

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
Criticism

TECHNICAL SECTION

Information Sheets
Information Centre
Current Technique
Working Details
Questions and Answers
Prices
The Industry

CURRENT BUILDING

Major Buildings described:
Details of Planning, Construction, Finishes and Costs
Buildings in the News
Building Costs Analysed
Architectural Appointments
Wanted and Vacant

No. 3427] [Vol. 132
THE ARCHITECTURAL PRESS
9, 11 and 13, Queen Anne's Gate, Westminster,
S.W.1. 'Phone: Whitehall 0611

Price 1s. 0d.
Registered as a Newspaper

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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: J. H. Holden, College of Art, Cavendish Street, Manchester 15	Langham 5533
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Victoria 0447-8
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Whitehall 9737
ACGB	Arts Council of Great Britain. 4, St. James's Square, S.W.1.	Mayfair 7501/8
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Langham 5861
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 5721
BAE	Board of Architectural Education. 66, Portland Place, W.1.	W.C.1.
BASA	British Architectural Students Association. Building Centre, 26 Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BC	Building Centre, 26, Store Street, Tottenham Court Road, W.C.1.	Welbeck 4185
BCC	British Colour Council. 13, Portland Square, W.1.	Ealing 9621
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Redditch 716
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Fremantle 8494
BDA	British Door Association. 10, The Boltons, S.W.10.	Hunter 1951
BE	Building Exhibition. 11, Manchester Square, W.1.	Temple Bar 9434
BEDA	British Electrical Development Association, 2, Savoy Hill, W.C.2.	
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Glasgow Central 2891
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Chancery 7772
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, S.W.1.	Langham 2785
BRB	Building Research Station. Bucknalls Lane, Watford.	Trafalgar 8855
BSA	Building Societies Association. 14, Park Street, W.1.	Garston 4040
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 0515
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Mayfair 9000
CAS	County Architects' Society. C/o J. Hurst, A.R.I.B.A., County Hall, Dorchester.	Holborn 3411
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England, 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2.	Covent Garden 3008
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)	
FPC	Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1.	Mayfair 7086

ACME

— FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

ACMEPAVING FACTORY FLOORS

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

ACME FLOOR RENOVATION SERVICE

Technical Brochures gladly sent on request.

ACME

**FLOORING & PAVING
CO.(1904) LIMITED**

RIVER ROAD, BARKING, ESSEX. RIPPLOWAY 2771 (P.B.X.)

LIFTS & ESCALATORS

LIFTS

in 17 standard duties to suit every possible need in a modern building. Prompt delivery can be given by the use of standard units but Cars and Entrances are specially made for each installation.

ESCALATORS

in 6 standard sizes of unit construction eliminating site erection, Each machine is delivered complete and can be in operation within a few days.

PATERNOSTERS

These Continuous Lifts give economical and reliable service where there is heavy inter-floor traffic.

WRITE FOR FULL PARTICULARS TO:

Established in 1860

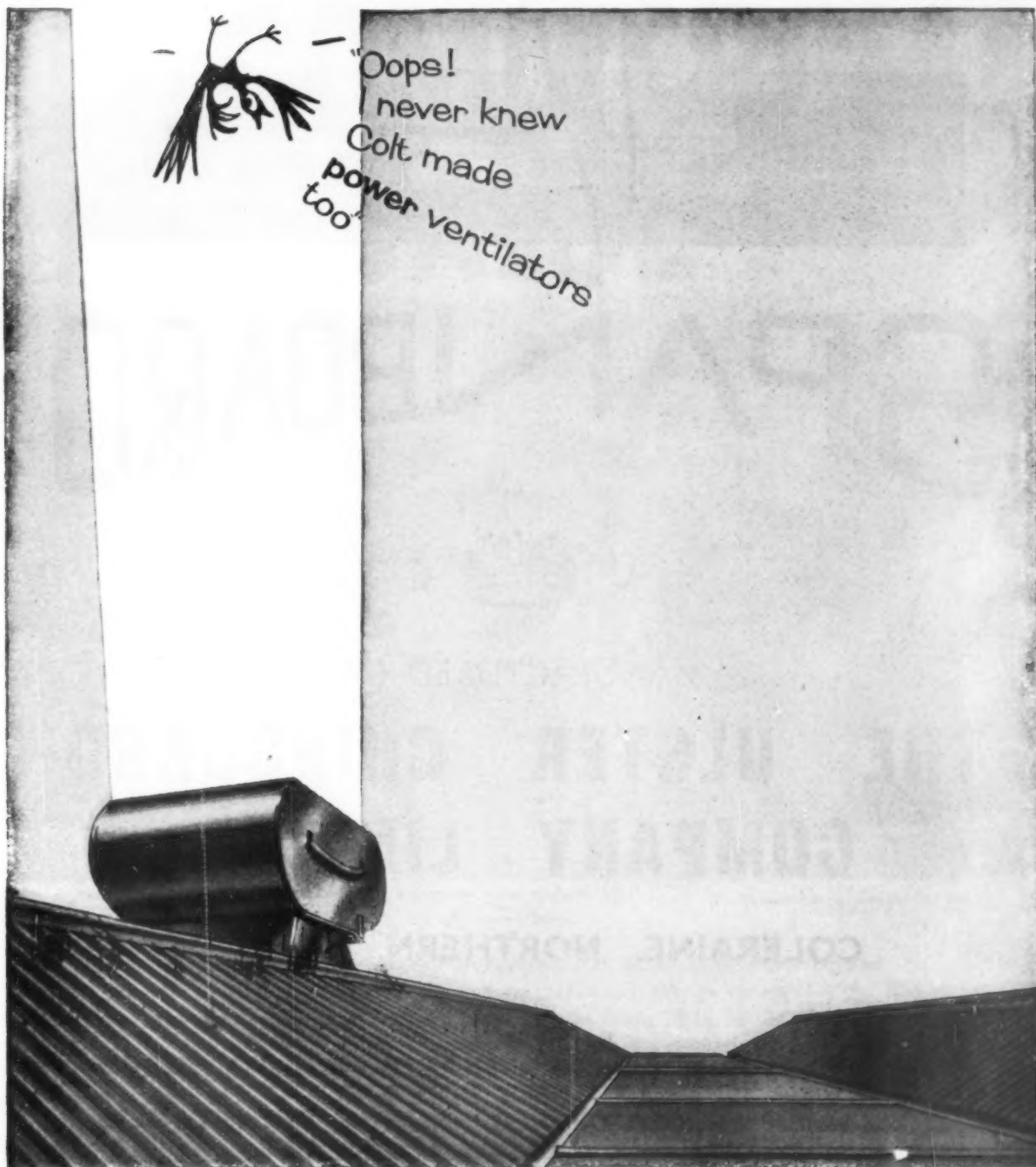
MARRYAT & SCOTT LTD

THE LIFT MANUFACTURERS

Wellington Works • Hounslow • Middlesex

BRANCHES IN

LONDON • BIRMINGHAM
LIVERPOOL • MANCHESTER
LEEDS • BRIGHTON • BRISTOL
NEWCASTLE • GLASGOW
EDINBURGH • DUNDEE
AND OVERSEAS



They do! For Colt have a ventilator, natural or powered, to meet every kind of problem—including a range of high powered ventilators such as the Upward Discharge unit shown here. Let the Colt Ventilation Service advise you. Powered or natural, or a combination of both—the Colt engineer will tell you which system is best and most economical for you. Send for a free manual to Dept. 37



**The power behind
natural ventilation and naturally
behind powered ventilation too!**

COLT VENTILATION LIMITED · SURBITON · SURREY · Telephone: ELMbridge 0161



ACME

— FLOORING SPECIALISTS FOR 100 YEARS

IMMOVABLE-ACME HARDWOOD FLOORS

ACMEPAVING FACTORY FLOORS

ACMETYLE SOLID P.V.C. TILES AND SHEET

ACMELYNO LINOLEUM

ACMECORK CORK TILES

ACMETRED RUBBER FLOORING

ACMEPYLE FITTED CARPETS

ACME FLOOR RENOVATION SERVICE

Technical Brochures gladly sent on request.

ACME

**FLOORING & PAVING
CO. (1904) LIMITED**

RIVER ROAD, BARKING, ESSEX. RIFpleway 1771 (P.B.X.)

LIFTS & ESCALATORS

LIFTS

in 17 standard duties to suit every possible need in a modern building. Prompt delivery can be given by the use of standard units but Cars and Entrances are specially made for each installation.

ESCALATORS

in 6 standard sizes of unit construction eliminating site erection. Each machine is delivered complete and can be in operation within a few days.

PATERNOSTERS

These Continuous Lifts give economical and reliable service where there is heavy inter-floor traffic.

