

continued from page 655

ADVERTISING

Memo to Minister

The Outdoor Advertising Industry Advisory Committee has told the Minister of Housing and Local Government that in its view the problem of "clutter," that is, the multiplicity of advertisements on shop exteriors, cafés and garages, could best be solved by educating shop-keepers and advertisers throughout the country to a sense of awareness that there is a right way and a wrong way of displaying advertisements. The Committee says it is prepared to co-operate in any steps that can be taken with this object in view.

It also advocates the encouragement of planning authorities to negotiate with the shop-keeper, and with the advertising contractors where they are involved, to bring about an improvement in the arrangement of the advertising.

The matter has arisen out of the statement made by Duncan Sandys, Minister of Housing and Local Government, last June, in the House of Commons. Mr. Sandys told the House of Commons that he had been considering whether sufficient action was being taken to protect the beauties and amenities of our countryside and towns from being spoiled by outdoor advertisements. Thanks to the co-operation of all concerned, he added, an appreciable improvement had been evident in recent years, but much more could and should be done to secure the removal of incongruous hoardings and signs. He added that at the same time there might be a case for relaxing the present detailed control in certain localities where a concentrated display of advertisements is unobjec-

tionable. He intended, as soon as possible, to issue further guidance to planning authorities on this whole problem, after consulting the local authorities and representatives of the advertising trade and other interests.

Mr. Sandys later circulated a memorandum in which he suggested that wherever an area of the countryside was brought under "special control" (that is an area requiring special protection on the ground of amenity) it might be appropriate to include the villages, and even some of the small country towns.

The Outdoor Advertising Industry Advisory Committee, in its memorandum to the Minister, has expressed its disappointment in the working of the Control of Advertisements Regulations, particularly in the long delays in dealing with applications and appeals, the work and costs involved, and the complete unpredictability of decisions.

The Committee agrees that the open countryside is suitable for inclusion in areas of "special control," and says it has not objected to the inclusion of some villages in areas of special control. But it says that the application of special control to urban areas is a difficult matter, and that generally the Committee takes the view that it is wrong in principle to deprive an advertiser of the right to make an application where it ought to be granted. Similarly, says the Committee, it is wrong to deprive a local planning authority of the right to consent to such displays.

The Committee points out "The illogicality of the Regulations." It calls attention to the fact that although the practice of many public houses in the country areas of displaying their signs on posts outside the public houses is prohibited in areas of special control, the display of the same sign on the premises is permitted.

The Committee submits that the proper remedies for the multiplicity of advertisements on business premises are:

(a) to educate shop-keepers and advertisers throughout the country to a sense of awareness that there is a right and a wrong way of displaying advertisements; (b) to encourage planning authorities to negotiate with shop-keepers, and with advertising contractors where the latter are involved.

COLUMN GROUP

Lectures at Attingham Park

The Column Group, Attingham Park, which was formed in 1952 with the object of stimulating an interest in architecture and the allied arts in Shropshire has arranged the following programme for 1956-57.

November 21 "Town Planning in Chains" —An appraisal of the failures of Planning as an integrated policy for this Country, by Lewis Keeble, Director of Studies of the Department of Town and Country Planning, University College, London.

January 23, 1957 "Opera at Covent Garden," an informal talk by David Webster, Administrator of the Royal Opera House.

February 27, 1957 "Houses of Tomorrow," a talk by Mr. Eric L. Bird, A.R.I.B.A., of The Building Centre, late Editor of the R.I.B.A. Journal.

March 27, 1957 "Sculpture for Architecture," a talk by Mitzi Cunliffe, sculptress.

The meetings will be held at Attingham Park and will commence at 7.15 p.m. Membership of the group is open to anyone interested in its object.

If you have to provide for your own retirement—here's a book that will help you.



The last Budget brought good news of tax concessions for those who have to make their own retirement arrangements. 'The Northern' have devised two new plans to make the most of these important new tax reliefs.

Before you make your own plans, you should in your own interest consult 'The Northern'. Their informative and very helpful booklet "Two New Ways to Provide for Your Retirement" will answer all your questions. Get

your copy from the nearest Northern Office, or from your Insurance Broker, or simply fill in this coupon.

You'll be on good terms with

THE NORTHERN

To The Northern Assurance Co. Ltd.,
1 Moorgate, London, E.C.2.

Please send me, without obligation, a copy of your booklet "Two New Ways to Provide for Your Retirement."

Name.....

Address.....

AJr

Modern cold water, Matthew! . . .



Water services as efficient and logical as the buildings themselves! Flexible piping, in fact, in De La Rue Polythene . . . that's the modern way of conducting cold water, as architects will tell you. Builders and engineers, too. Farmers likewise.

Look at it from your own point of view. De La Rue Polythene pipe has these big advantages over metal of any kind:—

- Doesn't corrode, inside or out; needs no maintenance at all, indoors or out. Lasts indefinitely.
- Needs few joints (you simply bend it round corners).
- Cheaper in labour, no dearer in first cost.
- Doesn't collect scale.
- Far lighter — which means easier handling, longer lengths.
- DOESN'T BURST, not in the coldest weather.

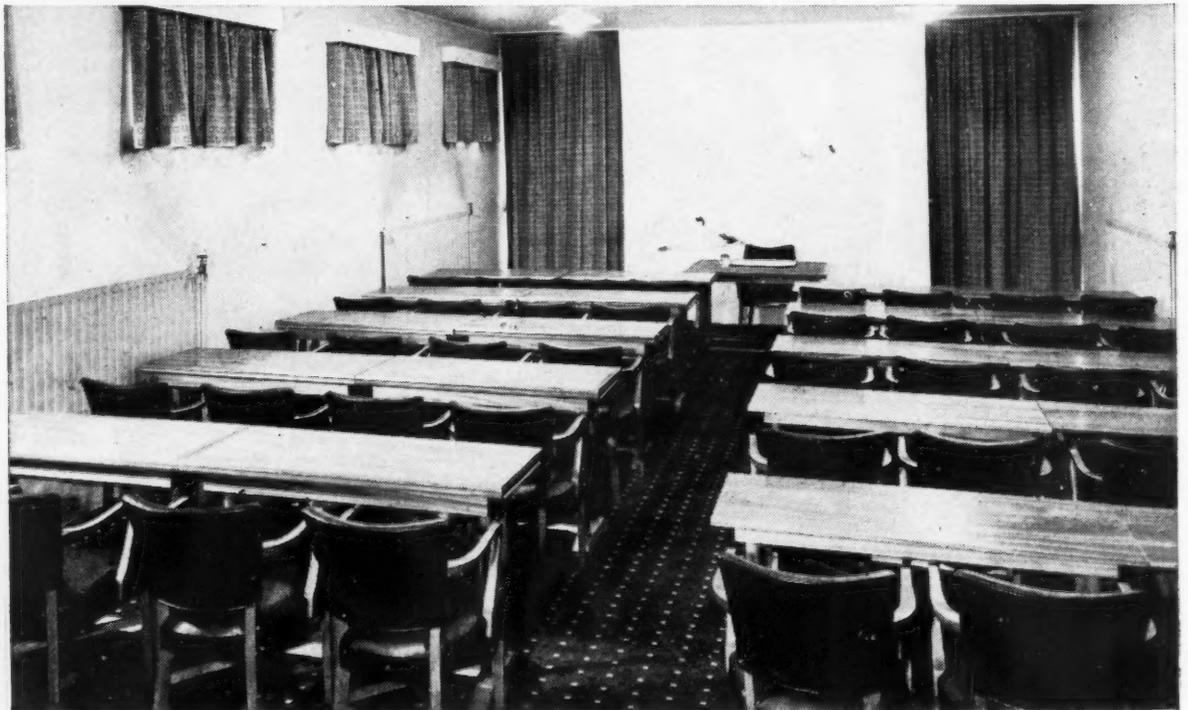
Yes, it's O.K. for drinking water. The best builders' merchants stock it. No cold water trouble *at all* . . .

. . . when the pipes are

DE LA RUE

POLYTHENE

Extrusions Dept. P5C, Thomas De La Rue & Co. Ltd., Buckhold Road, Wandsworth, London, S.W.18



Architects : Easton & Robertson, Chartered Architects

Combined operation

This dual-purpose room at the British Postgraduate Medical Federation, (University of London) was executed by Catesbys Contracts. The special tables enable full use to be made of the room without giving a makeshift appearance for one or other purpose. When in use as a lecture room, the top surfaces of the desks are wood. For conferences, the tables with the fold-back tops open out on their partners to reveal leather surfaces. Catesbys Contracts made the tables and supplied harmonizing curtains and carpets. If you are faced with making a lot out of a little space, or planning that calls for co-ordination with furnishing you will find that Catesbys co-operate . . . with most satisfying results.

Catesbys contracts
AND EXPORT LIMITED

TOTTENHAM COURT ROAD · LONDON W1 · MUSEUM 7777

Hey Prestik!

SEE THE EASE AND SPEED OF THIS JOINTING AND SEALING!

Use PRESTIK Builders' White Sealing Strip once, and you will never be content with any other method of jointing, sealing or bedding.

For PRESTIK offers altogether new ease and speed of operation . . . gives you a far more efficient, longer-lasting job . . . can be used inside or outside . . . needs no special tools . . . is completely clean to handle . . . is permanent and weather-proof.

PRESTIK is supplied in handy boxed reels from which you unwind the ready-made strip as you want it. Ask your usual Builders' Merchant for it. Or write to the address below for a sample.



PRESTIK makes quick work of:

MASONRY—Jointing gutter sections and coping stones. Bedding and jointing concrete blocks and panels.

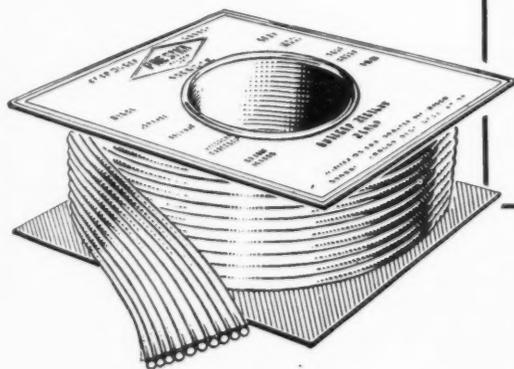
PRE-FABRICATION—Bedding and Jointing roof sections. Sealing joints in sectional buildings.

FLOORS—Sealing cable duct covers. Sealing skirting board joints.

WALLS and CEILINGS—Sealing wall-board joints (with cover strips). Sealing glass bricks to door and window frames.

DOORS and WINDOWS—Sealing door and window frames to brickwork. Bedding window frames and window boards.

SANITARY WARE—Sealing baths, washbasins, etc., to walls.



made by the
Bostik
people

white PRESTIK Builders' Sealing Strip

BOSTIK and PRESTIK are registered trademarks of:

B.B. CHEMICAL CO. LTD., ULVERSCROFT ROAD, LEICESTER.

More + more people are taking advantage

BLACK · MAHOGANY · WALNUT · IVORY · PRIMROSE · 5 GREEN · JADE GREEN · POWDER BLUE · LAVENDER

of their Quality + Value

BLUE · CORAL PINK · WHITE · MARBLED PEARL · MARBL · D PINK



CELMAC moulded plastic toilet seats are in greater demand than ever before. Superb quality and meticulous finish offered at keen, competitive prices have made them supreme in their field. CELMAC toilet seats undoubtedly give the best value — be sure to specify CELMAC next time you buy.



MOULDED PLASTIC
TOILET SEATS
at attractive prices!

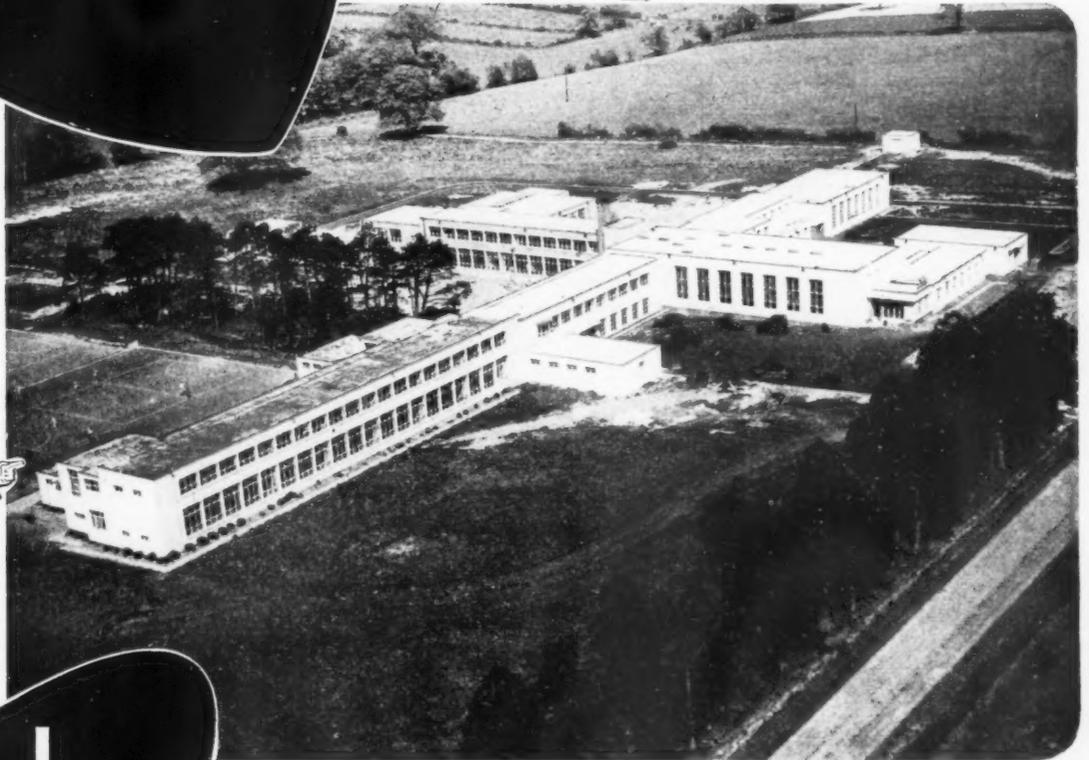
Made by
ROBERT M^cARD & CO. LTD.
CROWN WORKS · DENTON · MANCHESTER · ENGLAND
Telephone: DENTON 3837/8/9

Write for illustrated brochure describing our complete range
Available free on request

TS24

Specified for the following Cumberland County Council Schools:

Wigton Secondary Modern School
Maryport Primary School
Brampton Secondary Modern School
Belah Junior School



Wigton Secondary Modern School. Architect: John H. Haughan, F.R.I.B.A.

carries the day in Cumberland

Cumberland County Council recognise the merits of glass-hard Emalux for school decoration. This permanent interior wall finish is not expensive—and first cost is the last, for the walls are likely to crumble before Emalux shows sign of wear. It is attractive—glowing colours that never fade, a non-dazzle light-reflecting glaze that is quickly cleaned with soap and hot water. It can be applied by skilled Emalux craftsmen on almost any wall.

Write for the Emalux brochure

JOHN ELLIS & SONS LIMITED.

21 New Walk, Leicester. Telephone: Leicester 56682
London Office 29 Dorset Square, N.W.1. Telephone: AMBassador 1141 and 1142
Birmingham Office 46 Exchange Buildings Stephenson Place Birmingham 2. Telephone: Midland 1757



OTHER PRODUCTS

- Granite Concrete Ellispun Pipes.
- Granite Concrete Manholes and Gullies.
- Granite Concrete Hydraulically Pressed Paving, Kerb and Channel.
- Reconstructed Stone.
- Rapid Precast Floor Beams.
- Stafford Concrete Buildings.
- Granolithic Paving.
- Fence Posts and Agricultural Products.
- Precast Concrete Units of all types.
- Utilux Glazed Cement Wall Finish.
- Novalux Egg-Shell Glazed Cement Finish.
- Decolux Superior Textured Finish.
- Ellicem Cement Paint.
- Exposed Aggregate Cladding Slabs.

MONK

of
WARRINGTON and LONDON

are organised and equipped to carry out
BUILDING
CIVIL ENGINEERING AND
REINFORCED CONCRETE CONSTRUCTION



This organisation has been responsible for the construction of many major projects at Home and Overseas.

A recent contract, illustrated (above), is the Saltney Secondary Modern School for Flintshire County Council under the direction of W. Griffiths, Esq., L.R.I.B.A.

A. MONK & COMPANY LIMITED

Head Office:
Padgate, Warrington. Telephone: Warrington 2381
London Office:
75 Victoria Street, S.W.1. Telephone: Abbey 2651
Stamford Office: Tel.: Stamford 2587 Hull Office: Tel.: Hull 16641
Middlesbrough Office: Tel.: Middlesbrough 2391

RAPID + FLOORS

Laid Complete 100 sq. yds. per gang per day

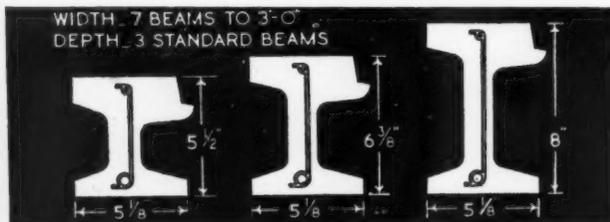
Precast Units designed for all loading conditions and for both simply supported and continuous spans.

Floor thicknesses are constant over a wide range of spans. Interlocking lips render the floor homogeneous. Soffits are flush and even. Trimmings and Cantilevers can be readily provided.

Special bearings are not required, and our gangs fix straight from the Transport Lorry.

The specified load is carried immediately and the floor at once provides a clear, uninterrupted working platform for all following trades.

Quotations for supply only, or supply and fix as desired. Deliveries commence six weeks after approval of working drawings. Technical booklet free on request.