WRITE FOR FULL PARTICULARS TO:

Established in 1860

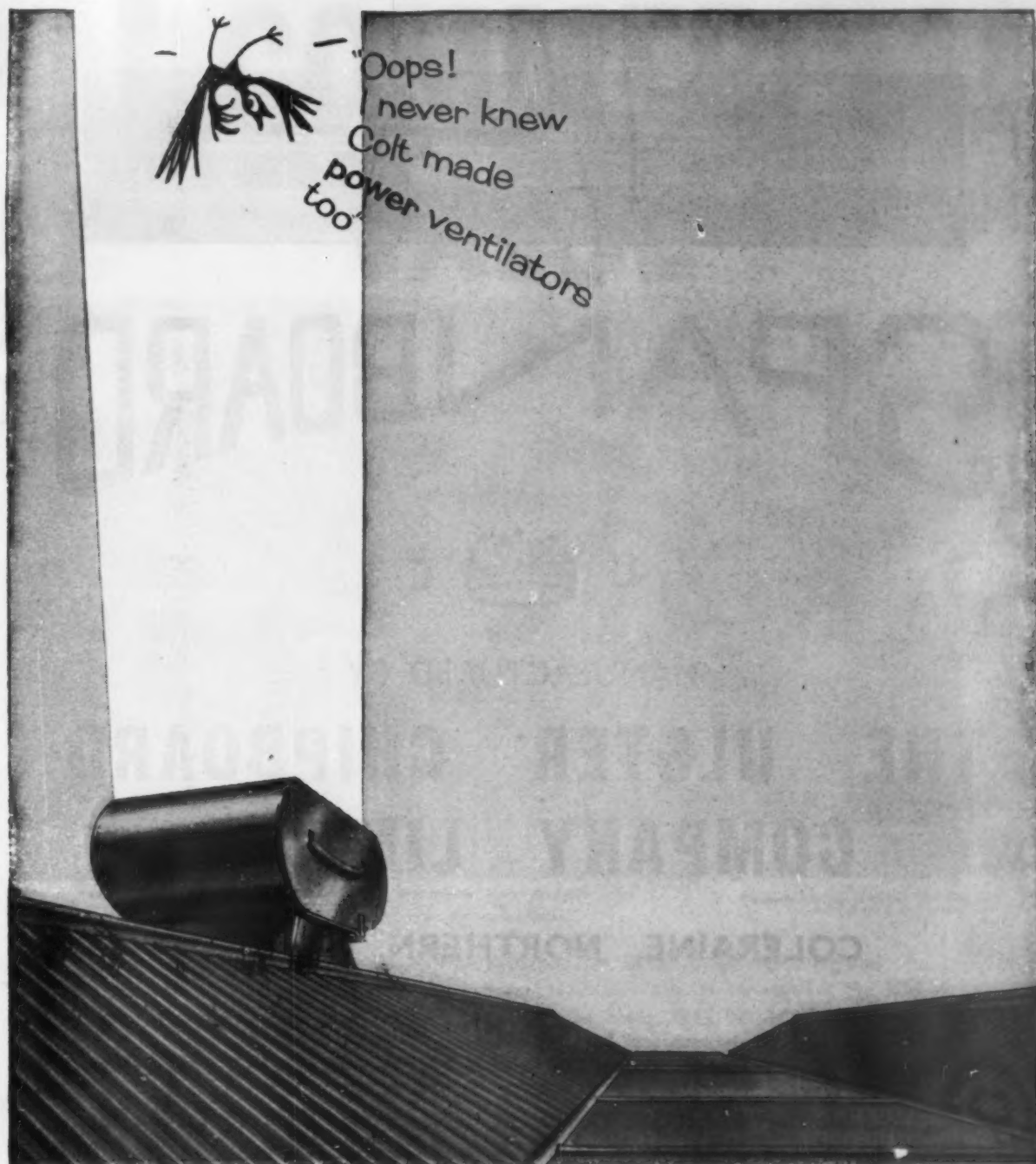
MARRYAT & SCOTT LTD

THE LIFT MANUFACTURERS

Wellington Works • Hounslow • Middlesex

BRANCHES IN

LONDON • BIRMINGHAM
LIVERPOOL • MANCHESTER
LEEDS • BRIGHTON • BRISTOL
NEWCASTLE • GLASGOW
EDINBURGH • DUNDEE
AND OVERSEAS



They do! For Colt have a ventilator, natural or powered, to meet every kind of problem—including a range of high powered ventilators such as the Upward Discharge unit shown here. Let the Colt Ventilation Service advise you. Powered or natural, or a combination of both—the Colt engineer will tell you which system is best and most economical for you. Send for a free manual to Dept. 37



**The power behind
natural ventilation and naturally
behind powered ventilation too!**

COLT VENTILATION LIMITED · SURBITON · SURREY · Telephone: ELMbridge 0161





SPANBOARD



MANUFACTURED BY

**THE ULSTER CHIPBOARD
COMPANY LIMITED**

COLERAINE, NORTHERN IRELAND

**THE ONLY HOMOGENEOUS GRADED - DENSITY WOOD
CHIPBOARD MANUFACTURED IN THE BRITISH ISLES**

FOR FULL DETAILS APPLY:

HARRISONS & CROSFIELD LTD.

1/4 GREAT TOWER STREET, LONDON, E.C.3

THE ULSTER TIMBER COMPANY, BELFAST, NORTHERN IRELAND.

OF COMMERCIAL VALUE



Architect: J. R. Piggott, Esq., T.D., F.R.I.B.A.
City Architects,
Stoke-on-Trent Corporation.

Contractors: George Minshull & Co. Ltd.
Cobridge,
Stoke-on-Trent.

Contract: College of Further Education
and College of Commerce.

With the aid of Febspeed Plus Frostproofer, bricklaying, plastering and concreting work continued on this contract without stoppage throughout the 1958/59 winter, the lowest recorded working temperatures being 27°F., falling to 10°F., at night.

With Febspeed Plus Frostproofer allowing the Contractor to work throughout freezing weather, he saved time and money and was able to complete the contract well within schedule.

YOU CAN'T AFFORD NOT TO USE

FEBSPEED PLUS

The Cement Anti-Freeze Compound that also Plasticises, Waterproofs and Rapid Hardens



(GREAT BRITAIN) LTD.

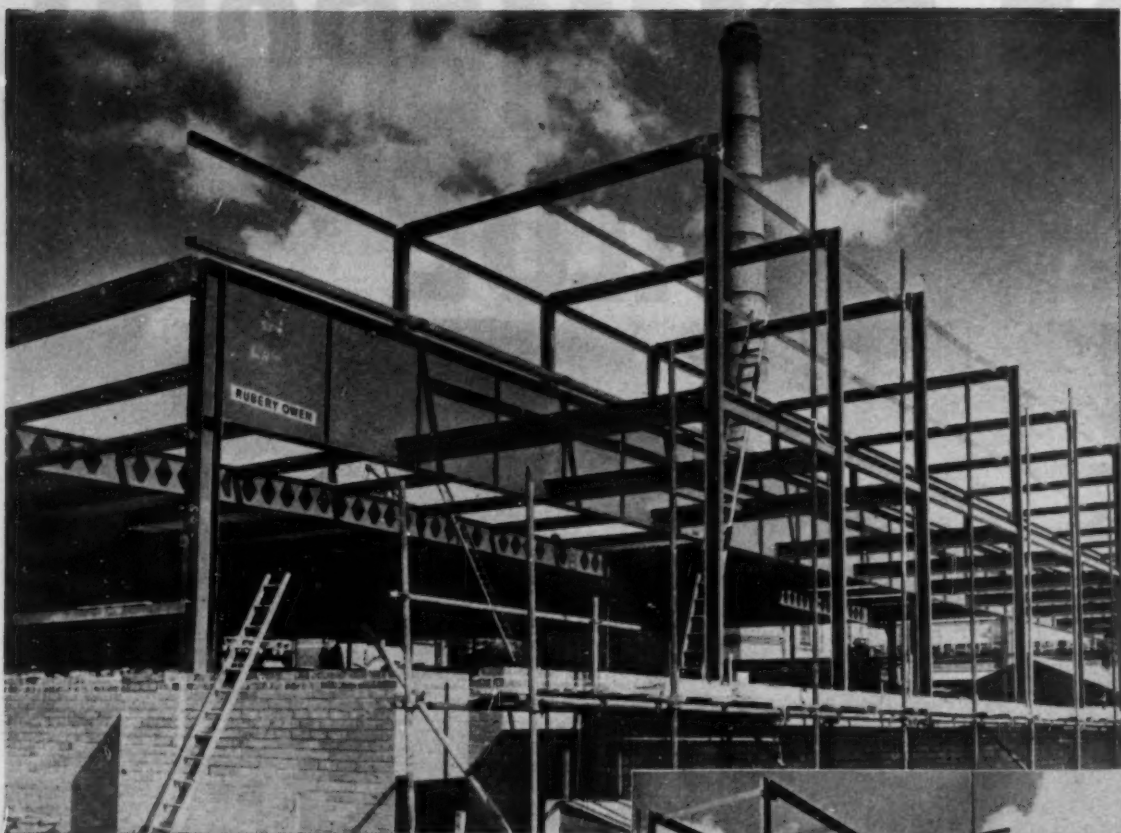
102 KENSINGTON HIGH STREET, LONDON, W.8.

ALBANY ROAD, CHORLTON-CUM-HARDY, MANCHESTER 21.

'Phone: WES. 0444

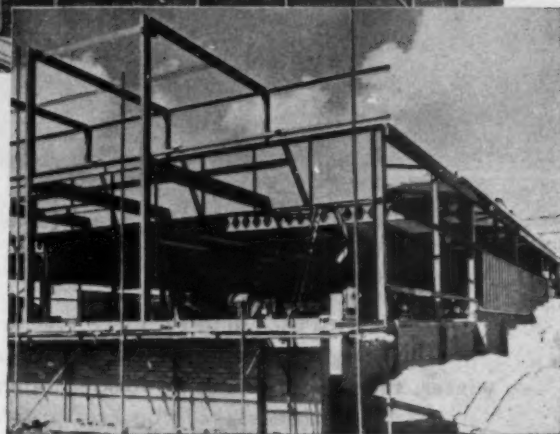
'Phone: CHO. 1063

DHB 9301



NEW FACTORY BUILDING for The Torrington Co. Ltd., Coventry

New two-bay factory building and office block for the Torrington Co. Ltd., Torrington Avenue, Coventry. Structure of 67 ft. span castellated beams fitted to portal frames.



Architects:
Messrs. Redgrave & Clarke, A/L.R.I.B.A., Coventry.
Main Building Contractors:
Messrs. Garlicks Ltd., Coventry.

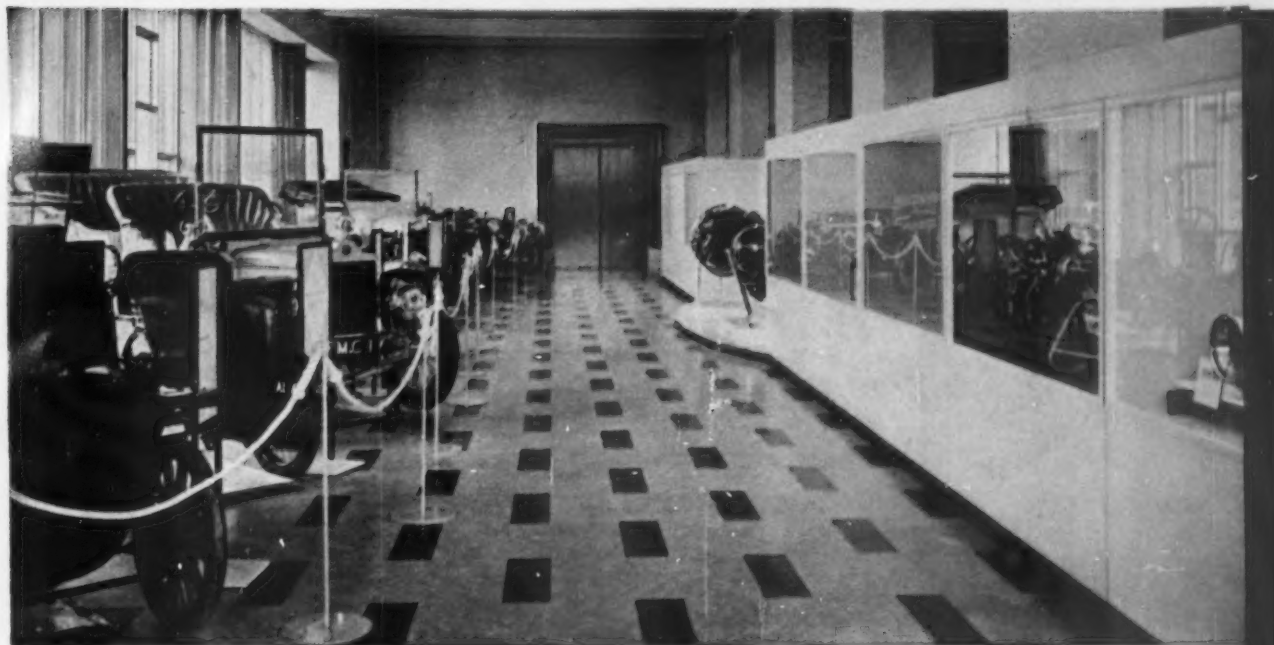
STEELWORK FABRICATED AND ERECTED BY

RUBERY OWEN

**RUBERY OWEN & CO. LTD., STRUCTURAL DIVISION,
P.O. BOX 10, DARLASTON, WEDNESBURY, STAFFS.**

Technical Bureau: London, Birmingham, Coventry, Southampton.

Member of the Owen Organisation.



These floors in the Herbert Museum and Art Gallery, Coventry are covered with Williamson's heavy grade linoleum (4.50 mm.)

Modern linoleum for modern installations

Low capital cost, ease of laying, durability, minimum maintenance, quality of finish and appearance . . . judge how you will, Williamson's linoleum is unequalled as a commercial or industrial floor covering. From the design point of view, Williamson's offer a range of linoleums with colour values carefully chosen to complement modern decors. Designers and architects can find in this range just what they need to carry through a scheme—and carry it through economically. Specialised knowledge is readily available. For advice and information, please contact the Williamson Technical Advisory Service.

WILLIAMSON LINOLEUM

JAS. WILLIAMSON & SON LIMITED • LANCASTER • FOUNDED 1844

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



glass for depth of colour



in cladding

PILKINGTONS' GLASS CLADDING MATERIALS INCLUDE "ARMOURCLAD" AND "MUROGLASS"

For full information write to the Technical Sales and Service Department, Pilkington Brothers Limited, St. Helens, Lancashire. Tel: St. Helens 4001;
LONDON OFFICE: Selwyn House, Cleveland Row, St. James's, S.W.1. Tel: Whitehall 5672-8.

Supplies are available through the usual trade channels. "ARMOURCLAD" is a registered trade mark of Pilkington Brothers Limited.





Some of the 555 flats and maisonettes, incorporating Weatherfoil heating at the London County Council housing project, Brandon Estate, Southwark. Architect to the Council, Hubert Bennett, F.R.I.B.A.

WEATHERFOIL for the Architect

Many of the most eminent architects in the country entrust their heating problems to Weatherfoil. They know they can rely on the Weatherfoil design team for the closest co-operation at every stage of the project. Result — a heating system perfectly suited to its purpose at the lowest possible cost.

Metered Heat for Multiple Housing

Tenant pays a standing charge included in the rent, which covers capital costs and maintenance, and a measure of background heat. Charge for full heating is registered by a meter, and may be as low as 1d per hour. Heater thermostat is set by tenant and can be switched off when not required.



- Low cost installation
- Economical running
- Temperature and on/off control in each dwelling
- Tenant pays by meter

WEATHERFOIL **Metered Heat**

Write for details to:—

WEATHERFOIL LTD. Head Office: 185 BATH ROAD, SLOUGH • BUCKINGHAMSHIRE • TELEPHONE: SLOUGH 25581
BROADGATE HOUSE • COVENTRY • WARWICKSHIRE • TELEPHONE: COVENTRY 40118

BRITISH CERAMIC TILE



COUNCIL

Announce

CERAMIC TILE FIX **CTF**

Ceramic Tile Fix is a material developed by the BRITISH CERAMIC TILE COUNCIL in co-operation with the BRITISH CERAMIC RESEARCH ASSOCIATION, for the fixing of ceramic tiles. It is produced in several grades and is regarded by the Council as an outstanding advance in tile-fixing technique, and one which merits the consideration of everyone concerned with the fixing of ceramic tiles.

One of its greatest virtues is EASE OF APPLICATION.

CERAMIC TILE GROUT **CTG**

The importance of the grouting in any tiling installation cannot be over-emphasised. CTG is made expressly for this duty and is greatly superior to many of the grouting materials in common use. It is recommended by the B.C.T.C. as presenting a further, and highly important, contributory feature to — high-class tiling work.

CTF and CTG are manufactured and distributed for the BRITISH CERAMIC TILE COUNCIL by **EVODE LIMITED** Stafford — to whom all enquiries and orders should be addressed.

Telephone: Stafford 2241 (5 lines)

Tests carried out by the British Ceramic Research Association show that CTF has an adhesion strength 2-3 times greater than the conventional sand/cement mortars. Consistency is ensured by regular testing.



*Write
for **FREE**
informative
booklet.

*Dept. 'C' BRITISH CERAMIC TILE COUNCIL, FEDERATION HOUSE, STOKE-ON-TRENT, ENGLAND

THE PRIMATIC COPPER SBP TYPE indirect cylinder



FOR SMALL BORE HEATING & DOMESTIC HOT WATER

Small Bore Pipe Heating requires an indirect cylinder.

The PRIMATIC Copper indirect cylinder is outstanding for this purpose.

ECONOMICAL for a new installation because it requires only one cold feed tank which means:-

LESS PIPEWORK, LESS FIXING
LESS SPACE and LESS COST.