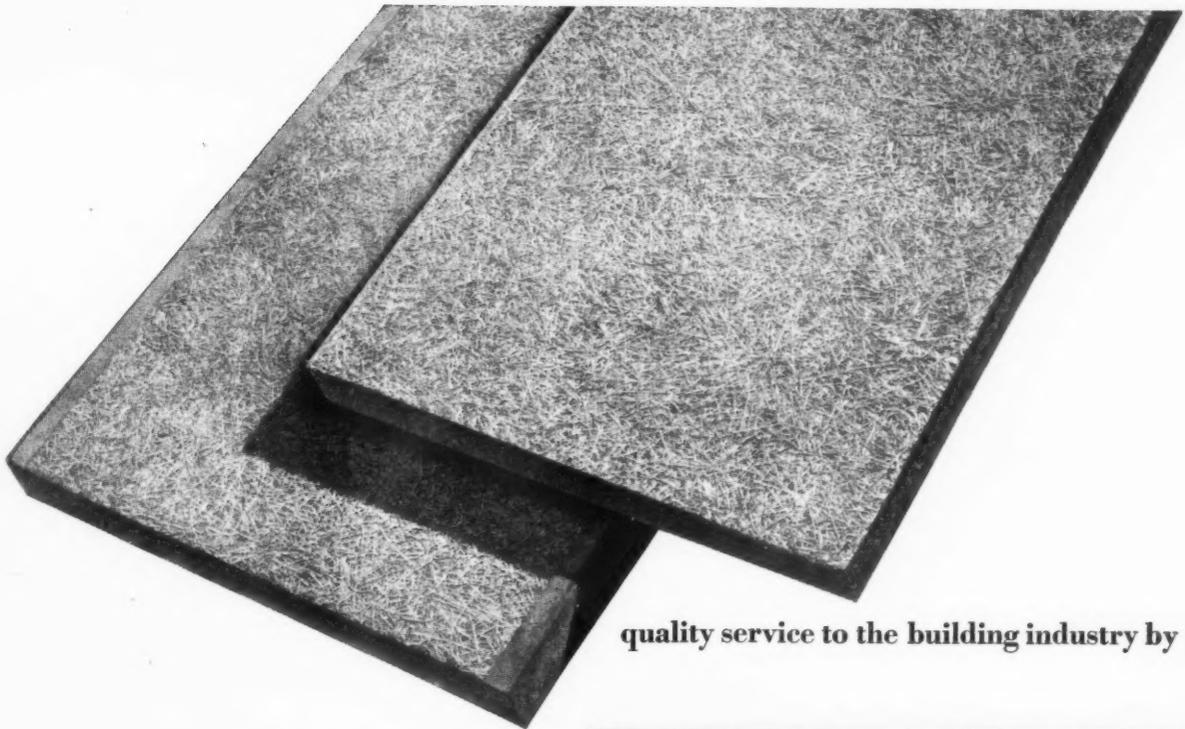
TARMAC LTD

-VINCULUM DIVISION-

ETTINGSHALL, WOLVERHAMPTON

Telephone: BILSTON 41101 (11 lines)

LONDON OFFICE: 50 Park Street, W.1. (GROsvenor 1422)



quality service to the building industry by

Stellith wood wool slabs and channel reinforced roofing slabs offer many advantages, including exceptional structural strength, light weight, excellent heat insulation and sound absorption properties, easy handling, cutting and fixing and effective resistance to fire and moisture. Their many uses include:—

STELLITH*

- 1 Structural insulating roof deck with channel reinforced STELLITH
- 2 Structural insulating roof deck laid in steel tees
- 3 Structural insulating roof deck over timber joists
- 4 Structural insulating roof deck over concrete purlins
- 5 Sarking over rafters
- 6 Structural insulation under all types of metal roofing
- 7 Structural insulating lining to concrete or steel frames
- 8 Insulating lining under asbestos or corrugated iron roofing
- 9 Suspended ceilings
- 10 Insulation over concrete roofs
- 11 Permanent insulating shuttering to roofs and floors
- 12 Permanent insulating shuttering to walls
- 13 Self-supporting partitions
- 14 Timber stud partitions
- 15 Insulating lining to brick walls
- 16 External wall cladding
- 17 Insulating tank and cistern cladding

Technical information sheets on the above and other uses of STELLITH available on request to:—

* STELLITH

wood wool slabs and channel reinforced roofing slabs

STELLA BUILDING PRODUCTS LTD.

Tudor Avenue, North Shields, Northumberland. Tel: North Shields 1474/5

FIRST TIME IN BRITAIN!



dust
if you use filters . . .

you will
obtain
greater
efficiency
at less
cost
with



AMER-glas

AMERICA'S LARGEST SELLING FILTER MEDIA
—NOW AVAILABLE IN BRITAIN.

High dust holding capacity · Low resistance ·
Inexpensive · For every industrial and commercial
air conditioning and ventilating application.

AMER-glas filters are supplied as complete units
ready for installation into existing metal frames
and RENU-glas filters consist of 2in. AMER-glas
pads in special metal casings with spring retainers.
AMER-glas filters are available from stock in
sizes:—

- 24in. by 24in. by 2in.
- 20in. by 20in. by 2in.
- 18in. by 18in. by 2in.

Special sizes to meet your particular specifica-
tions will gladly be produced.

Write or telephone the Sole Distributors for full details
and a sample of AMER-glas.



AIR CONTROL INSTALLATIONS LTD.

RUISLIP · MIDDLESEX

Ruislip 4066

LONDON	BIRMINGHAM	MANCHESTER	NEWCASTLE	GLASGOW
Welbeck 1306	Midland 1165	Central 0679	Whitley Bay 23046	Central 2923

**A modern
Cornucopia**



Every day an almost endless variety of BRASS,
BRONZE, NICKEL SILVER AND COPPER
EXTRUSIONS of all shapes and sizes leaves
our Birmingham factory to serve world industry.
Constant analytical control at every stage of
production guarantees their consistently high
quality and faultless finish — which virtually
eliminates further machining, thus saving time,
tools and labour.

● To produce better products more quickly
and more cheaply — specify

**MCKECHNIE
EXTRUSIONS**

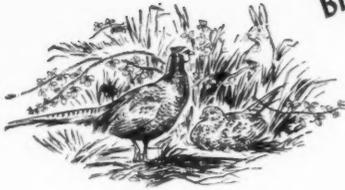
MCKECHNIE BROTHERS LIMITED

14 Berkeley Street, London, W.1
Telephone: HYDe Park 9841/7

Metal Works Rotton Park Street, Birmingham 16
and Aldridge, Staffs.

Other Factories Widnes, London, S. Africa, New Zealand
Branch Offices London, Leeds, Manchester, Newcastle-on-Tyne,
Gloucester, Paris.

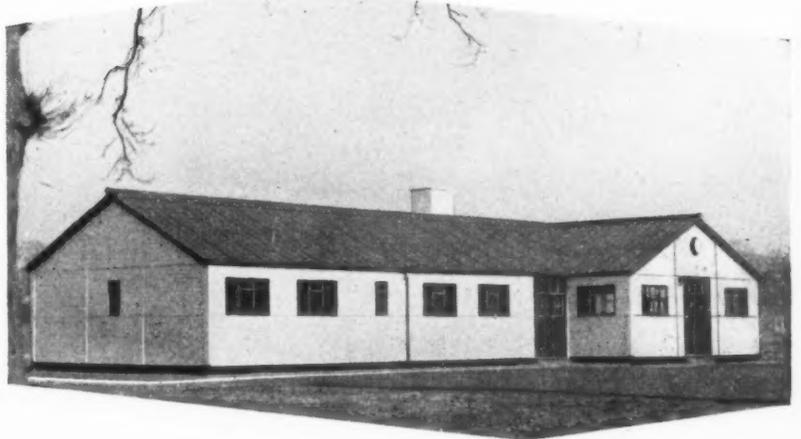
Brambles



SPORTS PAVILION, SIZE 48' x 25' & 40' x 25'
SUPPLIED FOR:—
WESTMINSTER HOSPITAL SPORTS GROUND

OTHER TIMBER BUILDINGS
8' 10' 12' 15' 20' 25' & 30' WIDE
FOR INDUSTRY AND COMMERCE,
HOSPITALS, SCHOOLS,
SOCIAL ACTIVITIES,
CANTEENS, ETC.

provide cover for all kinds of game



THORNS

BUILDINGS *provide cover for all kinds of sport*

PLEASE WRITE FOR CATALOGUE AND QUOTATION
GIVING DETAILS OR DRAWING OF BUILDING REQUIRED TO:—

Quickly!

J. THORN & SONS LTD., (DEPT. 188), BRAMPTON ROAD, BEXLEYHEATH, KENT

BD 754

DROYLAC has changed the old ideas about **gloss paint**

Droylac is an entirely new kind of gloss paint based on chemically treated linseed oil thinned with water. Droylac, ideal for interior walls, is easy to apply, by spray or large brush methods and when dry has the same characteristics as a gloss oil paint.



INTERIOR

DROYLAC

GLOSS WATER PAINT

quick

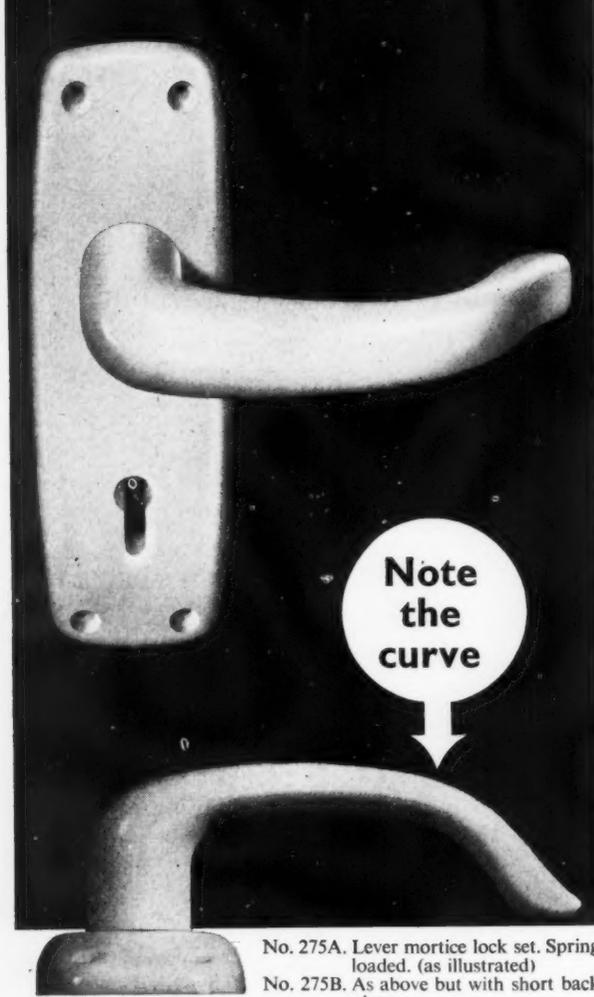
economical

durable



NORTH BRITISH CHEMICAL CO. LTD.,
(Paints Division) Droylsden, Manchester.

The latest member of
the Lacrinoid range



No. 275A. Lever mortice lock set. Spring loaded. (as illustrated)
No. 275B. As above but with short back plate.

AN interesting feature of this model is the shape of the lever. It is curved, as shown in the illustration above, to avoid any catching in the user's sleeve.

The design as a whole is in keeping with the modern trend of decoration, beauty and simplicity going hand in hand.

Colours: Black, Brown and Ivory

LACRINOID
TRADE MARK

LACRINOID PRODUCTS LTD · GIDEA PARK · ESSEX

MCN585 Tel: Hornchurch 2981

big

paint values for shrinking budgets

WAREOLIN
GLOSS ENAMEL PAINT

WAREBROMATT
FLAT OIL PAINT

WAREBROMUR
OIL-BOUND WATER PAINT

paint at sensible prices

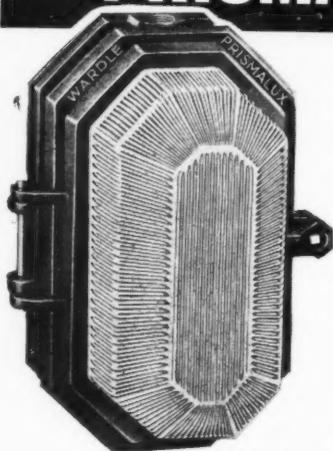
WAREING BROTHERS & COMPANY LTD.
CARLTON STREET WORKS, BOLTON,
TELEPHONE BOLTON 1566/7-227

the
Architect

says . . .

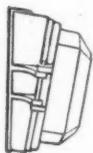


PRISMALUX

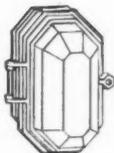


*directional
lighting units
have unlimited
applications.*

Prismalux Directional Lighting Units have been specially designed for lighting confined spaces and locations where pendant fittings are not practicable. For lighting subways, stairways, passages, entrances to garages, Prismalux is ideal. It is designed to meet modern requirements both in appearance and installation and needs no servicing. Incorporating a full size reflector and a carefully designed system of prisms to control the light, Prismalux is available in enamelled or galvanized finish with a choice of seven inlet points. You can get full information about Prismalux by writing to: The Wardle Engineering Co. Ltd.



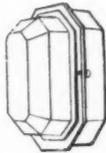
TILTED for subways, cable and conduit runs, arches.



GUARDED with strong wire guard for passages, stairways, porches, doorways.



DETACHABLE COVER TYPE for corners of passages, cellars, arches.



RECESSED for low ceilings and confined spaces.

THE WARDLE ENGINEERING CO. LTD.

OLD TRAFFORD, MANCHESTER, 16.
Tel: TRAfford Park 1801 (3 lines).

London Office: 34 Victoria Street, S.W.1.
Tel: ABBey 4072 and 1356.



what's METALLIC?

You'll seldom see it, but in many a school or factory, hospital or housing estate, METALLIC conduit and fittings plays a prominent, if under-cover, part in the electrical installation. And why is METALLIC so often specified? Because architects and contractors alike know that METALLIC is reliable, really long-lasting. Strongly made from good materials, it's specially treated to resist moisture, chemicals, etc., while consistent accuracy cuts installation time to a minimum and avoids wastage.

Wherever you go you'll find
conduit and fittings by



THE METALLIC SEAMLESS TUBE CO. LTD.,
LUDGATE HILL, BIRMINGHAM, 3

and at London, Newcastle-on-Tyne, Leeds, Swansea & Glasgow



Heat your Church with

BOTTOGAS

(NO MAINS GAS)

& INFRA-RED RADIANT HEATERS



CHURCH heating poses problems because the warmth is usually required for short periods. Conventional methods of heating require prior build up of air temperature, which is not only expensive in fuel but also in labour. With infra-red heating the heaters can be switched on just prior to the service and switched off at its cessation. A permanent installation of heating panels, either wall mounted or ceiling suspended, will warm the whole congregation. Portable heaters in decorative wrought iron work will heat small areas for small congregations without the expense of heating the whole church. The infra-red warms the occupants, not the surrounding air, by direct rays downwards from the panels and the radiant intensity is not weakened by passage through the air.

Portable heaters are available for both indoors and outdoors to provide pockets of heat for isolated groups of personnel, i.e., in garages, workshops, transport depots, hangars, club halls, etc. Heating panels wall mounted or ceiling suspended provide permanent installation giving complete heating in large buildings with high roofs such as churches, workshops, etc.

REMEMBER

localised heating is good economy - SEND FOR FULLY ILLUSTRATED LEAFLET TO :



BOTTOGAS

LIMITED

(Controlled by Shell-Mex and B.P. Ltd.)

CECIL CHAMBERS, 78-86 STRAND, LONDON, W.C.2.

Telephone: COVent Garden 2511 (7 lines)

6 POINT PLAN TO SAVE ON BUILDING COSTS

WITH



SALOPIAN

REGD. TRADE MARK.

TUBULAR FRAMED BUILDINGS AND ROOF STRUCTURES

1 ECONOMICAL in material, time and labour

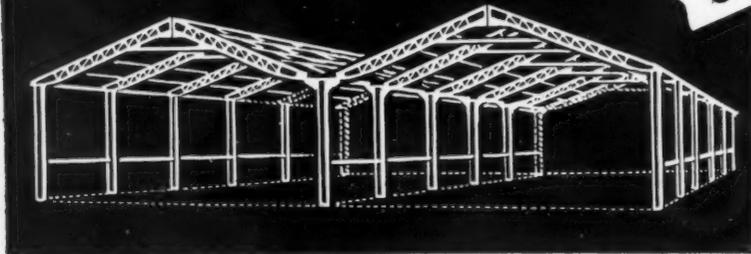
2 STRONGER than other steel sections of equal weight

3 EASILY ERECTED AND ASSEMBLED on account of light weight and special Salopian design

4 INCREASED HEADROOM AND GREATER STORAGE CAPACITY ensured by high level tie beam

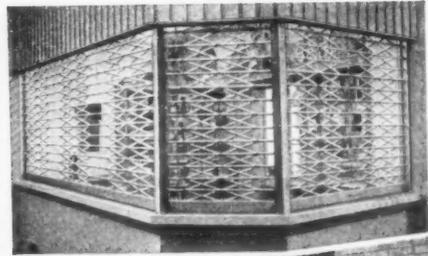
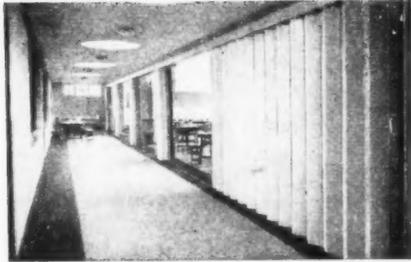
5 LOWER MAINTENANCE COST in paint and labour due to reduced surface area

6 STANDARD SPANS of 18ft., 27ft. 6ins., 34ft., 40ft., 50ft., and 60ft. readily available



Where additional accommodation is required quickly for offices, factories, canteens, schools, pavilions, etc. — Salopian Tubular Framed Buildings and Roof Structures can meet any specific requirement. Illustrated literature describing the wide adaptability of this medium is available on request — may we send you a copy?