PERFECT when altering an existing system from direct to indirect heating because it requires **PRACTICALLY NO ALTERATION TO THE PIPEWORK.**

An immersion heater can be operated in the primary circuit if required. This prevents scale deposit on the heater in hard water areas.

In soft water areas an immersion heater may be fitted in the Secondary System.

Manufactured from Copper Sheet to B.S.899.

All Copper Bosses.

Zinc free silver alloy brazed.

Immune to attack from dezincification.

Conforms to B.S.S. 699

Accepted by British Waterworks Association.

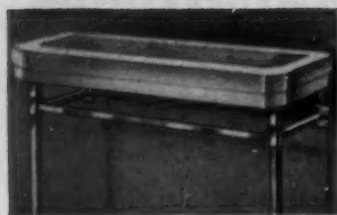
RANGE BOILERS LTD.

(AND SUBSIDIARY COMPANIES)

STALYBRIDGE · CHESHIRE

TEL STALYBRIDGE 3353 GRAMS. CYLINDERS, STALYBRIDGE



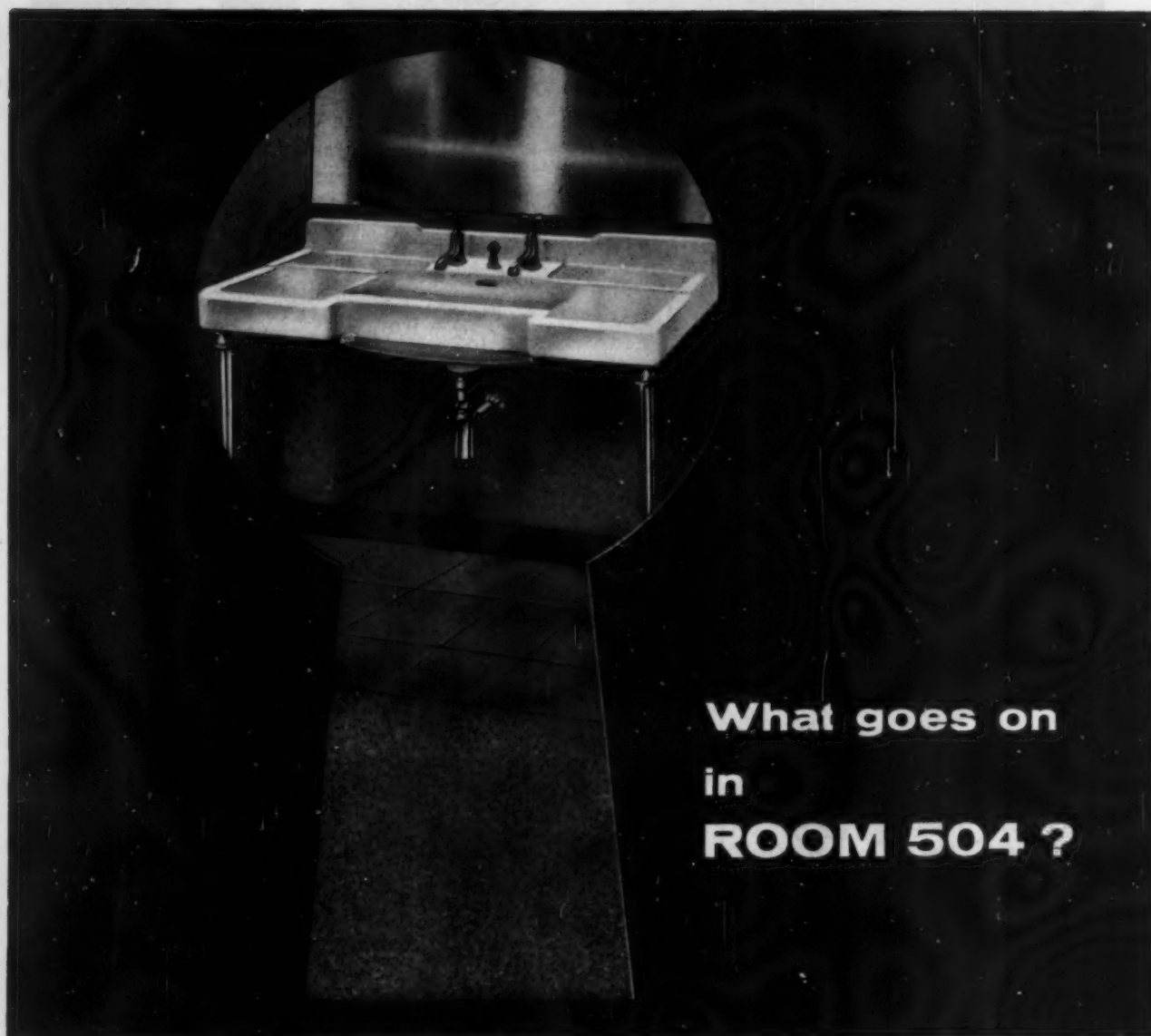


fireclay

SANITARY FIRECLAY
TECHNICAL BUREAU
57 GREAT GEORGE ST. LEEDS 1

A hotel room is a source of income to someone. It is imperative, therefore, that room 504 is available for constant use and will remain so. This can depend upon a number of factors. Take the sanitary installations, for instance. Should replacements become necessary the cost of installing new ware can be twice that of the ware itself, not to mention the loss of revenue and inconvenience. But that's where Ceramic **Glazed Fireclay** comes in. When you specify Ceramic **Glazed Fireclay** Sanitary Ware, not only for hotels but for any other public building, you automatically specify *permanence*. The permanence of strength, solidity, sturdiness, reliability and dependability. It's as simple as that!

A fully illustrated booklet, published in the interest of more and better hygiene and sanitation is available on request.

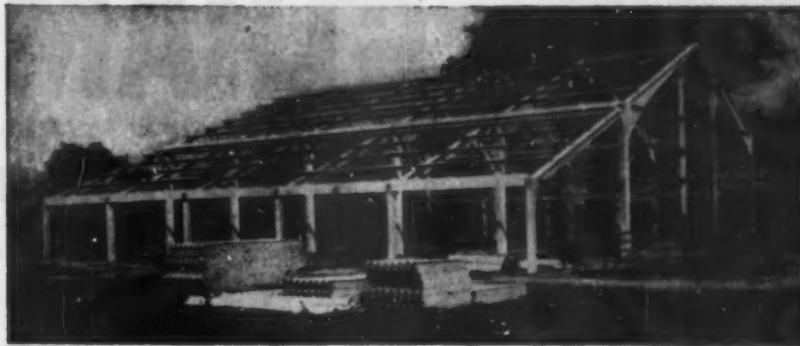


What goes on
in
ROOM 504 ?

SPECIFY SANITARY FIRECLAY WARE FOR **PERMANENT** SATISFACTION

PRECON

INDUSTRIAL BUILDINGS

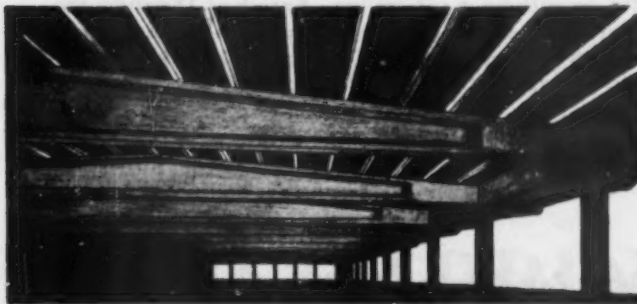


PORTAL FRAMES up to 50 ft. span $22\frac{1}{2}^\circ$ Pitch. Lean-to's up to 30 ft. span.



MULTISPAN PORTAL FRAMES Any Combination of Spans.

LONG SPAN BEAM CONSTRUCTION 40 ft. and upwards.



LONG SPAN BEAM CONSTRUCTION
40 ft. and upwards. 4° Pitch.



That extra few thousand square feet, that new canteen, that covered store, that garage, that new drawing office—you can have them at small cost and very quickly with a Precon building.

Precon make the finest precast concrete buildings—buildings to be proud of—permanent buildings which require no maintenance, are fire resistant and can easily be added to.

Full erection service, foundations, frames, roofing, including insulation.

Write or 'phone today with brief details to find out just how quickly and cheaply you can get your next building.

FOR ECONOMY AND SPEED

PRECON LIMITED

HARBOUR ROAD • RYE • SUSSEX • RYE 3003

**More evidence
of the remarkable
versatility of**

STRAMIT

**TWO-INCH THICK
STRUCTURAL
INSULATING SLABS**

**-the economical
dry-construction
roof-decking material**

Here are five roof constructions in which STRAMIT has proved to be an ideal and economical roof-decking material. STRAMIT dry-construction slabs are also well suited for use in flat, north-light and mansard roofs. STRAMIT slabs are strong, rigid and durable. They can be used with all types of weather-proofing, with or without a sub-ceiling. Excellent U-values are provided, meeting statutory insulation requirements with something in hand. They carry the physical and thermal load with great efficiency and true economy.