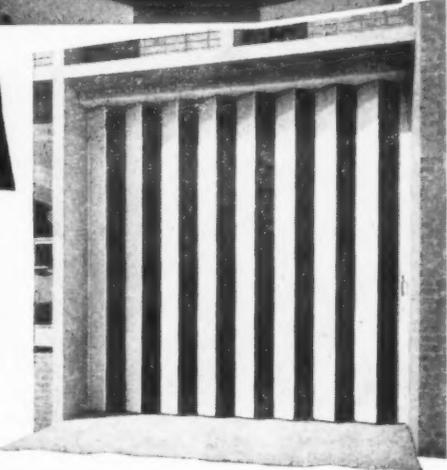
SALOPIAN ENGINEERS LIMITED (Constructional Engineering Division), PREES, WHITCHURCH, SHROPSHIRE. Telephone: PREES 331-4



DOORS & GATES
for every purpose

- (Top left) Multi-Leaf Lift Door.
- (Top centre) "Superfold" Collapsible Partitions, Leathercloth Covered.
- (Top right) Upward Lifting Bar Counter Grilles.
- (Bottom left) "Glydover" All-Steel Overhead Garage Door.
- (Bottom right) Bolton Patent Shutter Door.

Write today without obligation for Catalogue AJ2 and leaflets describing individual products.



BOLTON C-O-L-L-A-P-S-I-B-L-E
DOORS & GATES

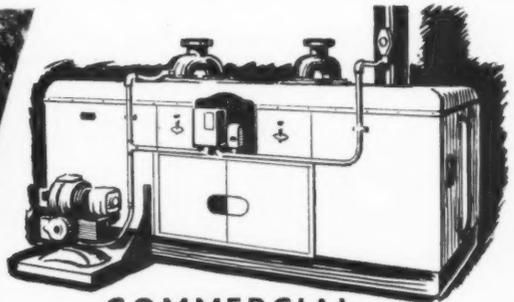
BOLTON GATE COMPANY LIMITED • BOLTON • LANCASHIRE

Telephone: Bolton 4240 (3 lines). Telegrams: "Gates Bolton"

dm BG 206



GERRARDS CROSS, BUCKS.



COMMERCIAL HEATING

Illustrated, Type W.300, 500,000 B.T.U./hr

BROADWAY HOTEL, MORECAMBE

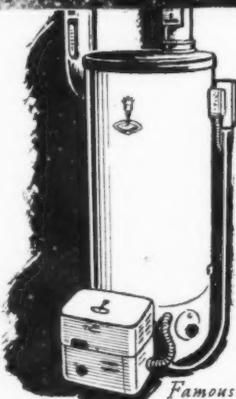
WITH
Perkins
OIL FIRED BOILERS



DOMESTIC HEATING

Sizes to suit various installations from £58.0.0

Please send for leaflets



Famous for After-Sales Service



PERKINS (C.M.E.) LTD. MANSFIELD ROAD, DERBY

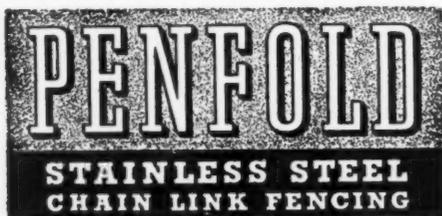


BUILDER FOR ETERNITY...

WHEN, A FEW YEARS AFTER the Great Fire of London, Christopher Wren began work on a new Cathedral, he was faced with great difficulties. The site at the top of Ludgate Hill where Phoenix-like, his masterpiece was to arise, was still strewn with the charred but stubborn remains of the old edifice. Gunpowder was tried at first but a passer-by was killed. So, with ingenuity typical of the man, Wren resorted to the Old Roman battering ram with great success.

Then, amid Norman, Saxon and even Roman graves, he probed and dug until he found the most suitable stratum for the foundations of the mighty building. Despite the crippling restrictions imposed by the commissioners, he selected his materials with great care and skill, declaring, with the confidence of genius, "I build for eternity." And, despite the onslaughts of two and a half centuries of wind and weather and, more latterly, of man, St. Paul's has endured—as Wren prophesied.

In modern projects too, where permanence is all-important, great care and attention must be paid to the choice of the materials. This is particularly true of fencing, especially in those areas where extreme corrosion can cause untold damage. It is for situations such as these that PENFOLD have introduced their *new* Chain Link Fencing. Manufactured from bright drawn STAINLESS STEEL wire it offers many advantages that should receive careful consideration by all who have to plan—if not for eternity—at least for a lifetime and more. We shall be pleased to send you full details on hearing from you.

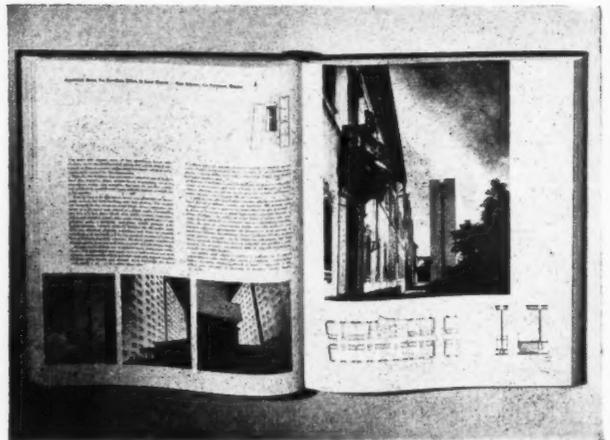


PENFOLD FENCING & ENGINEERING LTD.
IMPERIAL WORKS, BALMORAL ROAD, WATFORD, HERTS.
 Telephone: Watford 2241 Telegrams: "Penfold, Watford"

BUILDS

ITALY BUILDS: ITS MODERN ARCHITECTURE AND NATIVE INHERITANCE, BY G. E. KIDDER SMITH, A.I.A., PHOTOGRAPHS BY THE AUTHOR

THE MOST SUPERB and significant book on Italian architecture which has yet appeared, this is the climax of Mr. Kidder Smith's famous series on European



ITALY

architecture which began so auspiciously with *Switzerland Builds* and *Sweden Builds*. Not only will it profoundly influence every architect and planner, it will also delight and stimulate every student, traveller and lover of Italy who studies its 264 well illustrated pages.

In the first half of the book the incredible architectural inheritance of the country is, virtually for the first time, examined critically by a modern architect. Historic architecture and planning have been lifted from the category of the dull text-book and infused with a life which has particular pertinence for us today.

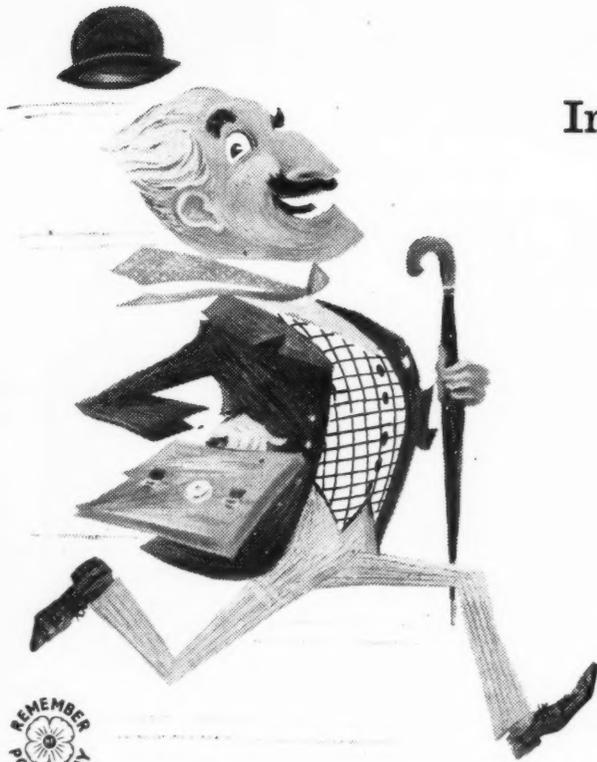
Ernesto N. Rogers provides a perceptive Introduction, and with the stage thus set we are given the brilliant modern work which burst on the world with such impact. *Italy Builds* captures the spirit and imagination, the lessons and ideas of the country's post-war architecture in galvanic fashion. The almost unknown but shining contribution of housing and commemorative architecture (including the most significant memorials in Europe), the imaginative shops, the scintillating exhibitions are among the many building types which introduce the climax of the book—the incomparable work of Pier Luigi Nervi, the greatest architectural engineer of the twentieth century.

Size 11½ in. by 8½ in., 264 pages, with over 750 illustrations. Introduction by Ernesto N. Rogers. The text set in English and Italian. Price 56s. net. Postage 1s. 6d. inland; 1s. 2d. abroad.

This edition *not* for sale in Italy or the U.S.A.

THE ARCHITECTURAL PRESS

9-13 Queen Anne's Gate, Westminster, S.W.1



In Pension Schemes we've been leading for 25 years!

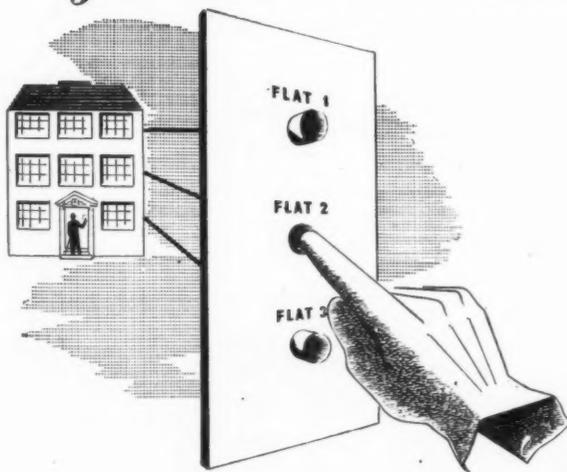
Our new plans for Personal Pensions
follow more than a quarter of
a century of specialised experience.
Please write for full details.

LEGAL & GENERAL
ASSURANCE SOCIETY LIMITED

Chief Administration:
188 Fleet Street, London, E.C.4
Telephone: CHAncery 4444
Branches throughout the United Kingdom



A complete all-in-one service for **CONVERSION SCHEMES**



Rawlings Bros.' experience, particularly with the older types of houses, can be of immense assistance when conversion schemes are being planned. For many years, Rawlings Bros. have specialised in domestic building work, and today have the building equipment, materials, specialised craftsmen and a comprehensive stock of fittings, etc., to complete any conversion scheme.

This "all-in-one" service saves time and money—why not let us quote you? Better still, call at our showrooms for a discussion.

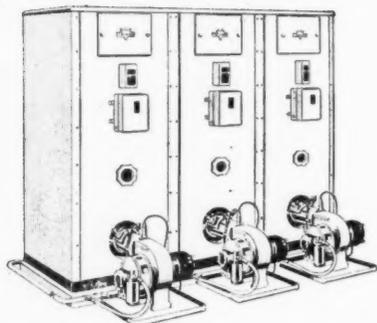
RAWLINGS BROS
LIMITED

85 Gloucester Road, London, S.W.7.

Phone: FREmantle 8161 (10 lines)

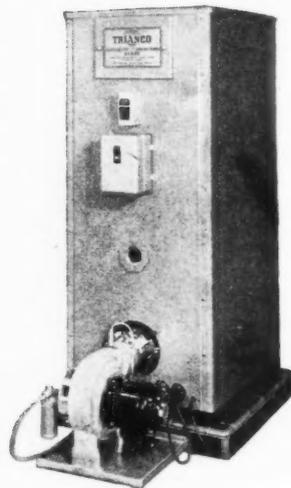
presenting **TRIANCO** oil fired boilers

*High Thermal Efficiency
with Economy of Operation*



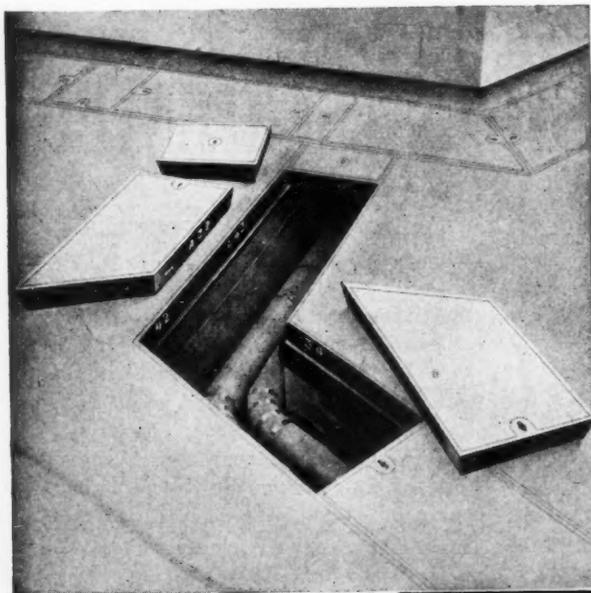
Fitted with the Selectos oil burning unit as standard the Trianco oil fired boilers incorporate the latest principle of combustion and rapid heat exchange to give thermal efficiencies of over 80 per cent. Trianco Boilers are provided as standard units capable of being operated in single, double or treble capacities, and the illustration above provides for a B.t.u. capacity of 400,000 and 1,200,000 per hour, as desired.

Trianco in their range of solid fuel boilers for automatic domestic and industrial heating and hot water supply have provided boilers which are economical, efficient and labour-saving. In presenting their new range of oil burning boilers Trianco pursue the same policy and have been able to incorporate into them many of the features which have made the solid fuel boilers so efficient.



Emberbrook 3300

Write for illustrated leaflet on the Trianco range to:
TRIANCO LTD. (HEATING DIVISION), Imber Court, East Molesey, Surrey.



an example ..

of the adaptability
of **BROADS TRUCAST DUCT COVERS**
specially designed for use in:
**POWER STATIONS, HOSPITALS, SCHOOLS,
KITCHENS, LABORATORIES,
BOILER HOUSES, ETC.**

★ Technical Staff are available to visit site to check final details and offer advice on layouts. Liaison is also maintained during installation. Full details submitted on application.

BROADS

MANUFACTURING CO. LTD. 4 SOUTH WHARF, PADDINGTON, LONDON, W.2 Tel: PAD 7072 (20 lines)

TRUCAST CONTINUOUS DUCT & ACCESS COVERS

DETAILED BROCHURE SENT ON REQUEST



GREVAK

ANTI-SIPHON TRAPS

GREVAK 'Senior' traps were fitted in the new Cardiff Royal Infirmary extension—another recent example of the extensive specification of GREVAK anti-siphon traps to comply with the need for high standards of efficiency and hygiene on all plumbing systems



Architect: Sir Percy Thomas & Son Cardiff
Contractor: Messrs. William Cowlin & Son, Cardiff

Fully illustrated literature and prices of the full range of 'GREVAK' traps available on request



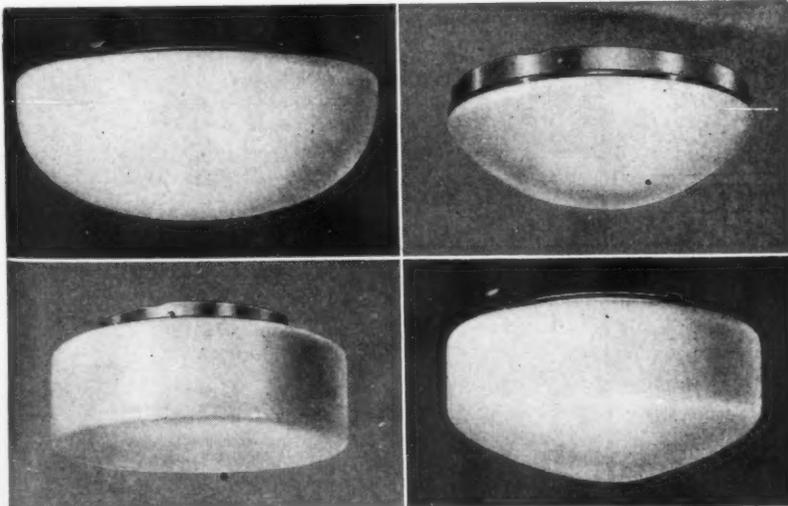
ANTI-SIPHON TRAPS MAINTAIN THEIR SEAL

GREENWOOD AND HUGHES LIMITED, CARLISLE HOUSE, 8 SOUTHAMPTON ROW, LONDON, W.C.1
Chancery 9377 (3 lines) ANTIVACU WESTCENT, LONDON



FOR TUNGSTEN LIGHTING FITTINGS

A SELECTION OF FLUSH FITTINGS DESIGNED FOR LOW CEILINGS, FROM A VERY COMPREHENSIVE RANGE



HAILWOOD & ACKROYD LTD

18 LOWNDES ST.
LONDON, S.W.1

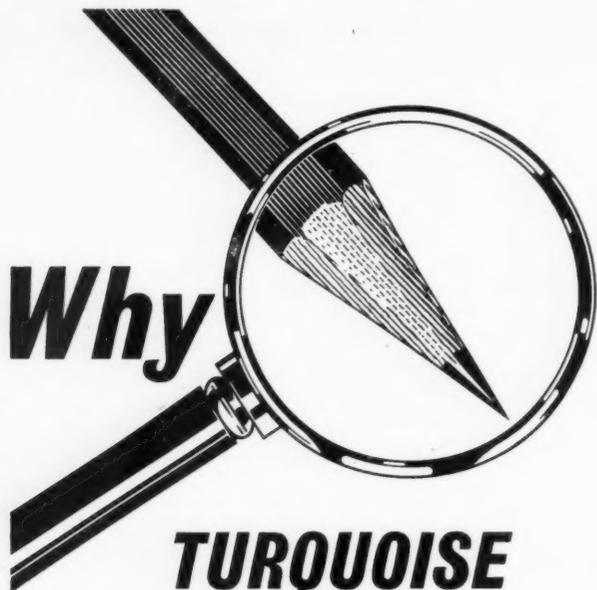
Tel.: Sloane 0471-2

73 ROBERTSON ST.
GLASGOW, C.2

Tel.: Central 3662

BEACON WORKS
MORLEY, YORKS

Tel.: Morley 571-2



Why

TURQUOISE
is not 'just another'
drawing pencil

The lead in Turquoise pencils is something quite special. It is prepared from 100% electronic graphite, which after being cleansed of all impurities is spun to particles of 1/25,000 of an inch, then blended with clay and steeped in hot waxes. A finer, more compact lead structure results, because millions more minute graphite particles are compressed into every inch of lead.



The lead structure makes Turquoise the most reliable pencil you can use. It ensures exceptional smoothness—this eases your work. It means less wear and greater resistance to point breakage—this saves time and money. It means denser, more opaque lines for cleaner, sharper reproductions.



TURQUOISE GRADING IS TRIED AND TRUE
 Turquoise pencils are made in 17 gradings. Each is compounded from a separate precisely controlled basic formula of graphite and clay, and each is therefore as uniformly spaced as the inches on your rule.

EAGLE
 "CHEMI-SEALED" SUPER-BONDED
TURQUOISE
DRAWING PENCILS
 with 100% ELECTRONIC GRAPHITE

T.14

EAGLE PENCIL COMPANY, ASHLEY ROAD, TOTTENHAM, N.17

INSTANT ACCESSIBILITY



Illustration shows part of the canteen at the Administration and Design Office of W. J. Fraser & Co. Ltd., at Harold Hill, where Teleflex Remote Controls were used for window operation.

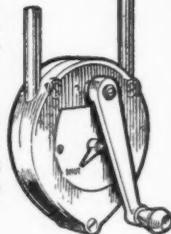
Architects :
 Alan W. Pite & Sons,
 L.R.I.B.A., F.R.I.C.S.
General Contractors :
 Messrs. A. E. Symes Ltd.

TELEFLEX

REMOTE CONTROLS

For the quick and trouble-free operation of high windows and ventilators in offices, factories and schools, Teleflex Remote Controls are invariably specified.

The Teleflex System ensures instant positive opening and closing action. Concealed in neat, rigid conduits, it is easily installed, maintenance-free and surprisingly reasonable in cost.



Write today for illustrated Catalogue.

TELEFLEX PRODUCTS LTD.
 BASILDON · ESSEX

Telephone : Basildon 22861. Telegrams : Teleflex, Phone, Basildon

MacLellan Rubber

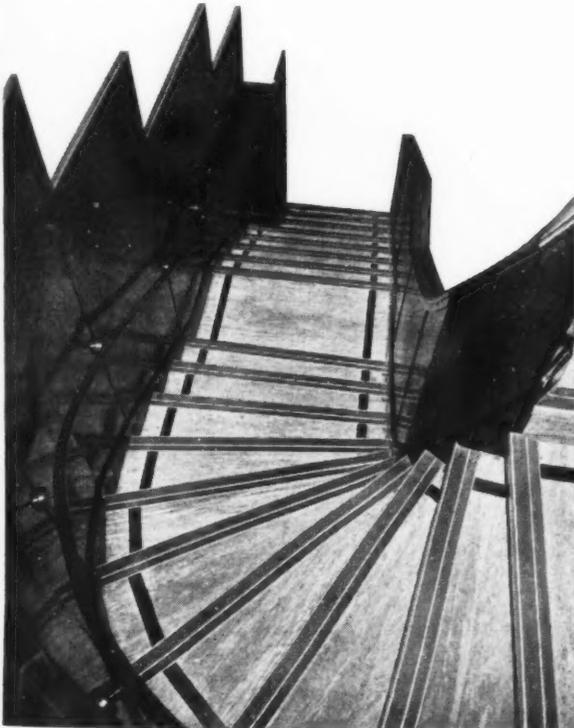
CARRIES INDUSTRY FORWARD

Save on Every Floor

specify

MACLELLAN RUBBER FLOORING

Resistance to wear and freedom from maintenance costs make MacLellan Rubber Flooring a money saver. Its resilient easy-to-walk surface pays off too by reducing fatigue for personnel. On every floor, and the stairs between, MacLellan Rubber Flooring is an attractive investment. Full particulars on request.



George MacLellan

AND COMPANY LIMITED

MARYHILL, GLASGOW, N.W.

Tel.: MARYhill 2255 9 'Grams: Caoutchouc, Glasgow

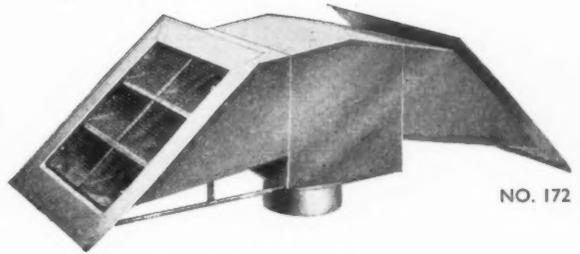
And at:—

London: Burston Road, Putney, S.W.15. Tel.: PUT. 5678/9.

Belfast: 60b, North Queen Street. Tel.: 23923.

Newcastle upon Tyne: 3-5, Queen Street. Tel.: 27617.

Preserving the Roof Line

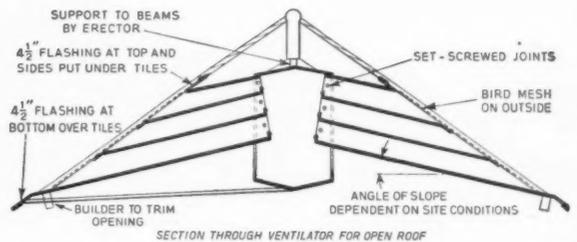


NO. 172

'HARCO'

Concealed Roof Ventilator

Where it is desired to preserve the roof line, or where the use of other forms of air-extraction is not practicable, the 'Harco' Ventilator No. 172 provides a satisfactory solution to ventilation problems. It is extremely effective under the most adverse weather conditions, the louvres being specially designed to deflect the wind and prevent down-draught.



It can be supplied as illustrated for open roofs or with duct and hopper for ceiled roofs. Made in any length in copper, zinc or galvanized steel (painted).

NEW CATALOGUE NOW AVAILABLE

The 'Harco' Concealed Roof Ventilator is one of the many types of ventilator illustrated and described in the new 'Harco' Catalogue. The full range also includes EXTRACTOR VENTILATORS of various types, LOBSTER BACK, ARCHIMEDEAN, WINDOW, LOUVRE and CREST Ventilators. Please ask for Catalogue No. AJ924.

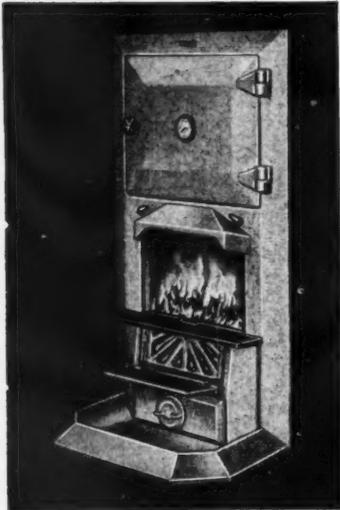
Harvey

G. A. HARVEY & CO. (LONDON) LTD.
Woolwich Road, London, S.E.7 GREENwich 3232 (22 lines)

FORESIGHT GRATES

Introduce their latest model

THE "RADCLIFFE" THE MODERN COMBINATION GRATE



Recommended by the Ministry of Fuel and Power for Local Authority Housing.

★
FOR COOKING
HOT WATER
AND
SPACE HEATING

★
Continuous Burning
on Household Coal
and Anthracite,
Intermittent Burning
on Coke

★
Fitted with concealed
soot doors for easy
cleaning

★
Illustrated with Open Fire
for daytime burning.
Supplied with closeable
cover plate for Overnight
Burning.

SAMUEL SMITH & SONS LTD.
BEEHIVE FOUNDRY
SMETHWICK, 41, STAFFS.

NEW EVERTAUT All Steel OFFICE CHAIR



✓ NOTE THESE OUTSTANDING
FEATURES

1. Back rest comprises steel pressing Latex Foam interior and cover with "Lip-Grip" bead. (Patent applied for.)
2. Back rest adjustable for height and angle.
3. Pressed steel seat pan with Latex Foam interior and cover with "Lip-Grip" bead. (Patent applied for.)
4. Oil immersed centre screw and self-lubricating bush in the seat pillar gives longer life, finer adjustment to seat height is self-lubricating and non-squeaking.
5. Altogether these features add up to an extremely comfortable office chair with a long and trouble-free life.



Write for catalogue No. AB1

EVERTAUT LTD.

(Proprietors: J. B. Brooks & Co. Ltd.)

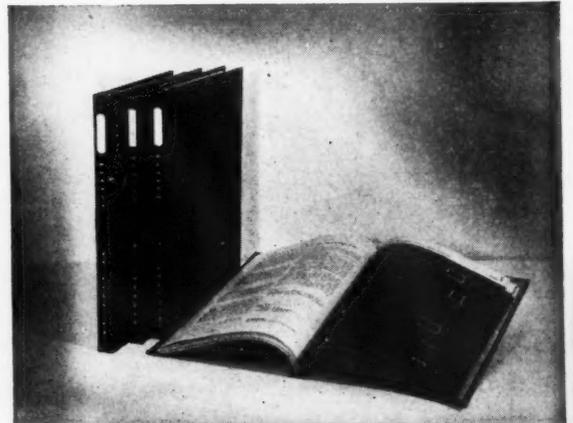
WALSALL ROAD, PERRY BARR,
BIRMINGHAM, 22b

Phone: BIRchfield 4587 (4 lines)

Grams: Evertaut Birmingham

London Office: KERN HOUSE, KINGSWAY, W.C.2. Phone: HOL 0238

INFORMATION SHEET BINDING CASES



Designed to contain approximately 100 Information Sheets, these loose-leaf binders are of stiff boards bound in black Rexine and are supplied with a patent clip on the spine. No perforations of the sheets are necessary thus ensuring perfect preservation. Four of these binders are sufficient to contain the complete set of sheets from October 1947 to the end of this year.

PRICE **6s.** (postage 1s. 3d.)
postage on 4 binders, 1s. 8d.

THE ARCHITECTURAL PRESS

9-13 Queen Anne's Gate, Westminster, S.W.1

Brownall

**HIGH JOINT
STRENGTH
FITTINGS**

● IN NON-FERROUS
METALS

Also finished
in coloured
plastic.

**EASY-CLEAN
LABORATORY
FITTINGS**

In Chrome, Black-Bronze,
Polished & Lacquered Brass
Finish.

COMPRESSION Fittings
for Hospitals and Industrial
Building.

For 1/2 in. to 6 in. Tube.

Gunmetal Screwed
Fittings to B.S.
Table 1 and B.S.P.
Threads.

Solder (Capillary)
& Welding for all
Heating Work.

SEND FOR
CATALOGUES
DATA AND
PRICES ETC.

DONALD BROWN (Brownall) LTD.
LOWER MOSS LANE MANCHESTER 15
Tel. DEAnsgate 4754/5 Grams "DONABROW" Manchester.

Pensions

Self-employed persons may now provide their own retirement benefits out of untaxed income. Send for our explanatory booklet entitled "Pensions for the Self-Employed" to



EAGLE STAR
INSURANCE COMPANY LTD

22 ARLINGTON STREET
LONDON SW1

or to your nearest Branch

Pioneers of Pension Plans

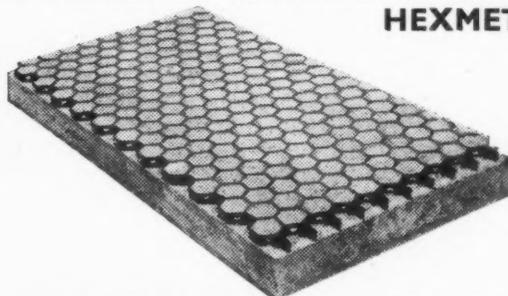


Intensified production outputs are subjecting floors of factories and works to heavy loads, vibration, and heat and are breaking them up, bringing an added burden for managements. See for yourself how HEXMETAL strengthens concrete floors.

flaws in your floors?

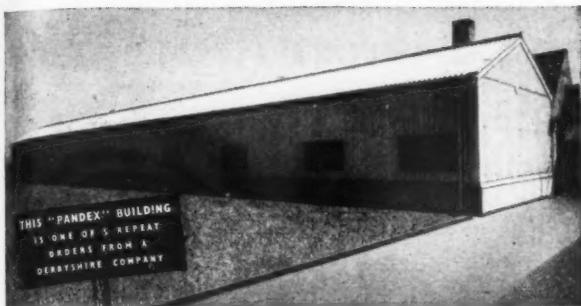
You'll have none of this worried feeling if you use HEXMETAL mats as shown below. The HEXMETAL mats are laid and filled with concrete on top of the existing broken flooring, giving a trouble-free "pre-cracked" surface! There are many uses for HEXMETAL—almost certainly in your works, it will serve a valuable purpose. Write to us for all the news on

HEXMETAL



CAUSEWAY REINFORCEMENT LTD.

66, Victoria Street, London, S.W.1. Telephone: VICTORIA 8648 & 1873



LOW-COST *Permanent* INDUSTRIAL BUILDINGS

Standardised production techniques rather than standardised component sizes now enable every "Pandex" Building to be an individual structure designed and fabricated to suit both your needs and your budget.

- * Single spans from 17' 6" to 120' 0". Multi-spans to any width.
- * Doors, windows, patent glazing or sheet rooflights, ventilators.
- * Internal lining and suspended ceilings.
- * Erection service throughout Britain.
- * We specialize in buildings of 2,000 to 20,000 sq. ft. floor area.
- * Fabrication of light steelwork to architects specifications.

Recent contracts concluded at: London, Coventry, Glasgow, Manchester, Warwick, Birmingham, Rotherham, Hull, Paisley and Newport Pagnell.

Please write or telephone our Sales Department for Brochure CS/56 or ask for our Area Manager to call and advise you.

Telephone: Leamington Spa 3394 (P.B.X.)

PANDEX welded steel-framed
PERMANENT INDUSTRIAL BUILDINGS

A. J. LUDWELL & CO. LTD., Queensway, LEAMINGTON SPA

The Need For Building Economy

is producing very many enquiries for this Patent Ragbolt Bracket . . . which costs less because it uses less material, but does as good a job of pipe fixing as any bracket available today.

The Patent Ragbolt is quicker and easier to fit than most Brackets so saves on time as well. Gives unshakable lock in Wall and Twist Neck cannot be bent.



RAGBOLT BRACKET

Regd. Design 858752

Ask for samples and full details from the manufacturers
BOLIVAR STAMPING CO. LTD. Crown Works, Keighley, Yorks.

THE ACME FLOORING & PAVING COMPANY (1904) LTD

River Road - Barking - Essex

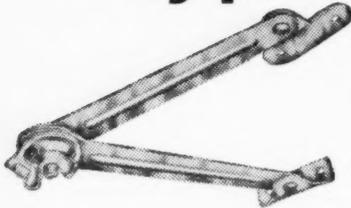
The Company's latest Technical Brochure

on hardwood block and strip floors and
softwood end grain paving will be gladly sent on request.

Telephone:
RIPpleway 2771 (7 lines)

Telegrams:
Dowelled-Easphone-London

The Stayput Movement Check



FOR HOLDING FIRMLY
IN POSITION ANYTHING
ON HINGES.

Including Doors, Casement
Windows, Fanlights, Garage
Doors, Cupboards, Box
Lids, etc.

Made in four sizes:
No. 00. No. 0 NO. 1 No. 2
Arms 2½" 4" 5½" 7"

Write for brochure to
RHODES CHAINS LTD
85 Southampton Row, London, W.C1
Chancery 9377 (3 lines)
Rhodespac, Norphone, London

ONE ACTION ... IT "STAYS PUT"

★ ★ ★ ★

THE CANALS OF ENGLAND by Eric de
Maré. 'Historical, topographical and technical...
a well-documented, well-written and highly informa-
tive book embellished with many photographs of
distinction and the reproductions of informative old
prints...' Clough Williams-Ellis in JOURNAL
OF THE TOWN-PLANNING INSTITUTE.
Price 18s. net, postage 1s. 2d.
Second impression.
The Architectural Press 9 Queen Annes Gate SW1

★ ★ ★ ★



Lady Allen of Hurtwood, F.I.L.A. and Susan Jellicoe

The new small garden

THIS IS A PRACTICAL book in which, with over 130 photographs and plans, the authors illustrate and describe an expertly made selection of successful and charming small gardens. Most of them have been constructed at small cost; all are designed to provide the maximum of peace and relaxation for a minimum of hard work. The plans have been worked out to meet a wide variety of site problems and conditions and the examples include long narrow gardens, children's gardens, a tree garden, a water garden, a roof garden, a scree garden. . . Full details of the materials and plants used in many of the gardens are given; and there is a useful 'How to find out' appendix.

Size 8½ in. by 5½ in. 128 pages with over 100 half-tones and 25 line blocks.

Price 15s. net, postage 1s.

THE ARCHITECTURAL PRESS 9-13 Queen Anne's Gate Westminster, S.W.1.



DUPLUS Domelights

in 'PERSEX'

The Duplus Domelight has a special weathered edge and is available in clear, opal or tinted Perspex. Aluminium curb reduces preparation work to a minimum. Leaflet showing fixing details, etc., on request.

Sizes from 22 in. by 22 in. to 70 in. by 46 in.
and 58 in. by 58 in.

WILLIAM FREER LTD. (PLASTICS FOR BUILDING DEPT.)
CHATHAM STREET LEICESTER
LONDON. KINGDOM INDUSTRIES. 173 BROMPTON RD., S.W.3.

(Phone 22771,
Ext. 12)

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on 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.

Public and Official Announcements
25s. per inch; each additional line, 2s.

METROPOLITAN BOROUGH OF LEWISHAM SENIOR ASSISTANT ARCHITECT
Salary scale, £795 x £35—£970 p.a. (A.P.T. V), plus London "weighting," age 26 and over £30 p.a. Applicants must possess an approved University degree in Architecture or be Associates of the R.I.B.A. Particulars and form of application from the Town Clerk, Lewisham Town Hall, Catford, S.E.6. Closing date: 24th November, 1956. 4402

HUNTINGDONSHIRE COUNTY ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments:
(a) SENIOR ARCHITECTURAL ASSISTANT, A.P.T. IV-V (£710—£970)
(b) SENIOR ARCHITECTURAL ASSISTANT, A.P.T. IV (£710—£885)
(c) ARCHITECTURAL ASSISTANT, A.P.T. II-III (£595—£765).