★
STOCK SIZES: 4ft. wide by 6, 8, 9, 10 and 12ft. long.
Special sizes made to order.

★
**Send for details of this unique
dry-construction material NOW**

Please send full details of Stramit slabs

AJ. 12

COMPANY

ADDRESS

For the attention of

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

**Low-pitch
Roof:**

Transair Ltd., Hangar & Offices,
Gatwick Airport.
Architects: Clive Pascall, A.A. Dip., F.R.I.B.A.,
and Peter Wason, Dip. Arch., A.R.I.B.A.

**Barrel-vault
Roof:**

John Perring Ltd., furnishers,
Crowley New Town, Chief Architect:
A. S. Howgrove-Graham,
A.R.I.B.A., A.M.T.P.I.

**Monitor
Roof:**

Tunbridge Wells Technical College.
Architects: E. Mayorcas, F.R.I.B.A.,
in collaboration with E. T. Ashley Smith,
F.R.I.B.A., County Architect.

**Hexagonal
Roof:**

Community Centre and Library,
Harlow New Town.
Executive Architect:
Victor Hamnett, A.R.I.B.A., A.M.T.P.I.

**Parabolic
Roof:**

Maldstone Masonic Temple.
Architect: Clifford Worthington,
F.R.I.B.A., F.R.S.A.



**'What about
the heating arrangements?'**

'Let's talk it over with Charringtons, now'

A FREE TECHNICAL ADVISORY SERVICE

Before making a final choice between fuel-oil or solid-fuel heating systems, planning problems need expert consideration.

Whether you are to build, or provide plans for a block of flats, an entire housing estate, or a single private house, Charrington's technical service can help you to ensure that your project will have the most suitable, practicable and efficient heating system. Our experts will gladly assist with heating installation plans for your entire project.

Here are some of the many points on which Charringtons experts can give architects, builders and estate development organisations invaluable help and advice: —

Special requirements for the convenient siting and planning for fuel-oil storage tanks or solid-fuel bunkers; proper provision for oil-filling and fuel delivery points; information on cost of equipment; guidance on installation and running costs; choice of special equipment to meet specific space-heating and hot water requirements.

Write or telephone

CHARRINGTONS

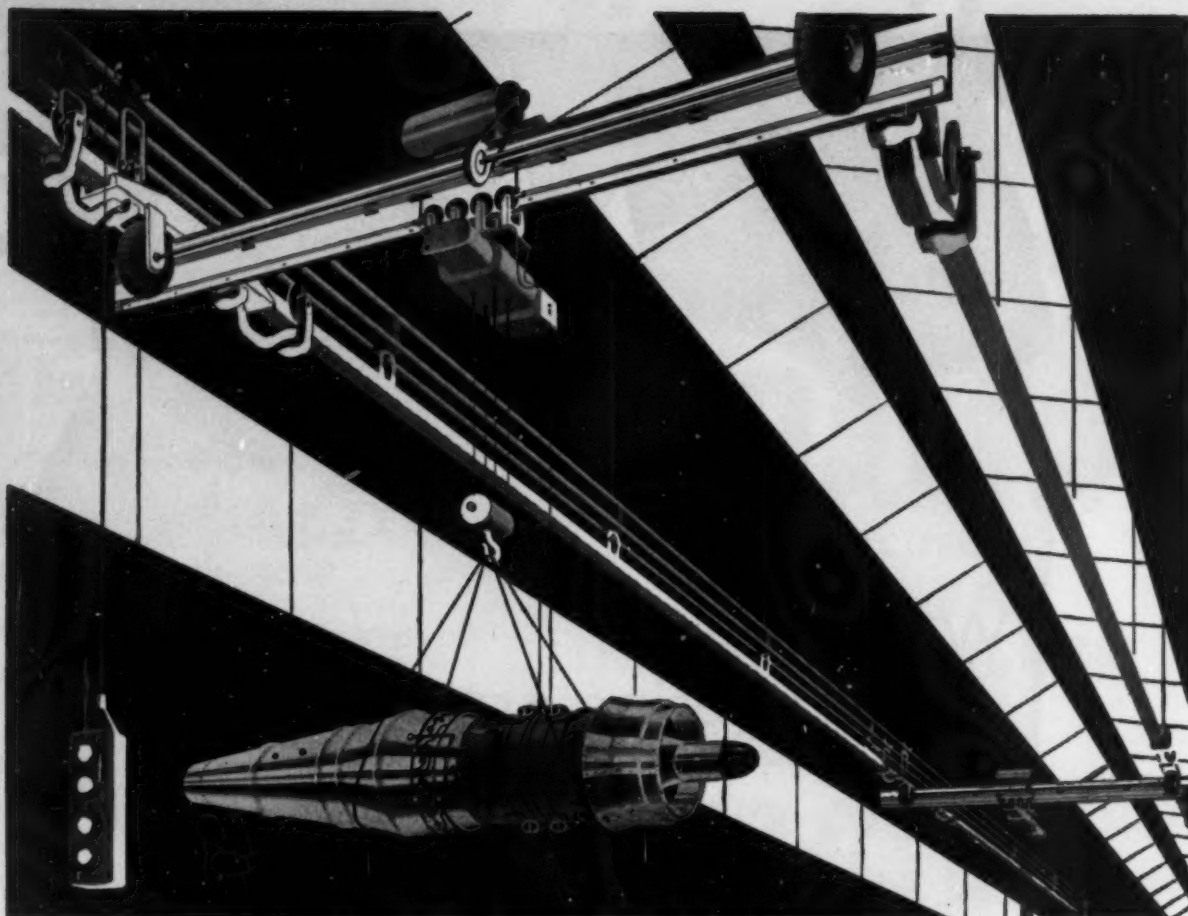
Heat is our business

DISTRIBUTORS OF
COAL, COKE  **FUEL OILS**

TOWER HOUSE · TRINITY SQUARE · LONDON EC3 · ROYal 9111



TGA C0171/6



Industry's new motorways speed heavy loads OVERHEAD



After a survey of your plant, we produce a tailor-made plan. This and the estimate are free.

Loads up to ten tons can be transferred smoothly across the factory with Underslung Bridge cranes specially developed by British MonoRail. With spans up to 200 feet they will straddle wide bays. The underslung principle permits interlocking between parallel cranes, and the transfer of loads from one bridge to another. When the cranes are installed as part of a complete MonoRail system, the load can be transferred beyond the crane area to any part of the factory.

More advantages of MonoRail Underslung Cranes. Economical in headroom. Low in deadweight. All materials specially rolled, forged or cast for the job. Rubber-tyred crane drive eliminates track wear. Track of standard flange width and specifically designed for this purpose. Local, remote or automatic control optional.

A complete Overhead System. Underslung cranes are just part of the MonoRail handling and transfer system. It is an individually tailored system, covering every type of installation from the smallest gravity drive to the most complex automated systems.

IF YOU WANT TO GET A MOVE ON

Send for the man with the **MONORAIL** plan

BRITISH MonoRail LIMITED

WAKEFIELD ROAD · BRIGHOUSE · YORKS · TELEPHONE: BRIGHOUSE 2244

A member of the Herberts Morris Group of Companies

VBA BH



Warehouse, 100ft. span. Roof Pitch 12°. Alford & Alder (Engineers) Ltd.

Architects:— W. Leslie Jones.

CLEARSPAN buildings are used by many leading industrial concerns including:—

ATOMIC ENERGY COMMISSION • BRITISH EUROPEAN AIRWAYS LTD
DE NAVILLAND ENGINE CO • ESSO PETROLEUM CO. LIMITED
IMPERIAL TOBACCO CO. LTD • IMPERIAL CHEMICAL INDUSTRIES LTD
J. LYONS & CO. LTD • MINISTRY OF WORKS
NATIONAL COAL BOARD • SHELL MEX & B.P. LIMITED
SOUTHERN ELECTRICITY BOARD • GEORGE WIMPEY & CO LIMITED

CLEARSPAN

the most comprehensive and attractive range of standard buildings ever produced.

Spans up to 150 ft.
Roof slopes 6° 12° 17°
Cranes up to 50 tons
Variations to order



CONDER pioneered the **NEW LOOK** in steel construction—elegant, efficient and economical. Now CONDER is even further ahead with the most advanced **NORTHLIGHT** designs. The clear portal frame construction ensures more light and is virtually maintenance-free. An exceptionally wide range of grids is available.

GRIDS UP TO 120' x 40'

Cloth weaving shop.

Architects: Vallis & Bird, Frome, Somerset



CONDER ENGINEERING CO LTD WINCHESTER HANTS Tel: 5095
CONDER ENGINEERING CO (MIDLANDS) LTD PEEL WORKS BURTON-ON-TRENT Tel: 5411



Latest Developments in **L.E.F.**

RAISING AND LOWERING GEAR for concrete and steel columns

CONCRETE COLUMNS:

Messrs Concrete Utilities Limited have produced a special bracket arm to which the working parts only of the Contact Suspension Unit may be fitted direct and in which there are two steel tubes, one for the electric cables and one for the winch rope. A pulley, and a cover for the working parts, are also supplied with this bracket arm. The advantages of this arrangement are simplification of installation, ease of operation and reduction in cost.