Appointments could be made within these grades subject to qualifications and experience.
Further details and application forms may be obtained from the County Architect, County Buildings, Huntingdon. Completed application forms should be returned to the undersigned by Friday, 23rd November, 1956.

A. C. AYLWARD,
Clerk of the County Council.
County Buildings, Huntingdon. 4403

BOROUGH OF NUNEATON APPOINTMENT OF ARCHITECTURAL ASSISTANT A.P.T. Grade IV (£710—£885)
Applications are invited for this post which offers an excellent opportunity for general experience in a large building programme which includes multi-storey flats in redevelopment areas and on housing estates, schools, shops, and civic buildings in addition to a large number of council houses.

Housing accommodation is available.
Further particulars can be obtained from the Town Clerk, Council House, Nuneaton, to whom applications should be submitted not later than 19th November, 1956. 4294

CITY OF PETERBOROUGH APPOINTMENT OF ARCHITECTURAL ASSISTANT, Grade A.P.T. II
Applications are invited for the above appointment in the City Engineer's Department. Applicants must possess a sound knowledge of building construction and be capable of preparing working and detail drawings under supervision. Previous experience on school buildings will be an advantage.

Applications stating age, experience, details of qualifications, together with copies of three recent testimonials should be sent in envelopes endorsed "Architectural Assistant" to Mr. L. H. Robjohn, M.B.E., A.M.I.C.E., City Engineer and Surveyor, Town Hall, Peterborough, to reach him not later than 15th November, 1956.

Consideration will be given to the provision of Council housing accommodation.
Canvassing, directly or indirectly, will disqualify. Candidates must disclose whether they are related to any member or senior officer of the Council.

C. PETER CLARKE,
Town Clerk.
Town Hall, Peterborough, October, 1956. 4311

BEDFORDSHIRE COUNTY COUNCIL QUANTITY SURVEYORS:
Grade V (£795—£970).
Grade IV (£710—£885).

Applications invited for above appointments. Commencing salary will be at point within Scales dependent upon candidates' qualifications and experience; preference given to Members of R.I.C.S. Candidates must have experience in taking off quantities for all types of buildings, measurement of work on site, valuations for interim certificates, etc. Application forms from County Architect, Shire Hall, Bedford, to be returned by 16th November. 4337

BOROUGH OF ROWLEY REGIS APPOINTMENT OF QUANTITY SURVEYOR
Applications are invited for the above appointment in the Building Department at a salary in accordance with Grade A.P.T. IV-V (£727—£994), according to qualifications and experience.

Applicants must be experienced in preparing estimates, Bills of Quantities, checking Interim and Final Accounts.

The provision of housing accommodation will be considered.
Applications, stating age, qualifications and experience, together with two recent testimonials, should be sent to the undersigned not later than Monday, the 19th November, 1956.

J. HILTON,
Town Clerk.
Municipal Buildings, Old Hill, Staffs. 30th October, 1956. 4410

ARCHITECTURAL DRAUGHTSMAN required by Adea Government P.W.D. on contract for four of 18 to 24 months in first instance. Salary according to experience in scale (including pay differential), £330, rising to £1,452 a year. Gratuity at rate £100/£150 a year. Outfit allowance £60. Free passages for officer and wife. Free passages for four children under age 18. Education allowance in lieu of passages for children between 11 and 18 years undergoing full time education in U.K. Liberal leave on full salary. Candidates must have sound knowledge of architectural drawing, building construction and measurement of existing buildings. Candidates who have passed R.I.B.A. Inter. Exam. or recognised equivalent given preference. Write to the Crown Agents, 4, Millbank, London, S.W.1. State age, name in block letters, full qualifications and experience, and quote M2B/41744/AG. 4397

COUNTY BOROUGH OF OLDHAM APPOINTMENT OF ARCHITECTURAL ASSISTANT
Applications are invited for the above appointment within the range of Scales of Special Classes, Grade A.P.T. IV (£707 5s.—£907 2s. 6d.), the point of commencement to depend on qualifications and experience.

The National Conditions and Local Government Superannuation Acts apply. Housing accommodation available if required.
Applications, suitably endorsed, together with the names and addresses of two referees, should reach me not later than Wednesday, 21st November, 1956.

A. L. HOBSON,
Borough Engineer and Surveyor.
75, Union Street, Oldham. 4395

CORBY DEVELOPMENT CORPORATION ARCHITECTS
Applications are invited for the following appointments on the staff of the Chief Architect:—

A SENIOR ASSISTANT ARCHITECT. Salary within the Grade £975 x £45 to £1,200.
TWO ASSISTANT ARCHITECTS. Salary within the Grade £710 x £35 to £885.
The work of building the New Town of Corby is now reaching its most intensive phase, and during the next seven to ten years will offer exceptional variety of experience in the design and construction of houses, flats, shops, and factories.

Appointments are subject to superannuation under the Local Government scheme, for which medical examination will be required.

Housing is available.
Applications, stating age, education, training, qualifications, experience, present and past appointments and salaries, together with the names of two referees, must reach the undersigned by 12th November, 1956.

R. F. BROOKS GRUNDY,
General Manager.
Spencer House, Corby, Northants. 4386

OXFORD REGIONAL HOSPITAL BOARD
Applications are invited for the following posts in the Regional Architect's Department:—

(A) ARCHITECTURAL ASSISTANT:—Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects or an examination recognised by the Institute as equivalent.

Salary scale £510 p.a. (at age 21 or over) x £20(5) x £30(1) x £20(1) x £25(2)—£710 p.a. Further particulars regarding the post can be obtained from the Regional Architect.

(B) SURVEYOR'S CLERK:—Applicants should have had experience in a builder's or quantity surveyor's office. Duties in the first instance will consist of working up bills of quantities, but opportunity available to widen experience.

Salary scale £425 p.a. (at age 24 or over: £20 deducted for each year below that age) x £15(3) x £20(5) x £25(1)—£595 p.a. Compulsory Superannuation and Whitley Council conditions apply to both posts.

Applications stating age, training, qualifications and/or experience and present salary, with the names of two referees, should be submitted to the Secretary, Oxford Regional Hospital Board, 43 Banbury Road, Oxford, by not later than 21st November, 1956. 4417

EAST KILBRIDE DEVELOPMENT CORPORATION
Applications are invited for the following post:—

MODEL MAKER. Salary Scale £640 x £25 to £765 per annum inclusive. Placing according to experience, etc. Candidates should have experience in the preparation of architectural models and photographs of models made by applicants should, if possible, accompany completed application forms.

The appointment is subject to the Corporation's Conditions of Service and Superannuation Agreement. The selected candidate will require to pass a medical examination. A house or flat will be made available as required.

Application forms may be obtained from the General Manager, Torrance House, East Kilbride, Lanarkshire, to whom they should be returned not later than two weeks from the date of publication of this notice.

Canvassing, directly or indirectly, of Members of the Corporation will constitute an absolute disqualification. 4416

BOROUGH OF EDMONTON QUANTITY SURVEYING ASSISTANT (Temporary) required for Borough Architect's Department, Grade A.P.T. III, £640 x £25—£765, plus London weighting £10—£30, according to age. Minimum qualification Intermediate R.I.C.S. or equivalent and studying for Final. Financial assistance and time off for study. Alternate Saturdays free.
Applications on forms from Town Clerk, Town Hall, Edmonton, must be delivered by 16th November. 4383

GOVERNMENT OF NORTHERN NIGERIA ARCHITECT, PUBLIC WORKS DEPARTMENT
To prepare sketch plans, working drawings and detailed specifications for various types of buildings and carry out the general work of a busy Architectural Office.

Contract appointment with possibility of transfer to permanent establishment. Salary range £1,170—£1,824 p.a. Gratuity £37 10s. for each completed three months' resident service.

Free passages for officer and cost of passages for wife and children up to maximum of two adult passages. Allowances of £120 to £288 p.a. payable for maximum of three children under 18 years. Government quarters, if available, at low rent. Generous leave. Low income tax.

Candidates must be A.R.I.B.A. with wide general experience.

Write Director of Recruitment, Colonial Office, London, S.W.1, giving age, qualifications and experience, quoting B.C.D.112/408/07. 4381

CENTRAL ELECTRICITY AUTHORITY EASTERN DIVISION

Applications are invited for the following Superannuable post in the Great Yarmouth, Norfolk, district:—

ASSISTANT SITE ENGINEER
Salary range in accordance with N.J.B. Agreement, £810—£1,155 per annum. The commencing salary depending upon experience and qualifications.

The successful applicant will be required to supervise Civil Engineering and Building Works in connection with a new Generating Station and must have experience in this class of work. Apply by 17th November 1956, giving age, details of experience, qualifications and present position to the Controller, Central Electricity Authority, Eastern Division, Northmet House, Southgate, N.14.

W. N. C. CLINCH,
Controller. 4426

AIR MINISTRY Works Designs Branch requires in London and Provinces ARCHITECTURAL ASSISTANTS, experienced in planning/preparation of working drawings and details for permanent and semi-permanent buildings.

Salaries in London up to £925 p.a. (men) and £831 (women). Lower in Provinces. Starting pay depending on age, quals. and experience. Long-term possibilities, with promotion and pensionable prospects. 5-day week, 3 weeks, 3 days' leave a year. Liability for overseas service. Normally natural born British subjects. Write, incl. type of work done, to any Employment Exchange, quoting Order No. Borough 1000. 3029

BOROUGH OF MAIDENHEAD BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

ARCHITECTURAL ASSISTANT
Applications are invited for the appointment of an Architectural Assistant on Special Grade (£690 x £30—£840), plus the recent 2½ per cent. award.

The appointment will be subject to:—
(a) The National Scheme of Conditions of Service.

(b) The Local Government Superannuation Acts.

(c) The satisfactory passing of a medical examination.

(d) Termination by one month's notice on either side.

HOUSING ACCOMMODATION WILL BE PROVIDED.

Applications, stating age, experience, qualifications and previous appointments, accompanied by copies of two recent testimonials, must be sent in an envelope endorsed "Architectural Assistant" to the Borough Engineer and Surveyor, 14, Craufurd Rise, Maidenhead, not later than the 14th November, 1956.

Canvassing will be a disqualification, and candidates must disclose whether to their knowledge they are related to any member or senior officer of the Council.

STANLEY PLATT,
Town Clerk.
Guildhall, Maidenhead. 4409
October, 1956.

THE CORPORATION OF GLASGOW ARCHITECTURAL AND PLANNING DEPARTMENT

ASSISTANT ARCHITECTS PLANNING ASSISTANTS ASSISTANT QUANTITY SURVEYORS

Vacancies exist for a number of assistants. Minimum qualification, Intermediate Examination of the appropriate professional body. Salary scale £580—£1,100 per annum, with placing according to age, experience and qualifications.

Forms of application may be obtained from the Principal Administrative Officer, 20, Tronsgate, Glasgow, C.1.

A. G. JURY,
City Architect and Planning Officer. 4164

BASILDON DEVELOPMENT CORPORATION
DEPARTMENT OF ARCHITECTURE AND PLANNING

Applications are invited for the following posts:—

- (a) ASSISTANT ARCHITECT, Grade A.P.T. VI (£680—£1,080).
- (b) ASSISTANT ARCHITECT, Grade A.P.T. V (£795—£970).
- (c) ASSISTANT ARCHITECT, Grade A.P.T. III (£640—£765).

The Architects may work on Town Centre, Housing, or a large Factory, and must have ability in contemporary design and the preparation of working drawings. Candidates for appointment (a) must also have experience in contract supervision and management.

Applicants for posts (a) and (b) must be A.R.I.B.A., and for post (c) must have passed Intermediate R.I.B.A.

Posts are supernumerary and subject to satisfactory medical examination.

Housing available for renting.

Applications on the Special form (obtainable from the Chief Architect) to the General Manager, Basildon Development Corporation, Gifford House, Basildon, Essex, endorsed with the relevant appointment, by Monday, 26th November, 1956. 4406

METROPOLITAN BOROUGH OF WANDSWORTH ARCHITECTURAL STAFF

Applications invited for posts of:—

- (a) TWO SENIOR ASSISTANT ARCHITECTS (A.P.T. V. £825—£1,000 p.a.).
- (b) TWO ARCHITECTURAL ASSISTANTS (Grade III (A), £720—£870 p.a.).

Applicants for (a) must be Assoc. of R.I.B.A. and/or the R.I.C.S. (Building), with architectural experience. Practical knowledge required in preparation of working drawings and 1 in. details for multi-storey blocks of flats and/or other framed buildings, and supervision of their erection. Applicants for (b) must have passed Parts I and II of the R.I.B.A. Final or Special Final Examination or their equivalent at one of the recognised schools of architecture, and had at least five years' experience, including training.

Application forms from Borough Engineer, Surveyor and Architect must reach me by 19th November.

R. H. JERMAN,
Town Clerk.

Municipal Buildings, Wandsworth, S.W.18. 4404

DENBIGHSHIRE COUNTY COUNCIL

Applications are invited for the following appointments in the Department of the County Architect (Mr. R. A. Macfarlane, A.R.I.B.A.), Wrexham, viz.:—

- (a) ARCHITECTURAL ASSISTANT, A.P.T. Grade III (£656—£784).
- (b) FOUR ARCHITECTURAL ASSISTANTS, A.P.T. Grade II (£609—£691).
- (c) TWO ARCHITECTURAL ASSISTANTS, A.P.T. Grade I (£543—£625).
- (d) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade IV (£727—£907).
- (e) QUANTITY SURVEYING ASSISTANT, A.P.T. Grade III (£656—£784).
- (f) HEATING ENGINEERING ASSISTANT, A.P.T. Grade III/IV (£656—£907).
- (g) ELECTRICAL ENGINEERING ASSISTANT, A.P.T. Grades III/IV (£656—£907).

Further details and application forms may be obtained from me. Completed application forms are to be received by me not later than 24th November, 1956.

W. E. BUFTON,

Clerk of the County Council.

County Offices, Ruthin. 4415

BOROUGH OF BUXTON

Appointment of:—

- (a) SENIOR ENGINEERING ASSISTANTS (Two). Special Grade (£690×£30=£840).
- (b) JUNIOR ENGINEERING ASSISTANT, Grade A.P.T.I. (£530×£20=£610).
- (c) ARCHITECTURAL ASSISTANT, Special Grade (£690×£30=£840).

Applications are invited for the above appointments.

(a) Applicants must have passed the Final Examination of the Institution of Civil Engineers or the Institution of Municipal Engineers, and have had experience in Main Drainage, Sewage Disposal Design, Reinforced Concrete Design, Water Supply, Road Construction and Town Planning and Byelaw Administration. Housing accommodation available for one only of these appointments.

(b) Applicants to have completed professional training such as that envisaged in the scheme for training of Municipal Engineers.

(c) Applicants must be Registered Architects and have had experience in Housing and Estate Development.

The above appointments are subject to the National Scheme of Conditions of Service and the provisions of the Local Government Superannuation Act, 1937.

Applications, together with the names of two Referees, to be received by the undersigned not later than 20th November, 1956.

Canvassing will be deemed a disqualification.

A. C. W. RYLAND, A.M.I.C.E., M.I.Mun.E.
Borough Engineer.

Town Hall, Buxton. 31st October, 1956. 4422

CORPORATION OF GREENOCK BURGH SURVEYOR AND MASTER OF WORKS DEPARTMENT

Applications are invited for appointment to the post of JUNIOR DEPUTE (Architectural) to the Master of Works.

The salary offered is on the scale of £1,050, rising to £1,200 by annual increments of £50, with placing according to experience.

The appointment is subject to one month's notice on either side, is superannuable and subject to N.J.C. conditions.

The post is a newly created one and, while the Depute will have responsibility for all architectural work, the immediate task will be to take over design of all new structures, including shops, offices and dwellings in Comprehensive Development Areas.

Candidates must be A.R.I.B.A., and experience of redevelopment will be considered an advantage.

Applications, giving all particulars and quoting names of two referees, should be submitted to the undersigned not later than Monday, 26th November, 1956.

JOHN LIDDELL,

Town Clerk.

Municipal Buildings, Greenock. 29th October, 1956. 4414

GOLD COAST HOUSING CORPORATION—TWO ARCHITECTS

required on contract appointment to design and supervise construction of houses and other types of buildings for two tours each of 15-18 months' duration. Consolidated salary in the range of £1,130—£2,020 a year, according to age and experience. Gratuity of £37 10s. for each completed three months of resident service. Free first-class passages. Generous home leave. Outfit allowance of £30—£50 on first appointment. Taxation at low local rates.

Candidates not less than 30 years of age must be A.R.I.B.A., and one is required to have in addition the qualification of A.M.T.P.I. with minimum of three years' experience.

Apply, stating age, qualifications and experience, for further particulars and application form from the Secretary for Recruitment, Gold Coast Office, 13, Belgrave Square, London, S.W.1. Closing date for receipt of initial enquiries: 23rd November. 4408

EASTERN REGIONAL HOSPITAL BOARD, SCOTLAND

Applications are invited for the following appointments:—

- (a) ARCHITECTURAL ASSISTANT. Salary £510—£710.
- (b) ASSISTANT QUANTITY SURVEYOR. Salary £680—£985.

Applicants for post (a) must have passed the Intermediate Examination of the R.I.B.A., and for post (b) must be Corporate Members of the R.I.C.S., with experience of the Scottish Mode of Measurement.

The starting salary for both posts may be above the minimum of the scale, according to age and experience.

Applications, stating age, qualifications, experience, and the names and addresses of three referees, should be sent to the Secretary, Eastern Regional Hospital Board, "Braeknowe," 430, Blackness Road, Dundee, within 14 days from the date of this advertisement. 4431

CITY OF BELFAST

APPOINTMENT OF SENIOR ARCHITECT

The person appointed to this position should be capable of carrying through projects from sketch plans to working drawings and specifications; also giving a lead on incidental services and supervising the erection of the buildings and have experience in, or be capable of, leading a group of junior assistants on large size projects if required to do so.

Candidates should be registered by examination and have not less than 8 years' post-qualification experience.