STEEL COLUMNS:

A new Contact Suspension Unit with four contacts has been designed for use with lanterns such as the GEC lantern using Osram 280 watt integral sodium lamps for 35 ft mounting heights. Messrs Stewarts and Lloyds Limited co-operated in the design of the bracket arm of their column and in arrangements for fitting a pulley to the top of the column at their works before despatch. Here again, simplification of installation and ease of operation have been achieved.

L.E.F. Raising and Lowering Gear, acknowledged the quickest and most convenient means of servicing out-of-reach lights, enables one man operating from ground level to carry out maintenance, thus making considerable savings in time, labour and vehicles.

Working models of L.E.F. Gear in streetlighting columns can be seen at our Croydon works and an advisory service is ready at all times to assist you with light maintenance problems.

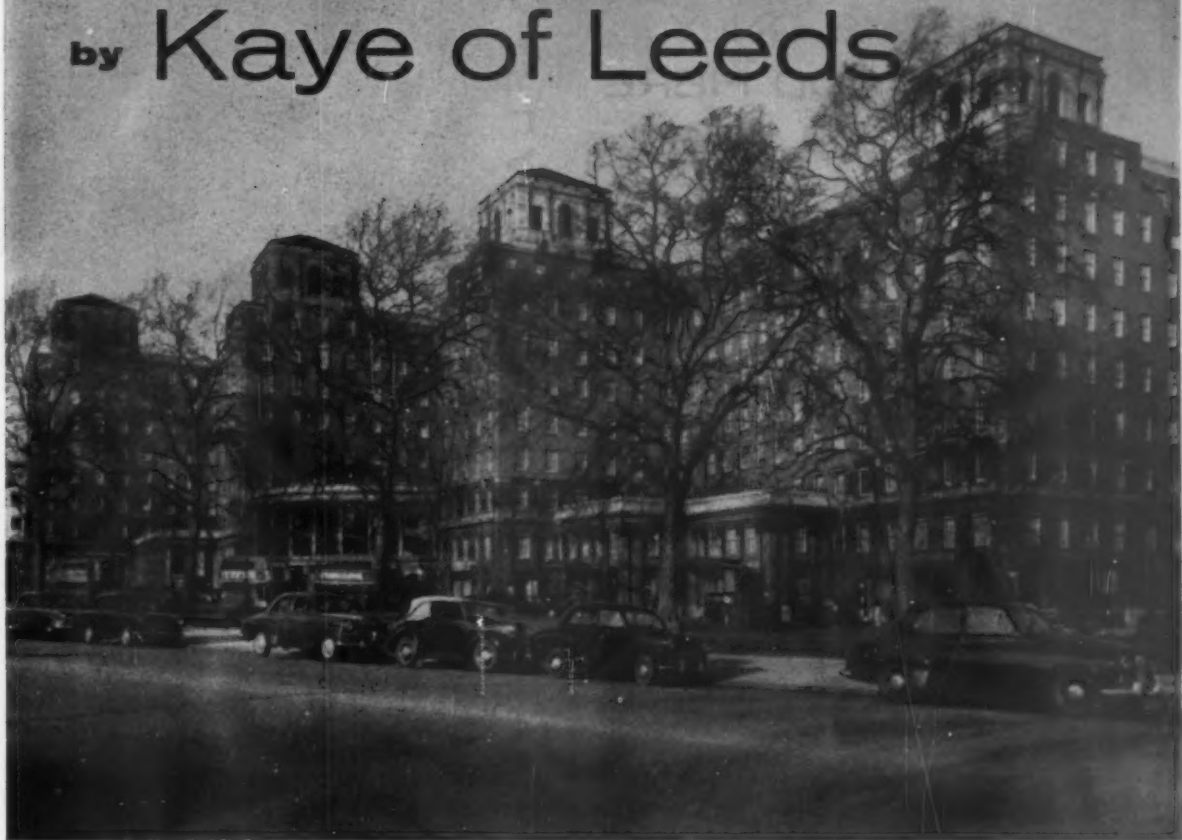


LONDON ELECTRIC FIRM LTD
Brighton Road, South Croydon, Surrey

Telephone: UPLANDS 4871



1,000 rooms, 1,020 locks and 3,084 keys by Kaye of Leeds



Grosvenor House's requirements for locks with master, sub-master and servant keys were satisfactorily fulfilled by Joseph Kaye & Sons Ltd. Specify Kaye Locks and Door Furniture for quality finish and robust traditional craftsmanship. They have nearly a century's experience behind them.

FOR EVERY APPLICATION

- Hotel Locks
- Mortice Locks
- Sliding Door Locks
- Emergency Door Fittings
- Padlocks
- Latches
- Rim Locks
- Cupboard Locks
- Stabilisers
- Drawer and Desk Locks

TECHNICAL PERFECTION

- 4 Lever Locks
- 750 Differs off Levers
- Differs from Levers and Wards are almost unlimited
- Followers are of hard resistant Brass
- Forends are of hard resistant Brass
- Phosphor Bronze Springs to Levers
- The 'K' design, four lever Lock is for greater security
- The Locks can be made in suites with Sub-master and Master Keys



Illustrated literature is available on request

Joseph Kaye & Sons Ltd.,

Established 1864

Lock Works, Leeds 10. Telephone : 20887

London Office : 1-5, New Bond Street, London W.1. Telephone : HYDe Park 2956.

Pyrestos is unique

THE ONLY
WOOD FIBRE
INSULATION
BOARD

FLAMEPROOF



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



Meeanee & Hyderabad Barracks, Colchester.
Main Contractors: Farrans Ltd., Upper Brook Street,
London. W.1.

THROUGHOUT
ITS
THICKNESS.

PERMANENT FIRE
PROTECTION PLUS
INSULATION.

The triple action of
PYRESTOS-FLAME-
PROOF, HIGH THERMAL
and ACOUSTIC VALUE-
makes the ideal board for
ceilings and wall cladding,
partitions, etc.-where
thermal and sound
insulation must combine
with safeguard against fire
risk. Decay and termite
proof.

NOW AVAILABLE
with a high grade light
reflecting surface-
PYRESTOS WHITE.
Thickness: 9/16" 11/16" and
13/16" up to 12' x 4'

Immediately available from
stockists throughout the
country.

Complies fully with the
requirements of the
THERMAL INSULATION
(Industrial Buildings) Act,
1957.

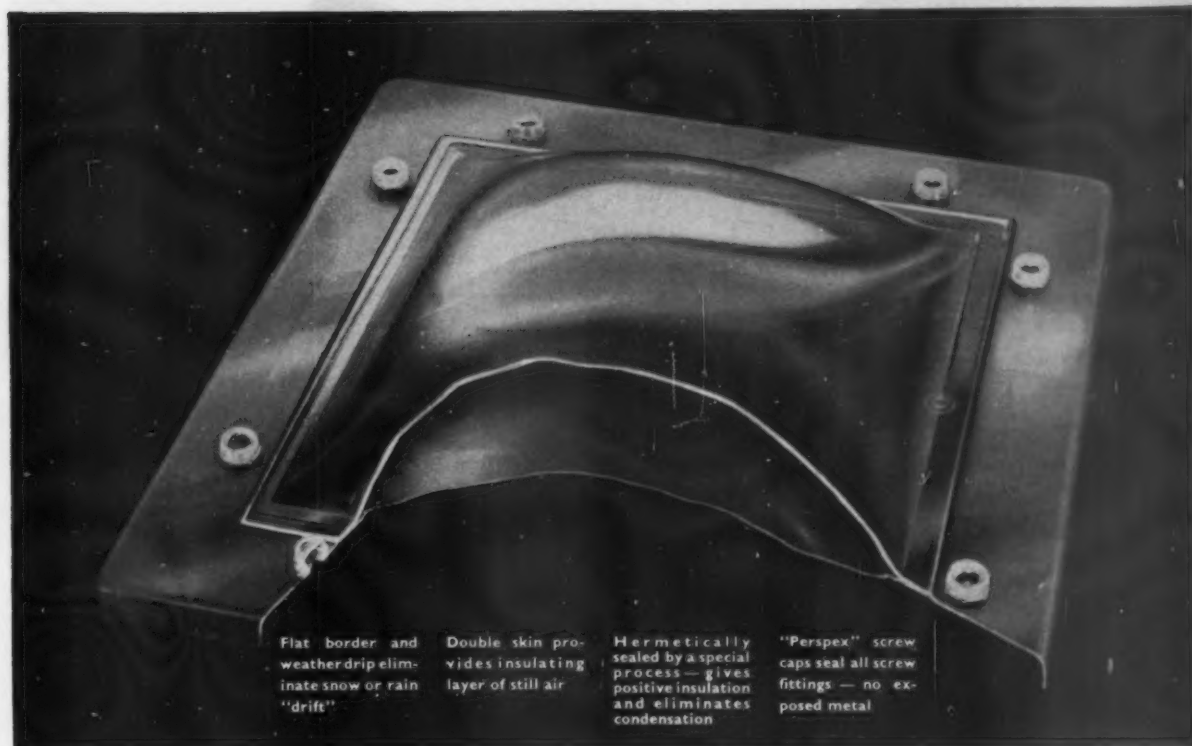
Further details, samples and prices
etc. available on request.