The work carried out by the Architectural Staff includes public baths, libraries, sports pavilions and welfare homes in the form of new structures and alterations to existing buildings.

Salary: £1,100×£37 10s.—£1,250; commencing remuneration will be fixed according to qualifications, ability and experience. Superannuation contributions of approximately 6 per cent. of remuneration will be payable.

Reciprocal pension arrangements exist between the Corporation and other public authorities. Canvassing will disqualify.

Application forms, etc., completed from Room 39, City Hall, Belfast. Completed applications must reach the undersigned by 19th November.

JOHN DUNLOP,

Town Clerk.

City Hall, Belfast, P.O. Box 234. 30th October, 1956. 4433

LONDON COUNTY COUNCIL ARCHITECTS' DEPARTMENT

Vacancies for ARCHITECTURAL and SURVEYING ASSISTANTS in the THEATRES SECTION. Salaries up to £818, with starting rates according to qualifications and experience. Work involves survey of existing premises and the consideration of proposals for alterations and new construction.

Particulars and application form returnable by 23rd November, 1956, from The Architect (AR/EK/TH/2), County Hall, S.E.1. (2083) 4372

EAST RIDING OF YORKSHIRE COUNTY COUNCIL

Applications are invited for the following appointments on the permanent staff of the County Architect:—

- CHIEF ASSISTANT QUANTITY SURVEYOR, N.J.C. Scales, Grade VII (£999 7s. 6d.—£1,230).
- ASSISTANT ARCHITECTS, N.J.C. Scales, Grades IV and Special (£727 15s.—£907 2s. 6d.) and (£707 5s.—£861) respectively.

Applications for the post of Chief Assistant Quantity Surveyor should be Members of the Royal Institution of Chartered Surveyors and have had wide experience in the preparation of estimates, specifications, bills of quantities, schedules, adjustment of final accounts and other work incidental to such an appointment, including the control of staff.

Applications, giving particulars of age, past and present appointments with salaries, details of experience, together with the names of three referees, should be sent to the County Architect, County Hall, Beverley, not later than Friday, 23rd November, 1956.

THOMAS STEPHENSON,

Clerk of the Council.

County Hall, Beverley. November, 1956. 4432

SURREY COUNTY COUNCIL

Applications invited for following appointments:—

- (1) ASSISTANT ARCHITECT, Grade IV-VI, minimum £710, maximum £1,080, plus £30 London allowance p.a.
- (2) ARCHITECTURAL ASSISTANT, Grade I-III, minimum £530, maximum £765, p.a., plus L.A.

(3) SENIOR ASSISTANT QUANTITY SURVEYOR, Grade VI, £880×£40 to £1,080 p.a., plus £30 L.A. must be Chartered Quantity Surveyor, with experience on major contracts, including adjustment of final accounts and directing staff.

(4) ASSISTANT QUANTITY SURVEYOR, Grade III, £640×£25 to £765 p.a., plus L.A. Preference given applicants who have passed Inter. R.I.C.S.

(5) MAINTENANCE SURVEYING ASSISTANT, Grade II, £595×£20 to £675 p.a., plus L.A. Preference given applicants who have passed Inter. R.I.C.S. (Building Sub-Division). Experienced preparing specifications, schedules of dilapidations, and detailed estimates for general maintenance works.

For (1) and (2) salary range of appointment and commencing salary will depend on experience and qualifications.

Full details, present salary and 3-copy testimonials, to County Architect, County Hall, Kingston, as soon as possible. 4434

CORPORATION OF DUNDEE

CITY ARCHITECT'S DEPARTMENT

Applications are invited for several appointments as ARCHITECTS in the City Architect's Department in A.P.T. Grades II to Va, £580 to £905, and in A.P.T. Grades VI to VIII, £805 to £990 per annum.

The posts are supernumerary, and applicants should be under 45 years of age. The successful applicants will require to pass satisfactorily a medical examination for entry into the Superannuation Scheme.

Salaries will be in accordance with experience and qualifications of the applicants.

Applications, giving full information as to training, experience and qualifications, along with the names of two professional referees, to be lodged with the Town Clerk, City Chambers, Dundee, on or before Monday, 26th November, 1956. 4435

METROPOLITAN BOROUGH OF WOOLWICH

BOROUGH ENGINEER'S DEPARTMENT

SENIOR ASSISTANT ARCHITECT required, Grade V (£795—£970), plus London weighting, A.R.I.B.A. or equivalent essential. Superannuation Scheme, Medical examination.

Application forms from Borough Engineer, Town Hall, Woolwich, S.E.18, to be returned to Town Clerk by 19th November, 1956.

Canvassing disqualifies. 4378

LONDON COUNTY COUNCIL

ARCHITECTS' DEPARTMENT

Applications are invited to fill newly created positions in the BUILDING REGULATION DIVISION for inspection of buildings to improve MEANS OF ESCAPE in Areas of high fire risk. Grade III (salary up to £987) and ASSISTANTS (up to £810), with starting rates according to qualifications and experience.

Particulars and application form obtainable from the Architect (AR/EK/BR/3), County Hall, S.E.1. (2091) 4394

CITY OF WORCESTER

APPOINTMENT OF SENIOR QUANTITY SURVEYOR

Applications are invited from qualified Quantity Surveyors for this appointment within A.P.T. Grade V (salary £814 17s. 6d.—£994 5s.). Housing accommodation will be offered if required, and a casual users' car allowance will also be available.

Applications, with the names of two referees, are to be sent to the City Engineer and Surveyor, 22, Bridge Street, Worcester, by 13th November, 1956.

BERTRAM WEBSTER,

Town Clerk.

Guildhall, Worcester. 4393

CORPORATION OF LONDON
invites applications
for permanent appointment of
SECOND PRINCIPAL ARCHITECTURAL ASSISTANT.
in the Architectural and Housing Section of the
CITY ENGINEER'S OFFICE.
Salary scale £1,000 to £1,220, according to
experience.

Candidates should be Associates of the Royal
Institute of British Architects, and have had
varied experience in Local Authority work, particu-
larly on maintenance and improvement works
for Housing and Public Buildings.
Medical examination, local Act Superannuation
Fund.
Applications, stating age, experience, present
and previous appointments, with names of two
referees, to the City Engineer, 55/61, Moorgate,
London, E.C.2, by 26th November. 4437

Architectural Appointments Vacant
4 lines or under, 7s. 6d.; each additional line, 2s.

POST-INTERMEDIATE ASSISTANT requires,
in large London Office with widely varied
practice. Lewis Solomon, Son & Joseph, 21,
Bloomsbury Way, London, W.C.1. Telephone HO 6
7062. 3122

CO-OPERATIVE WHOLESALE SOCIETY LTD.
ARCHITECT'S DEPARTMENT, MANCHESTER
SHOPFITTING DRAUGHTSMAN required, ex-
perienced in shop equipment and modernisa-
tion of interiors.

The position calls for the preparation of layouts
and perspectives with a modern approach to store
fitting problems.

The post is pensionable, subject to medical
examination and there is a five-day week in
operation.

Applications giving age, details of previous
experience and salary required to G. S. Hay,
A.R.I.B.A., Chief Architect, Co-operative Whole-
sale Society, Ltd., 1, Balloon Street, Manchester
4. 3056

ASSISTANTS required in medium-sized busy
West End office. Applicants should be of
R.I.B.A. Finals standard, capable of taking com-
plete charge of contracts under general super-
vision. General Practice, including Housing
Schemes, Office Blocks, Factories, etc.—Apply in
writing only, stating age, qualifications, experience
and salary required, to Thomas Sibthorp,
F.R.I.B.A., A.R.I.C.S., A.M.T.P.I., 10, Manchester
Square, W.1. 4376

RONALD WARD & PARTNERS require an
ARCHITECTURAL ASSISTANT, with con-
temporary outlook and willing to use own initia-
tive. Salary range £500 to £800. Interesting and
varied work, home and abroad. Congenial work-
ing conditions.—Apply 29, Chesham Place,
Belgrave Square, S.W.1. Tel. Belgravia 3361.
4032

WEST END Architects require **ASSISTANT**
for preparation of working drawings.
Some office experience essential, together with a
sound knowledge of building construction. State
salary required.—Box 4049.

F. W. WOOLWORTH & CO. LTD. Architect's
Department, Kensington District Office.
Applications are invited for the following appoint-
ment:

ARCHITECTURAL ASSISTANT of Inter-
mediate R.I.B.A. standard, capable of carrying out
surveys, preparing sketch schemes, working
drawings and details.

The appointment is permanent and pensionable.
5-day week. Dining room facilities. Application
stating age, experience, qualifications and salary to
District Architect, F. W. Woolworth & Co.,
Ltd., 26/40, Kensington High Street, London, W.8.
4272

ARCHITECTURAL ASSISTANT required with
good general training and experience. Inter-
esting work including schools, light industrial
work, and housing R.I.A.S. Pension Scheme.
Apply with full particulars and salary required to
Fairbrother, Hall & Hedges, A/A.R.I.B.A., 27,
Rutland Square, Edinburgh, 1. Fountainbridge: 1251/2.
4256

ARCHITECTURAL ASSISTANTS required.
State salary, age, experience, etc. Harvey
& Scott, 2, Lynedoch Place, Glasgow, C.3. 4278

MAJOR Petroleum Company requires, for its
London Office, an **ARCHITECTURAL**
DRAUGHTSMAN for work on various com-
mercial projects. Applicants should be quick and
accurate draughtsmen and should have a sound
knowledge of building construction. Salary
according to experience. Position will be per-
manent and pensionable. Excellent working
conditions, staff restaurant, sports club, etc.
Apply in writing giving full details of age,
qualifications and experience to Box 4255. Replies
can only be sent to those selected for interview.

ARCHITECTURAL ASSISTANT required:
qualified or Intermediate stage. Must have
good experience, and considerable capacity for
work.—Write, stating salary required, to David
Carr & Stuart Matthew, 14, Lynedoch Place,
Edinburgh. 4343

OLIVER LAW & PARTNERS (Chartered
Architects), 35, Ebury Street, Westminster,
require two or three additional **ARCHITEC-
TURAL ASSISTANTS** (Draughtsmen). Architec-
tural School or Office experience essential. Salaries
£600 to £800 per annum, according to experience.
Box 4253.

ARCHITECTURAL ASSISTANT, Intermediate
standard, required immediately for busy
general practice. Write stating age, experience
and salary required to Deacon & Laing, 9, St.
Paul's Square, Bedford. 4221

ARCHITECTURAL ASSISTANT required in
New Year, in small office, for work in
Metropolitan Essex. Opportunity for wide ex-
perience with varied types of building. 5-day
week. Salary by arrangement.—Tingey Associates,
29a, Longbridge Road, Barking, Essex. Rippleway
1313. 4352

RAMSEY, MURRAY, WHITE & WARD re-
quire an **ASSISTANT ARCHITECT**, with
minimum two years' experience after qualify-
ing.—Apply 32, Wigmore Street, London, W.1.
4356

PATRICK GWYNNE requires an **ASSISTANT**
to work with him personally at his home
near Esher, on detailing of new houses, interiors
and furniture. Previous office experience essential.
The Homewood, Esher, Surrey. Esher 3310. 4277

SOUTH-WEST Office requires **ARCHITEC-
TURAL ASSISTANT**, Junior/Intermediate
grade. Progressive position; medium size, varied
practice, with scope for initiative and taking of
responsibility; pleasant working conditions; small
flat available, car allowance; pension scheme.
Salary up to £600 p.a., according to experience.—
Apply Box 4339.

W. H. SMITH & SON require **ASSISTANT**
ARCHITECTS and also **JUNIOR ASSIS-
TANTS** in the Drawing Office of their Estate
Department. Assistant Architects should be
qualified, and preference will be given to those
applicants with knowledge of shop fitting work,
although not essential. Juniors should be up to
intermediate standard. Positions will be pro-
gressive and work is interesting and varied.
Salary paid commensurate to age, experience, and
qualifications in both cases. 5-day week. Super-
annuation scheme.—Apply to Chief Architect,
W. H. Smith & Son, Ltd., Strand House, W.C.2.
4548

ARCHITECTURAL ASSISTANTS required.
Intermediate R.I.B.A. standard. Salaries
according to ability. Superannuation scheme in
operation.—Box 4349.

CUMBERNAULD NEW TOWN

THE FIRST OF THE MARK II NEW TOWNS

★ *The New Town, to be built on a hilly site between Glasgow and Stirling, will provide accommodation for 50,000 people. Housing densities will be considerably higher than in the other New Towns.*

The Chief Architect and Planning Officer will be responsible for the preparation of the Master Plan and for building projects carried out by the Development Corporation.

The Department will be organised on a group basis, with full scope for staff to make essential contributions to the creation of an urban setting.

Applications are now invited for the first posts as listed. Salary scales are those of the Whitley Council for New Towns Staff, but appointments may be made above the minimum of the scale. The Corporation are aware of the difficulties of the housing situation and, where necessary, every effort will be made to provide accommodation as soon as possible.

Write to Hugh Wilson, O.B.E., A.R.I.B.A., Dist.T.P., A.M.T.P.I., Chief Architect and Planning Officer, Cumbernauld House, Cumbernauld, Dunbartonshire, for application form (quoting reference number of post) to be returned not later than 28th November, 1956.

● PLANNING SECTION

SENIOR PLANNING OFFICER. (Ref. P.1)
Scale £1,295—£1,515.

To lead. A.R.I.B.A., A.M.T.P.I. required.

ASSISTANT PLANNING OFFICERS, GRADE B.
(Ref. P.2)

Scale £880—£1,080. A.R.I.B.A., A.M.T.P.I. required.

ASSISTANT PLANNING OFFICERS, GRADE C
(Ref. P.3)

Scale £710—£885. A.R.I.B.A. required.

SENIOR LANDSCAPE ARCHITECT. (Ref. P.4)

Scale £880—£1,080. To be responsible for landscape design under the general guidance of the Landscape Consultant. A.I.L.A. required.

ASSISTANT LANDSCAPE ARCHITECT. (Ref. P.5)

Scale £640—£765.

MODEL MAKER. (Ref. P.6)

Scale £640—£765. To take charge of Modelling Section.

● ARCHITECTURAL SECTION

GROUP ARCHITECT. (Ref. A.1)
Scale £1,185—£1,405. To be responsible for leading a group. A.R.I.B.A. required.

ASSISTANT ARCHITECTS, GRADE B. (Ref. A.2)
Scale £795—£1,080. To take charge of a project to completion. A.R.I.B.A. required.

ASSISTANT ARCHITECTS, GRADE C. (Ref. A.3)
Scale £710—£885. To work on large projects in a group or have charge of a smaller project. A.R.I.B.A. required.

ARCHITECTURAL ASSISTANT, GRADE D.
(Ref. A.4)
Scale £595—£765. Inter R.I.B.A. required.

● ENGINEERING SECTION

SENIOR ENGINEER. (Ref. E.1)
Scale £1,295—£1,515. To lead engineering section and to be responsible for liaison with other authorities. Also to work in planning team. A.M.I.C.E. required.

ASSISTANT ENGINEER. (Ref. E.2)
Scale £880—£1,080. A.M.I.C.E. required.

ENGINEERING ASSISTANT. (Ref. E.3)
Scale £640—£765. Parts I and II of the Associate Membership I.C.E. examination or equivalent required.

ARCHITECTURAL ASSISTANT required by Spicers, Ltd. Intermediate standard R.I.B.A. essential, A.R.I.B.A. desirable. Permanent position, Pension Scheme.—Write, stating salary required, to Personnel Adviser, 19, New Bridge Street, E.C.4. 4336

EXPERIENCED ARCHITECTURAL ASSISTANT required for varied practice.—Write or telephone for appointment to Gerald Shenhstone & Partners, 34, Bloomsbury Way, W.C.1. Telephone Chancery 3444. 4302

THE LONDON HOSPITAL, Whitechapel, E.1. requires **JUNIOR ARCHITECTURAL ASSISTANT**. Salary £440 to £650 p.a., according to experience, plus London weighting. Post superannuable.—Applications, stating age, present salary, and brief particulars of experience, to be sent to the Architect. Accommodation is available in Kensington if successful candidate is a woman. 4086

LOUIS DE SOISSONS, Peacock, Hodges & Robertson, have vacancies in their London and Welwyn Garden City offices for **SENIOR AND JUNIOR ARCHITECTURAL** staff. A large amount of varied interesting work on hand.—Write, stating age, salary and experience, to Louis de Soissons, Peacock, Hodges & Robertson, 3, Park Square Mews, Upper Harley Street, London, N.W.1. 4296

ARCHITECT'S EXPERIENCED ASSISTANT required in Brewery Architect's Office, Newcastle upon Tyne. Superannuation scheme operative after probationary period. State age, experience, salary expected and full details to Box 4424.

ARCHITECTURAL ASSISTANTS with imagination and initiative, required by Brighton office to London practice. Applicants should have progressive ideas and at least two years' office experience after completion of training. Congenial working conditions; 5-day week; staff pension scheme. Salary by arrangement.—Apply Box 4319.

YOUNG, Intermediate standard, **ARCHITECTURAL DRAUGHTSMEN**, with contemporary outlook, required immediately for Surveys, Working Drawings and Details. Good salary and prospects offered.—Dawe, Carter & Partners, Clarendon Road, Watford. WAT. 7296. 4300

ARCHITECTS require **ASSISTANT**; passed R.I.B.A. Intermediate. Large scale commercial work. Good salary to keen assistant.—Watson, Johnson & Stokes, 5, Victoria Square, Birmingham, 2. 4318

QUALIFIED ARCHITECT for Design in London office on interesting West African projects. Prospects of overseas tours. Salary by arrangement.—Apply Box 4314.