Board Processors Ltd

Leyborne Wharf, Horton Bridge Road, West Drayton, Middlesex.
Telephone: (WE 3) 4021 (7 lines)



Pyrestos is a registered trade mark



Flat border and weatherdrip eliminate snow or rain "drift"

Double skin provides insulating layer of still air

Hermetically sealed by a special process—gives positive insulation and eliminates condensation

"Perspex" screw caps seal all screw fittings—no exposed metal

designed daylight *PLUS* insulation at low cost !

CORDAR

ROOF LIGHTS

PATENTS PENDING

**MAXIMUM LIGHT TRANSMISSION
EASILY INSTALLED
NO MAINTENANCE**

An insulated roof light is complementary to an insulated roof and CORDAR double skin 'Perspex' domes give a "U" value of .42 BTU/sq.Ft./HroF—the ideal answer to the problem of THERMAL EFFICIENCY. CORDAR provide maximum light transmission, eliminate condensation, and cut out maintenance with their exclusive featherweight design. A wide range of sizes, circular, square, rectangular.

Price Example:
3 ft. x 3 ft. dome
Single Skin—£9.0.0
Double Skin—£13.15.0



CORDAR LIMITED

34 Dean St., Newcastle upon Tyne 1. Telephone: 26214

P4405



PLYGLASS

makes it possible

That brilliant idea—don't discard it out of hand because it seems impractical or too costly at first sight. Look at it from the 'PLYGLASS' point of view! But what about glare and shadow, you say? And thermal and sound insulation, and even light distribution STOP! Before you think of any more difficulties, think about 'PLYGLASS' double glazing units!

For further information on

'PLYGLASS' DOUBLE GLAZING UNITS and VITROSLAB INFILL PANELS

write to: **PLYGLASS LIMITED • EDINBURGH WAY • HARLOW • ESSEX**

Telephone: Harlow 24271. Cables: Plylux Harlow.

'PLYGLASS' double glazing units—manufactured either as Clear or Diffusing, or as coloured opaque slabs (the latter known as Vitroslab) overcome all these notorious glazing limitations and cut construction costs because they provide *double insulation in a single set of glazing bars!*



Pelmet panels of 'PLYGLASS' DIFFUSING DOUBLE GLAZING UNITS
Architect: Maurice H. J. Bebb L.R.I.B.A.

Office block at Hemel Hempstead
'PLYGLASS' is the registered trade name of Plyglass Limited

► CONVERSION of HEATING BOILERS to AUTOMATIC operation with **HARD COKE**

TO RAISE THEIR EFFICIENCY • TO SAVE FUEL & LABOUR

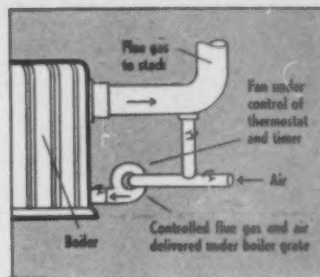


A G.A.P. Unit is installed at the Manor Hotel, Scarborough.

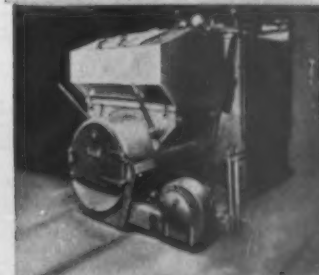
USERS OF SECTIONAL BOILERS should send for INFORMATION SHEET No. 3 which shows how these boilers can be converted to automatic operation resulting in greatly improved performance and considerable saving on fuel costs.

The ordinary cast-iron sectional boiler is cheap, it has a long life and is easily installed. Converted to automatic operation, which can be done quite inexpensively, its thermal efficiency may well be raised to over 80% with the further advantages of longer banking periods and greater flexibility in relation to heat requirements.

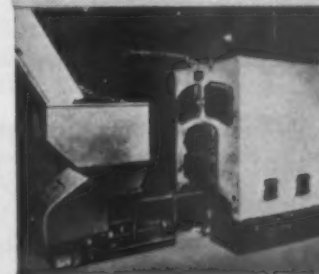
HARD COKE is ideally suited to sectional boilers whether automatically operated or not. It is the authorised smokeless fuel produced by the British Coking Industry, produced in coke ovens from coals which are washed and crushed before carbonisation. It is a high-efficiency fuel, containing no stone or shale, uniform and consistent in size and quality.



G.A.P. Conversion Unit fitted to sectional boiler, thermostatically controlled, with time switch. An inexpensive unit for lower fuel costs and long banking periods.



SUXE Pre-burner Unit available in sizes from 450,000 to 1,500,000 B.T.U.'s per hour. With these units very high efficiencies are obtained.



BIGWOOD Underfed Stoker specially suitable for use with Hard Coke. Made in sizes from 500,000 to 1,360,000 B.T.U.'s

**TO THE BRITISH COKING INDUSTRY ASSOCIATION,
74 Grosvenor Street, London, W.1.**

Please send me Information Sheet No. 3, giving full details of boiler conversion.

NAME _____

ADDRESS _____

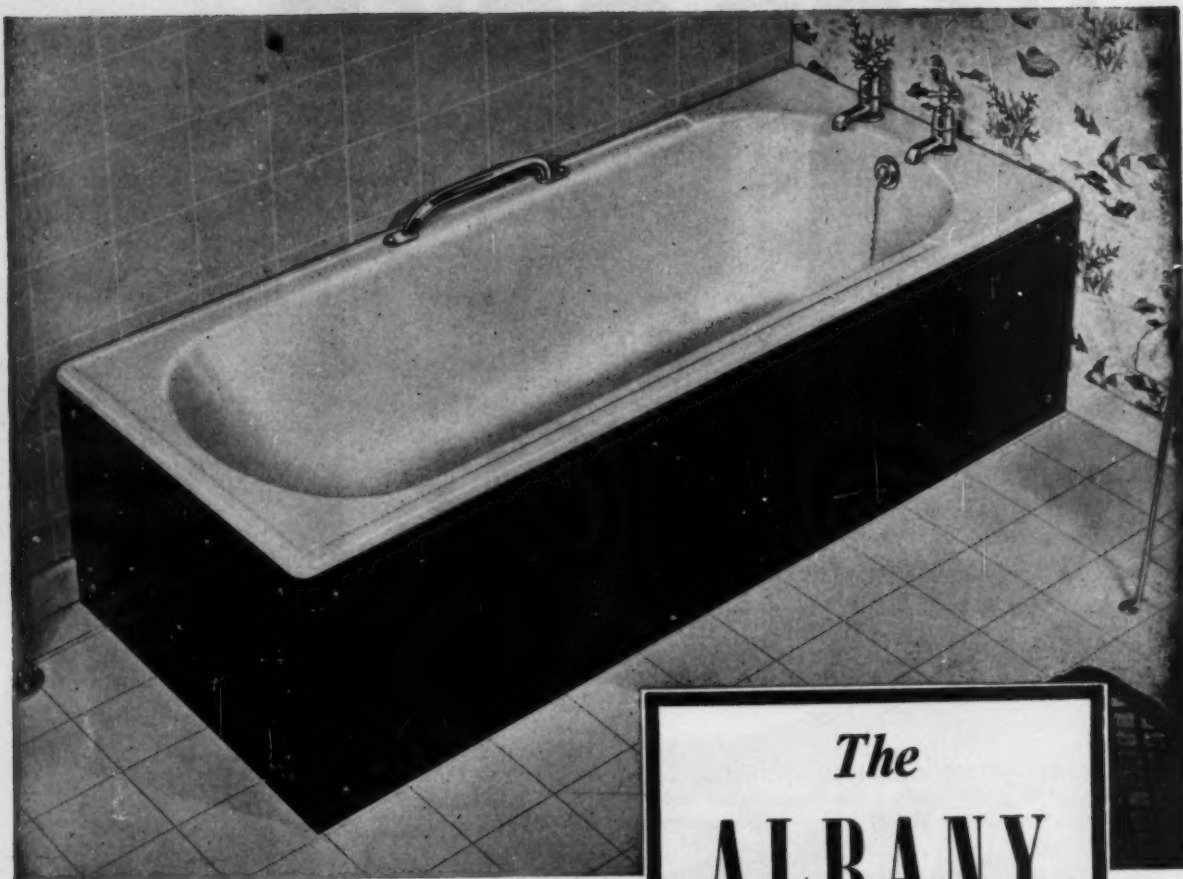
A.J.