TREHEARNE & NORMAN, PRESTON & PARTNERS have vacancies for **SENIOR AND JUNIOR ASSISTANTS**. Salaries according to experience and qualifications.—Apply: 83, Kingsway, W.C.2 (HOL. 4071). 3028

ENTHUSIASTIC ASSISTANT wanted for small modern office.—Write or 'phone N. H. Godsmark, Chartered Architect, 37A, Tubwell Row, Darlington. Tel. Darlington 4932. 4327

ARCHITECTURAL ASSISTANT, Intermediate standard, required for West End Architects' office. 5-day week. Luncheon vouchers. Salary by arrangement.—Scherrer & Hicks, 19, Cavendish Square, W.1. 4307

EXPANDING Architectural practice on South Coast requires **ARCHITECTS** for work on large projects.—Apply, giving particulars and salary required, to Box 4328.

SENIOR EXPERIENCED ASSISTANT required. Interesting work with opportunity for individual responsibility. Apply in writing, stating age, experience and salary required to Devereux and Davies, 3, Gower Street, London, W.C.1. 4427

W. H. WATKINS, GRAY & PARTNERS require **ASSISTANTS** for interesting hospital work, pension scheme in operation. Write or phone, 57, Catherine Place, S.W.1. Victoria 7761. 4399

FREDERICK GIBBERD requires **ARCHITECTURAL ASSISTANTS** with office experience for interesting work. Salary £600—£750 according to experience. Apply, giving full particulars, to 8, Percy Street, London, W.1. 4420

INTER. R.I.B.A. standard **ASSISTANT** required with office experience for varied practice in Gray's Inn. Chance to see job through from start to finish.—William G. Ingram, Son & Archer. Telephone Chancery 8036. 4290

MESSRS. EASTON & ROBERTSON require **ASSISTANTS** in Junior and Intermediate grades.—Apply 53, Bedford Square, W.C.1. 4153

JOHN LAING AND SON LIMITED INVITE applications for the following grades of **ARCHITECTURAL STAFF** for vacancies in the Architects Departments (Chief Architect; Sydney Greenwood, A.R.I.B.A.).

DEVELOPMENT ARCHITECTS & ASSISTANTS for the study and development of new forms of construction at the Research and Development Centre, Boreham Wood, Herts. All grades are required including qualified men and those seeking qualifications.

The following vacancies exist in the Architects Department at Head Office, Mill Hill, N.W.7:—

ARCHITECTURAL ASSISTANTS of Final or Intermediate R.I.B.A. standard, and some experience in one or more of the following:—office and industrial schemes, multi-storey flats and maisonnettes, private and municipal housing.

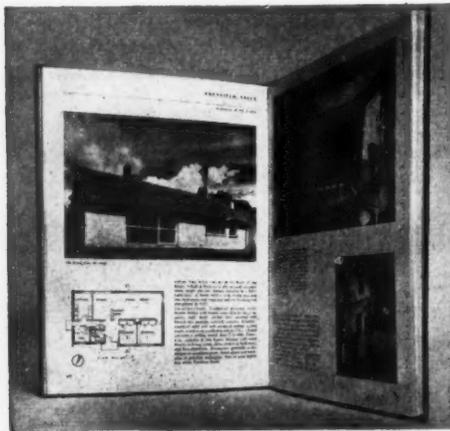
JUNIOR ARCHITECTURAL ASSISTANTS who are studying for a recognised qualification and requiring practical experience.

ARCHITECTURAL DRAUGHTSMEN with adequate drawing office experience.

These positions offer excellent opportunities for advancement and a wide variety of work in a busy office. Pension Scheme. Five-day week. Canteen. Sports and Social Club facilities. Applications should be made in writing stating age, qualifications and experience to:—Personnel Manager (D.A.1), John Laing and Son, Ltd., Page Street, London, N.W.7. 4421

ARCHITECTURAL ASSISTANT required, age 22-26 years, for London office. Should have completed National Service and be R.I.B.A. Probationer working for Intermediate examination, with experience in an Architect's office. Commencing salary £468—£558 according to age. Good prospects. Apply Box 4430.

ARCHITECT required in Walvis Bay, South West Africa. Write for details quoting OSS 83/3 to O.T.S., 5, Weldon Crescent, Harrow, Middlesex. 4380



50 modern bungalows

EDITED BY FELIX WALTER, F.R.I.B.A.

THIS BOOK ILLUSTRATES AND DESCRIBES in detail a selection of examples of the most successful and interesting recently-built single-storey houses, all of them examples which show the latest developments in small house planning and design. It is edited by a practising architect with considerable experience of small house design. In his introduction and descriptive notes he pays special attention to new heating methods and to the latest ideas in planning, kitchen arrangements and so on which these facilitate. Costs are stated for each house illustrated. Size 10 ins. by 7½ ins. 112 pages, over 200 illustrations in halftone and line. Price 18s. 6d. net postage 1s.

THE ARCHITECTURAL PRESS, 9 Queen Anne's Gate, S.W.1.



Stainless Steel or Galvanised CROCKERY WASH & STERILIZING UNIT

In sizes to requirements. Specialists in sink unit fabrication.

GAS ELECTRIC OR STEAM

Associated Metal Works
(GLASGOW) LTD.
30 ST. ANDREW'S SQUARE, GLASGOW, C.I.

LONDON OFFICE:
7, Grosvenor Gardens, S.W.1. Telephone: VICTORIA 1977/8
And at LIVERPOOL·MANCHESTER·NEWCASTLE·BELFAST and DUBLIN

Telephone: BELL 2004/6. Telegrams: "STAINLESS, GLASGOW."

INTERMEDIATE STANDARD ASSISTANT required urgently for small City practice. Temporary or part-time considered. Ring CENTRAL 8464. 4419

SENIOR ARCHITECTURAL ASSISTANTS required for work in N.W. England, salary £1,000 p.a. Apply Box 4379. 4384

SENIOR ASSISTANT wanted in busy office in Birmingham. Salary £750-£950 according to experience. Box 4382. 4384

ASSISTANT required. Salary £900-£900 per annum. Write stating qualifications and experience to Richard Brown, Architects, 123, Victoria Road, Darlington. 4384

ARCHITECT'S ASSISTANT required in West Riding private practice. Intermediate standard. Write C. F. L. Horsfall & Son, Lord Street Chambers, Halifax, Yorkshire, giving details of experience. Salary to be agreed on basis of ability. 4385

ARCHITECT. Young qualified Architect required by a large Iron and Steel Works in the Midlands for work in connection with new buildings and extensions. Housing prospects favourable. Applicants should give details of experience and salary required. Box 4387. 4389

ARCHITECTURAL ASSISTANT required for interesting work in the City and Provinces. Write giving experience and salary required to Westmore & Partners, 121, Cheapside, E.C.2. 4389

EXPERIENCED ARCHITECTURAL ASSISTANTS required for varied contemporary work. Sound knowledge of construction essential, able to take responsibility. 5-day week. Apply, giving details of age, experience, salary required and when available to Edward D. Mills & Partners, 15, Carlisle Street, Soho Square, W.1. 4390

SHOPFITTING DRAUGHTSMAN. Selfridges Limited have a vacancy for a senior shopfitting draughtsman in their architect's office. The work is varied and interesting. Permanent pensionable position for man under forty-five years of age. Staff restaurant. Five-day week. Apply in the first instance in writing stating age, experience and salary required to the Staff Manager, 403, Oxford Street, W.1. 4392

SOUTHAMPTON. ARCHITECTURAL ASSISTANT required in busy office for work on a varied programme of commercial and industrial building. Permanent and progressive post for man with initiative. Applications giving full particulars and salary required to W. H. Saunders & Son, 1, Carlton Crescent, Southampton. 4377

ARCHITECT'S ASSISTANTS required, London. Salaries £500-£750. Box 4401. 4405

RILEY & GLANFIELD require male ASSISTANT, maximum salary £650. Work: church, industrial, housing and public house. Telephone CHA 7328. 4398

LEADING Timber Building Prefabricating Company requires for its Farnborough Office, an **ARCHITECTURAL DRAUGHTSMAN.** Applicants should be quick and accurate with a contemporary outlook. Salary according to experience. Five-day week, pleasant working conditions, staff canteen. Apply in writing giving full details of age and experience to H. & H. Blacknell Ltd., Park Place, Pinehurst Avenue, Farnborough, Hants. 4396

GEORGE WIMPEY & CO. LTD. THE Architects' Department seek architectural staff enthusiastic to apply their knowledge to new construction techniques covering Houses, Multi-storey Flats, Offices, Schools and Industrial Buildings for contracts in the UK and Overseas. Appointments range from ARCHITECTS to DRAUGHTSMEN with special interest to those of ability, recognising the value of the designer and technician as an integral part of the production team. Appointments are on a permanent basis, with a 5-day week, at Head Office, Hammersmith. Regional Offices at Birmingham and Newcastle have similar appointments (excepting 5-day week) for applicants interested in work in these areas. Salaries will be according to qualifications and experience, and subject to satisfactory service, there is a Pension Scheme for those wishing to make a career with the firm. Applicants should write giving brief particulars to E. V. Collins, A.R.I.B.A., Chief Architect, 27, Hammersmith Grove, London, W.6. Ref. R.131A. 4405

ARCHITECTURAL ASSISTANT (R.I.B.A.) Intermediate or near Final standard) interested in contemporary design, required in small West End office of Architect dealing with design of chain shops. Telephone for appointment Grosvenor 2533 or apply Box 4407. 4405

JUNIOR ARCHITECTURAL DRAUGHTSMAN required to work under supervision and assist with surveys. Apply: Richard Jaques, F.R.I.B.A., 3, Carr Road, Nelson, Lancs. 4444

HEAD in graphic—feet on ground. Art department of small, but growing, graphic design and P.R. Group, need young GENERAL ASSISTANT. Imagination preferable to knowledge of what can't be done. Box 4442. 4443

ARCHITECTURAL ASSISTANT required. Progressive post with scope for initiative. Apply in writing to Devereux & Davies, stating age, experience and salary required. 4440

ARCHITECTURAL ASSISTANTS required with experience in heavy industrial buildings and large office blocks. Salaries up to £850 with ample opportunities for overtime working. Bunnell & Isitt (Partners), 33, Gt. Titchfield Street, W.1. Tel. MUSEUM 8753. 4441

JUNIOR ARCHITECTURAL ASSISTANT or **BEGINNER (Male)** required in West End Architects' office. Previous experience desirable but not essential. 5-day week. Salary by arrangement. Apply Box 4439. 4443

RONALD FIELDING, A.R.I.B.A., requires **SENIOR** and **JUNIOR ASSISTANTS.** Please apply with details of experience, age and salary required to Aldwych House, London, W.C.2. (Chancery 5532/3). 4436

ARCHITECTURAL ASSISTANT, enthusiastic and with contemporary outlook, for Lincolnshire Office £800 per annum. Housing accommodation. Saunders & Partners, 24, Castlegate, Newark-on-Trent. 4443

ARCHITECTURAL DRAUGHTSMAN required by London's oldest and largest Property Development Company specialising in choice commercial developments. This is a permanent post which offers invaluable experience. Excellent prospects of future advancement and highest salary to ambitious and competent man. Write Box 4439. 4443

LONDON firm of Architects requires **ASSISTANTS** immediately. Write stating experience, salary required, etc., to Box 4388. 4443

Architectural Appointments Wanted
4 lines or under, 7s. 6d.; each additional line, 2s.

A. R.I.B.A. Dipl. Arch. (30), with considerable experience in management of awkward contracts in London, requires responsible, busy, senior appointment in small, private, London office. 4297

A. R.I.B.A. (41), holding senior post with London Brewery (8 years), seeks similar post anywhere outside London area.—Box 4355. 4443

A. R.I.B.A., A.M.T.P.I., 25 years' London experience, seeks responsible post or partnership in London area—Write 273, Shirland Road, W.9, or 'phone Ladbroke 1886. 4207

A. R.I.B.A., experienced, car owner, seeks responsible position.—Box 4370. 4443

ASSOCIATE, A.M.T.P.I. (30), with varied experience seeks responsible position with an Established Practice in South or South-West England. Would like to introduce some work. Contemporary outlook. Car owner.—Box 4425. 4443

ARCHITECTURAL ASSISTANTS

Required by

MINISTRY OF WORKS

For employment in London and Provinces on design and detailing work on construction and maintenance of all types of public buildings.

SALARY RANGE £500 (age 21) to £790 P.A. London (slightly less elsewhere).

5 DAY WEEK. 3½ WEEKS ANNUAL LEAVE INITIALLY.

STARTING PAY ACCORDING TO AGE, QUALIFICATIONS AND EXPERIENCE.

GOOD PROSPECTS OF PROMOTION WITH SALARIES OF £925 P.A. AND ABOVE.

OPPORTUNITIES FOR PERMANENT POSTS LEADING TO PENSIONS (NON-CONTRIBUTORY).

INTERVIEWS at Regional Offices where possible.

APPLICANTS should be of Inter R.I.B.A. standard.

State age, training and experience to Chief Architect, Ministry of Works (H), Abell House, John Islip Street, S.W.1.

SPECIFY for SAVING — in WEIGHT, MAINTENANCE AND CLEANING COSTS

"CODE" C.4 OFFSET EASY-CLEAN HINGE

- **PRESSURE DIE CAST** aluminium alloy. Weight only 12 ozs. per pair.
- **TESTED** to equivalent 60 years' movements in use.
- **APPROVED** to B.S.S. 1490. Specified by L.C.C. and other Municipal Authorities.

Send for data and prices



Code Designs Ltd.

415 OLDFIELD LANE, GREENFORD, MX.

BILLINGHAM  DIVISION

ASSISTANT ARCHITECT

Applications are invited for the appointment of an Assistant Architect to help in the design of a large scale building programme of Offices, Laboratories, Amenity Buildings, etc. Candidates should be members of the R.I.B.A. with a minimum of two years' experience after qualification. The post is permanent and carries an attractive starting salary and conditions of service. Without commitment, send for Application Form to the Staff Manager, Imperial Chemical Industries, Limited, Billingham Division, Billingham, Co. Durham, quoting reference L/C/8.

BILLINGHAM  DIVISION

ASSISTANT QUANTITY SURVEYORS

There are vacancies at Billingham for two Assistant Quantity Surveyors, preferably under 30 years of age, for permanent positions. They should be experienced in taking off, preparation of Bills of Quantities and settlement of final accounts. Attractive salaries and conditions of service are offered. Without commitment, send for Application Form to the Staff Manager, Imperial Chemical Industries Limited, Billingham Division, Billingham, Co. Durham, quoting reference L/D/8.

A. R.I.B.A., A.M.T.P.I., offers part-time day or evening assistance in London area or Essex. School trained and with 7 years' varied office and site experience. Own car.—Box 4429.

YOUNG Furniture/Interior Designer seeks post offering scope for application of modern idiom with firm or architect. Accommodation desired. Box 4413.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.
BUILDING SURVEYOR required by progressive Manchester Architects and Surveyors. Must be good, accurate draughtsman, able to survey and level. State age, qualifications (if any), salary and experience.—Apply Box 4292.

DESIGNER/ESTIMATOR required with shop-fitting experience. Opportunity for advancement with growing Company. R. W. Bates & Sons, Ltd., 85/87, Norwood High Street, S.E.27. G.I.P. 0091. 4418

RHODESIA

A LEADING firm of Contractors seek a **CONTRACTS MANAGER**. Preferably qualified engineer with 15 to 20 years' experience in the overall running of civil engineering and building/contracts. Capable of handling schemes up to £1,000,000. Sound business knowledge essential, with organising and administrative ability, and ability to organise and able to control staff of mixed nationality. Outstanding opportunity for man of right calibre. Salary according to capabilities, free family passages, etc. Write for details quoting OSS 86/5 to Overseas Technical Service, 5, Welldon Crescent, Harrow, Middlesex. 4391

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.
THIS WEEK we are available to inspect sites between **NORFOLK** and **LONDON**.—**THE SITE SURVEY COMPANY, BLACKHEATH, S.E.3.** LEE Green 7444-5.

EXPERIENCED ARCHITECT will assist profession in Home Counties and London area. Tracing, details, working drawings, specifications. Own office and facilities. Box 4219.

"DON" ARCHITECTURAL MODEL MAKEERS. We offer the highest grade work with speed and reliability. Please phone Brith 3843 or Hastings 3985. 1673

HEATING AND VENTILATING. M.I.H.V.B. advises on tenders or prepares schemes Box 3179.

A. R.I.B.A. offers part time assistance in any capacity. Car-owner. Box 4371.

A RCHITECTURAL PHOTOGRAPHY to Monochrome, Natural Colour and 3D. Quotations with pleasure.—Geoffrey Hammonds (Associate of the Institute of British Photographers in Commercial Photography), The Studios, King Street, Hereford. Tel. Hereford 2619. 3094

SITE Surveys and Surveys of Buildings prepared at short notice anywhere in Britain. MUSEUM 8753. 3193

SURVEYS OF BUILDINGS, detailed drawings prepared, also land surveys by chain or theodolite, levelling, etc. LIV. 1839. 1739

A RCHITECTURAL, Reinforced Concrete and Steel Design and Detailing required—only buildings over £10,000. Large staff available. MUSEUM 8753. 3223

GOOD LETTERING is essential for Commemorative Wall Tablets, Foundation Stones, etc. Designs prepared and estimates given for the finished work in any suitable material. Renowned as a Centre for Lettering since 1834. Sculptured Memorials, 67, Ebury Street, S.W.1. 9170

A RCHITECT'S SHORTHAND TYPIST with own portable is available for week-end work.—Apply Box 4341.

STRUCTURAL Design, Detailing, Scheduling, etc., in steel and reinforced concrete undertaken.—Box 4346.

TYPEWRITING/DUPLICATING. — Specifications, etc., undertaken by experts. Reasonable charges.—Stone's Secretarial Services, 446, Strand, Tem. 5984. 4312

PAISLEY TECHNICAL COLLEGE COMPETITION. Site survey record photographs available, choice of 50, including panoramic view of whole site. Key plan showing viewpoints on application.—Box 4423.

For Sale and Wanted

4 lines or under, 7s. 6d.; each additional line, 2s.

RECONDITIONED Ex-Army Huts and Manufactured Buildings, Timber, Asbestos, Nissen Type, Hall Type, etc. All sizes and prices.—Write, call or telephone: Universal Supplies (Belvedere), Ltd., Crabtree Manorway, Belvedere, Kent. Tel.: Erith 2948. 1474

SECTIONAL BUILDINGS, timber, timber and asbestos, 10 ft. to 24 ft. spans. A few secondhand buildings available. Enquiries invited for Site Huts, Temporary Offices, Club Rooms, Church Halls, etc. Free catalogue. Universal Supplies (Belvedere), Ltd., Crabtree Manorway, Belvedere, Kent (Brith 2948). 3275

A RCHITECT'S Practice for Sale. Established 25 years, busy town, South Lincolnshire. Excellent office suite and all equipment.—Box 4369.

Partnership and Financial

6 lines or under, 12s. 6d.; each additional line, 2s.
FOR disposal in old and well established firm of Builders, Ordinary Shares at an agreed valuation together with suitable position secured by Agreement. £25,000 required. Box 4411.

A DVANCES at 6% p.a. assisting qualified male Accountants (maximum age 50) to purchase partnership shares in established practices. No fees payable. Colinton & Co. Ltd., 87, Chancery Lane, London, W.C.2. 4412

WE undertake to furnish conversions for letting purposes. A large selection of suitable new and secondhand furniture carried in stock. H.P. facilities available. Layouts drafted and estimates prepared. For full information write, phone or call: John Strand Ltd., 257, Harrow Road, W.2. CUN 7442. 4400

Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s.

A. J. BINNS, LTD., Specialists in the supply and fixing of all types of Fencing, Gates and Cloakroom Equipment. Harvest Works 46/107 St Paul's Road N1 Canonbury 2061

DESIGNER requires 1 or 2 unfurnished rooms, central London, for use as studio-living quarters. Phone GRO. 7211. Ext. 19. 4428

Educational Announcements

4 lines or under, 7s. 6d.; each additional line, 2s.

R. I.B.A. Inter. and Final EXAMS. TUTION BY POST.—C. W. BOX, F.R.I.B.A., 115, Gower Street, W.C.1. Tel.: RUS. 3906. 1942

R. I.B.A. and T.P.I. EXAMS.—Stuart Stanley (Bx. Tutor Sch. of Arch., Lon. Univ.), and G. A. Crockett, M.A./B.A., P./F.R.I.B.A., M./A.M.T.P.I. (Prof. Sir Patrick Abercrombie in 1920), prepare Students by correspondence, 10, Adelaide Street, Strand, W.C.2. TEM 1603/4.

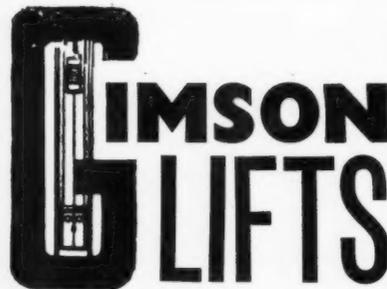
WELL qualified LECTURER will coach Students in Design. Personal or postal tuition.—Write Box 4036.

COURSES for all R.I.B.A. EXAMS.

Postal tuition in History, Testimonies, Design, Calculations, Materials, Construction, Structures, Hygiene, Specifications, Professional Practice, etc. Also in general educational subjects.

ELLIS SCHOOL OF ARCHITECTURE

Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A., 103B OLD BROMPTON RD., LONDON, S.W.7
Phone: KEN 4477 and at Worcester



Service is available throughout the country. Technical literature will be sent on request.

GIMSON & CO. (LEICESTER) LTD.
VULCAN ROAD, LEICESTER

Phone: Leicester 27272. Grams: Gimson Leicester

You can depend on

Cementone

Manufactured only by
JOSEPH FREEMAN SONS & CO. LTD.

THE WORLD'S GREATEST BOOKSHOP
FOYLES
FOR BOOKS
FAMED CENTRE FOR
Books on Art & Architecture

Depts. for Gramophone Records, Music, Magazine Subscriptions, Foreign Stamps
119-125 CHARING CROSS ROAD WC2
Gerard 5660 (20 lines) ★ Open 9-6 (incl. Sats.)
Two minutes from Tottenham Court Rd. Stn.

ARCHITECTURAL
— contemporary
SIGN
LETTERS

IN A VARIETY OF METALS
& FINISHES

WARD AND COMPANY

128 CHELTENHAM ROAD, BRISTOL 6
TELEPHONE 21536

ARCHITECTURAL
FOR **MODELS**

Completed Schemes, Planning Stage Models, Structural Design, Display Designers Mockups, etc.

CONSULT

LYNCH & BAKER LTD.

DISPLAY & MODELMAKING SERVICES

23 Oakleigh Court, Burnt Oak, Edgware, Middlesex. Colindale 1339

you can't galvanise a building, but you can prevent rust with **GALVAFROID** paint

SECOMASTIC LTD. BRACKNELL, BERKS. TEL. BRACKNELL 918



TAYLOR'S SHUTTERS
STEEL, WOOD & ALUMINIUM
RAPID DELIVERY AT COMPETITIVE PRICES
JANUS WORKS SYSTEM, LEICESTER
TEL. SYSTEM 86133

PRINT FOLD HERE

FOLD HERE

Postage
will be paid
by
Licensee

No Postage Stamp
necessary
if posted
in Great Britain or
Northern Ireland

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.

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

on

LTD.

OP

t

re

ic,

mps

WC2

(Gats.)

Stn.

ry

S

NY

ELS

anning

esign,

, etc.

LTD.

RVICES

ak,

le 1339

aint

WELL 710

S

S

MINIMUM

VE PRICES

Alphabetical index to advertisers

	PAGE		PAGE		PAGE
Acme Flooring & Paving Co. (1904), Ltd.	110	Falk, Stadelmann & Co., Ltd.	15	Penfold Fencing & Engineering, Ltd.	102
Adams, Robert (Victor), Ltd.	119	Fibreglass, Ltd.	84	Perkins (C. M. E.), Ltd.	101
Air Control Installations, Ltd.	96	Finlock Gutters, Ltd.	34	Permanite, Ltd.	65
Airscrew Co. & Jiewood, Ltd.	9	Fire Armour, Ltd.	28	Pilkington Bros., Ltd.	3
Anderson, D., & Son, Ltd.	71	Foyle, W. & G., Ltd.	116	Pollard, E., & Co., Ltd.	74
Architectural Press, Ltd., The	102, 108, 110, 114	Freer, William, Ltd.	110	Pynford, Ltd.	2
Arens Controls, Ltd.	40	Freeman, Jos., Sons & Co., Ltd.	116		
Armstrong Cork Co., Ltd., The	12				
Ascot Gas Water Heaters, Ltd.	41				
Associated Metal Works (Glasgow), Ltd.	114	Gay, R., & Co.	13	Radiation Group Sales, Ltd.	27, 48
		Gimson & Co. (Leicester), Ltd.	116	Rawlings Brothers	103
B.B. Chemical Co., Ltd.	91	Green & Vardy, Ltd.	82	Redland Tiles, Ltd.	53
Berry, Z. D., & Sons, Ltd.	66	Greenwood's & Airvac Ventilating Co., Ltd.	105	Rhodes Chains, Ltd.	110
Biddle, F. H., Ltd.	22	Greenwood & Hughes, Ltd.	105	Richards Tiles, Ltd.	35
Bilston Foundries, Ltd.	68	Gyproc Products, Ltd.	18	Rippers, Ltd.	56
Blundell, Spence & Co., Ltd.	7			Robertson Thain, Ltd.	8
Bolivar Stamping Co., Ltd.	109	Hailwood & Ackroyd, Ltd.	105	Rowe Bros. & Co., Ltd.	60
Bolton Gate Co., Ltd.	101	Harvey, G. A., & Co. (London), Ltd.	107		
Bottogas, Ltd.	100	Henderson, P. C., Ltd.	76	Salopian Engineers, Ltd.	100
Boulton & Paul, Ltd.	26	Hill, Richard, Ltd.	14	Scottish Aluminium Ware, Ltd.	24
Braby, Fredk., & Co., Ltd.	64	Hills (West Bromwich), Ltd.	69	Secomastic, Ltd.	116
Brady, G., & Co., Ltd.	32	Hollis Brothers, Ltd.	70	Sentex, Ltd.	73
British Aluminium Co., Ltd.	6	Holoplast, Ltd.	11	Shell-Mex & B.P., Ltd.	36
British Hermeseal, Ltd.	59	Hope, Henry, & Sons, Ltd.	78	Simplex Electric Co., Ltd.	23
British Insulated Callender's Cables, Ltd.	63			Smith, Samuel, & Son, Ltd.	108
British National Electrics, Ltd.	10	Imperial Chemical Industries, Ltd.	115	Spencer, Lock & Co., Ltd. (Royal Board)	116
British Titan Products Co., Ltd.	79			Stella Building Products, Ltd.	95
Broads Manufacturing Co., Ltd.	104	Jones, T. C., & Co., Ltd.	46, 47	Stephenson Development, Ltd.	55
Brown, Donald (Brownall), Ltd.	108			Stott, Jas. (Engineers), Ltd.	77
		Kingfisher, Ltd.	33	Storry, Smithson & Co., Ltd.	81
Canadian Government	38			Stramit Boards, Ltd.	37
Catesbys Linoleum Contracts	90	Lacrinoid Products, Ltd.	98	Sugg, William, & Co., Ltd.	52
Causeway Reinforcement, Ltd.	109	Legal & General Assurance Society, Ltd.	103	Sundeala Board Co., Ltd.	29
Church & Co. (Fittings), Ltd.	119	Lenanton, John, & Son, Ltd.	67		
Code Designs	115	Lever, James, & Sons, Ltd.	119	Tarmac, Ltd.	94
Colt, W. H. (London), Ltd.	50	London Brick Co., Ltd.	4	Taylor, J. (Syston), Ltd.	116
Concrete, Ltd.	86	Ludwell, A. J., & Co., Ltd.	109	Taylor, Robert & Co. (Ironfounders), Ltd.	61
Crane, Ltd.	44	Lumenated Ceilings, Ltd.	19	Teleflex Products, Ltd.	106
C.T.C. Heat (London), Ltd.	87	Lynch & Baker, Ltd.	116	Terradura Flooring Co., Ltd.	28
Cumbernauld New Town	113			Thorn, J., & Sons, Ltd.	97
		Macandrews & Forbes, Ltd.	119	T.I. Aluminium, Ltd.	72
Dean, J. & J., Ltd.	17	Magnet Joinery, Ltd.	49	Timber Fireproofing Co., Ltd.	24
De La Rue, Thomas, & Co., Ltd.	89	McArd, Robert, & Co., Ltd.	92	T.M.C. Harwell (Sales), Ltd.	5
Denny, Mott & Dickson, Ltd.	75	McKechnie Bros., Ltd.	96	Trianco, Ltd.	104
Dexion, Ltd.	30-31	McLellan, George, Ltd.	107	Twistel Design Service	62
Docker Brothers	20	Metallic Seamless Tube Co., Ltd.	99		
Draftsele, Ltd.	85	Metropolitan-Vickers Electrical Co., Ltd.	16	Union Fibre Pipes, Ltd.	80
		Mills Scaffold Co., Ltd.	120	United Steel Companies, Ltd.	21
Eagle Pencil Co., Ltd.	106	Ministry of Works	115		
Eagle Star Insurance Co., Ltd.	109	Monk, A., & Co., Ltd.	94	Versatile Fittings (W. H. S.), Ltd.	45
Econa Modern Products, Ltd.	22	Morris, M. A., Ltd.	43		
Ellard Sliding Door Gears, Ltd.	39	National Federation of Clay Industries	42	Ward & Company	116
Ellis, John, & Sons, Ltd.	93	Newsum, H., Sons, & Co., Ltd.	83	Ward, Thos. W., Ltd.	58
Ellis School of Architecture	116	Newton-Victor, Ltd.	16	Wardle Engineering Co., Ltd.	99
Evertaut, Ltd.	108	Nife Batteries	54	Wareing Bros., Ltd.	98
Evode, Ltd.	2	North British Chemical Co., Ltd.	97	Wheatly & Co.	57
		Northern Assurance Co., Ltd.	88	Whites of Hebburn (Engineers), Ltd.	51

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Education, Legal Notices, Miscellaneous Property and Land Sales, see 111, 112, 113, 114, 115, 116.

Write in block letters, or type, your name, profession and address below, and fold so that the post-paid address is on the outside.

NAME _____

PROFESSION _____

ADDRESS _____

PAGE
102
101
65
3
74
2

27.48
103
53
110
35
56
8
60

100
24
116
73
36
23
108
116
95
55
77
81
37
52
29

94
116
61
106
28
97
72
24
5
104
62

80
21

45

116
58
99
98
37
51

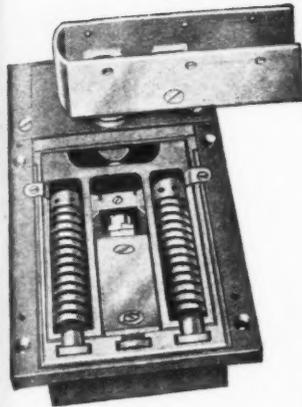
AL
C/V
A
C
•
• L
• D
• C
• S
a p
by
R

A
S
•
fo

llu
col
spe
IN
PA

H
St
Lit

Ag



DOORS NEED NOT S-L-A-M

—specify



ALSO

• WINDOW GEARING
AND FANLIGHT
OPENERS

• 'X-IT' PANIC BOLTS

• LOCKS

• DOOR FURNITURE

• CASEMENT FITTINGS

• SPRING SASH BALANCES

"VICTOR" fittings are specified
by all leading Architects.

ROBERT ADAMS (VICTOR) LTD
139 STAINES ROAD, HOUNSLOW, MIDDX
Telephone: Hounslow 5714

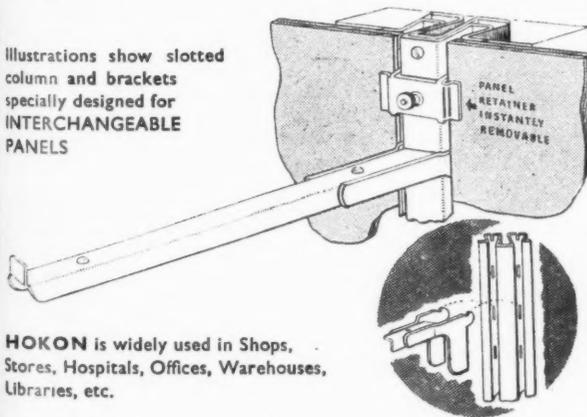
An essential fitting with self-contained check for Public Buildings, Housing Schemes, Office Blocks, etc. In shallow and watertight floor patterns. Overhead types to suit every purpose.

HOKON ADJUSTABLE SHELVING

The basis of the best
SELF-SELECTION
SERVICE UNITS

• Ideal for Bars, Cocktail bars, in fact
for shelving of all kinds

Illustrations show slotted
column and brackets
specially designed for
INTERCHANGEABLE
PANELS



HOKON is widely used in Shops,
Stores, Hospitals, Offices, Warehouses,
Libraries, etc.

Orders may be placed direct with us or through the shop-fitting trade.

CHURCH & CO. (FITTINGS) LTD.

36 MINSTER STREET, READING. Phone: 2035/6

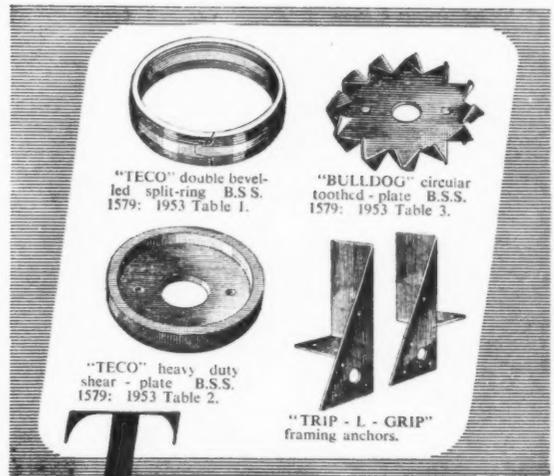
Leeds Showroom: 62 ALBION STREET, LEEDS. Tel: 30173

Agent for Northern Scotland: G.T.A. Winram, 121 Crown St., Aberdeen. Tel: 23373

4497

specify

"Teco", "Bulldog" & "Trip-L-grip"
connectors for all construction in timber, and
make practicable cuts in timber and
hardware requirements. Fulltest data
gladly furnished.



"TECO" double bevelled split-ring B.S.S. 1579: 1953 Table 1.

"BULLDOG" circular toothed-plate B.S.S. 1579: 1953 Table 3.

"TECO" heavy duty shear-plate B.S.S. 1579: 1953 Table 2.

"TRIP-L-GRIP" framing anchors.

Timber Connectors by

MACANDREWS & FORBES LIMITED,
2 CAXTON STREET, LONDON, S.W.1. Telephone: ABBey 4451-3.

AVOID
THIS...

Fit

EVERLASTO
for safety!



**EVERLASTO SASH
CORD**

JAMES LEVER & SONS EVERLASTO CORDAGE WORKS
DELPH ST BOLTON

BUILDERS

PLANT

...you've

got to

hand

it to

MILLS

FOR SAFETY, SERVICE AND SATISFACTION

MILLS SCAFFOLD CO. LTD., (A Subsidiary of Guest, Keen & Nettlefolds Ltd.)
Head Office: TRUSSLEY WORKS, HAMMERSMITH GROVE, LONDON W.6 • RIVERSIDE 3011 (TEN LINES)

Agents and Depots: BELFAST • BIRMINGHAM • BOURNEMOUTH • BRADFORD • BRIGHTON • BRISTOL • CANTERBURY • CARDIFF
COVENTRY • CROYDON • DUBLIN • GLASGOW • HULL • ILFORD • LIVERPOOL • LOWESTOFT • MANCHESTER • MIDDLESBROUGH
NEWCASTLE • NORWICH • PLYMOUTH • PORTSMOUTH • PRESTON • READING • SHIPLEY • SOUTHAMPTON • SWANSEA • YARMOUTH

e



ON

(INES)
RDIFP
OUGH
OUTH

te,
ce.