**POST COUPON
FOR THIS
INFORMATION
SHEET**

HCI 66

THE GLEAMING BEAUTY OF A CARRON BATH



Here's the Albany, a special Carron shallow bath—safe, compact, good looking. Corner tap positions are available to facilitate plumbing. It's tailored for modern bathrooms and finished in a range of gleaming Carron colours (or porcelain white if you wish). To instal the best costs you no more. Insist on the Carron Albany. Write today for detailed specification sheet.

The
ALBANY
by
CARRON



CARRON COMPANY • CARRON • FALKIRK • STIRLINGSHIRE

LONDON OFFICE: 15 UPPER THAMES STREET, E.C.4. CENTral 7581 (4 lines)
and at 22-26 Redcross Street, Liverpool, 1. 125 Buchanan Street, Glasgow, C.1. 33 Bath Lane, Newcastle Upon Tyne.

LEADING
LIFT
MAKERS
USE

BOLTON

DOORS



BOLTON *The BIG name in doors*

This wide range of doors includes types suitable for every lift car or landing in such diverse situations as goods warehouses and hotels.

Write now for latest leaflet ref: AJ. 362



*Above:
Patent
Multi-Leaf
Door.*

*Left:
2 Panel
Centre
Opening
Door.*

*Right:
Bolton
Patent
Shutter
Door,
bunched
and fully
extended.*



BOLTON GATE COMPANY LIMITED • BOLTON • LANC

Branches at: London, Glasgow, Birmingham and towns throughout the country

CELSIUS

[188

celsius See THERMOMETER (person)

celt 1. *n.*, chisel-edged prehistoric tool (imaginary L.)

celt 2. *n.*, (*pl.*) peoples speaking or having spoken languages akin to that of the Gauls (Bretons, Cornish, Welsh, Irish, Manx, Gaels) (*sing.*) member of such people.

celtic (*adj.*; *-ically*) of the Cc. (Celtic fringe, the Scots, Irish, Welsh and Cornish, in relation to the U.K.) (*n.*) the Celtic language, celticism, celtomania, celtomaniac, celtophobe, celtophobia, *nn.* (L. Celta)

cement 1. *n.*, Substance made by calcining lime and clay, applied as paste and hardening into stony consistence, and used as material for floors and walls and tanks or as mortar: TUNNEL C. is particularly strong, rapid hardening, weather resistant c. Best C. *see* The Tunnel Portland Cement Company Limited, 105 Piccadilly, London W.1. GROsvenor 4100.

cement 2. *v.t.* Apply c. to, line or cover with c., unite (as) with c. To C. for best results *see* TUNNEL

cemetery *n.*, Burial ground other than churchyard (Gk. Koimao, put to sleep)

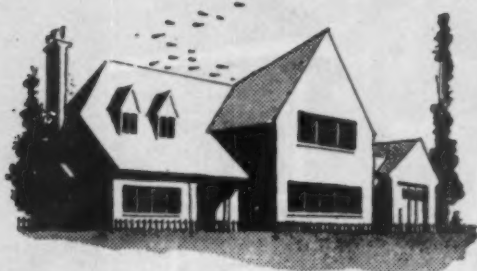
cenobite *see* COENOBITE

cenotaph (-ahf) *n.* Sepulchral monument to one whose remains are elsewhere.

censer *n.* Incense-burning vessel. Cense *v.t.* adore or perfume with incense (INCENSE 2)

censor 1. *n.* Ancient-Roman supervisor of census and public morals; modern official examining
nlaas hooks news correspondence etc

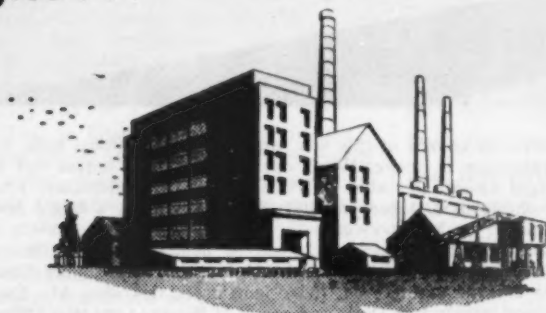
They all need Insulation . . .



home . . .



office . . .



factory . . .

They all need . . .



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

Write for full information.

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

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

KR56



The Architects' Journal

No. 3427. Vol. 132. December 22, 1960

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

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

NOT QUITE ARCHITECTURE

*Heroes of Our Time : the
 All-talking, All-gesticula-
 ting, Completely Non-
 existent Man*

Oh, excuse me Mr. Simpson, may I have a word with you?

—Why of course, Old Boy, anything you like.

—Well, I hope you don't mind me asking you again so soon but if you remember about two months ago I asked you about that lecture you promised to give us last year, remember? With you being in the Planning we thought you'd be just the man for the job.

—Why of course, Old Chap, I remember, in fact I've been looking forward to it very much. I'm only sorry we've had to put it off for so long. Smoke?

—No thanks, can't afford it, Private Practice you know.

—Ha, ha, jolly good.

—Not really. Anyway about this lecture; if you could give us a definite date I think that would be the best, don't you? When can I say you'll come?

—Mm that's a tricky one, one can hardly call one's time one's own these days. Maybe it would be better if you named the day and then that would give us something to work on, eh? Or better still, how about a few alternatives, maybe we could do something there?

—Practically any time within the next three months would be fine but if it's at all convenient we like to have people in term-time; so the students can get along, you know.

—An excellent idea too, the sooner they learn the hard facts about their job the better, I know our task would be a jolly sight easier if you chaps came out of the clouds a bit earlier: too much Art.



International Recognition

The highest award of the Milan Triennale a *Gran premio con menzione speciale*, a unique distinction apparently, has been awarded to the primary school, above, which, thanks to the MOE's efforts formed the British Government exhibit. The school was designed in the CLASP system of construction by the Nottinghamshire Architects' Department (County Architect: W. D. Lacey; deputy, Henry Swain). The President of the RIBA, Sir William Holford, on learning of this great distinction being awarded to Britain's first official exhibit, said:

Every architect in the country and a number of official bodies, including the Ministry of Education and the Board of Trade, will be delighted by the outstanding success scored by this first British exhibit at the Triennale in Milan, the theme of which was "The Home and the School."

This is an achievement all the greater for not being an isolated instance of felicity in design. It is the product of a development team; and as the saying goes—"There are plenty more where that came from." It is sensible, well-planned, well-equipped, economical and attractive, and was put up in the exhibition ground in nine weeks. Both the exhibit and the booklet "Britain's New Schools" were best-sellers in Milan; and for a moderate expenditure our designing, building and organising capacity was admirably demonstrated to the world.

British architects have honoured many international architects in recent years; now the compliment has been handsomely returned, not to an individual but to a programme—the Consortium of Local Authorities' Special Programme for School Building in the UK. To all members of the consortium and its supporters, and also to Mr. W. D. Lacey, the Nottinghamshire County Architect, and designer of the school shown in the XIIth Triennale, the country owes a word of thanks and appreciation.

And the immediate past-president, Sir Basil Spence, said: It is wonderful news that one of our first major participations at the Milan Triennale, which is the Mecca of design in the world, should have collected the supreme award. I am not surprised by this as, since the war, the one field that has been fertile for British architecture has been schools and it reflects great credit on the Ministry, and the Minister in particular, that he should give archi-

tecture its chance in this way, and in an international field where competition is severe. When one considers this school has been judged against the work of Finland, Denmark, Germany, France, Czechoslovakia, Japan and Italy itself, it is really a bright feather indeed in the Ministry's cap.

I am sure that all architects will be delighted to hear this and, most of all, the architects of the Nottinghamshire County Council, and one must not forget the originator of this idea, Mr. Donald Gibson, who is now Director-General of Works at the War Office.

The advances in educational theory and in architecture which this achievement demonstrates is due to the administrative set-up in this country and is largely peculiar to it, whereby central and local government educationists and public architects have the opportunity to carry out research and development work in their respective disciplines over a continuing programme of building. Such progress can only be attained with great difficulty, if at all, by private architects and by educational authorities doing only one-off buildings. This is the profound lesson which other countries will have to learn if they are to emulate this British achievement. The disgrace for this country is that so few local authorities building schools, and none doing housing, have learnt CLASP's obvious lessons. The disgrace must also be borne by the many private concerns with building programmes which have not appreciated the economic, functional, and development principles which are the fundamentals of modern architecture.

In addition to the special award, the sanitary equipment in the school, by Adamsez, received a gold medal, and the desks by Sherwood Industries (a Notts undertaking to promote the industrial and physical rehabilitation of men suffering from pulmonary tuberculosis) and the chairs by A. and F. Howland received silver medals. This furniture was designed in accordance with BS 3030 and the MOE's architects were closely involved. The steel frame of the Milan school was supplied and erected by Brockhouse Steel Structures Ltd., and the majority of the component parts, furniture and equipment was supplied free, on loan, or at low cost by British manufacturers, publishers and suppliers.

—That's just it Mr. Simpson, that's one of the reasons why we'd like you to come along in term-time. After all you're chaps who really make the decisions, Art or no Art. Could you give us a date this month, Mr. Simpson?

—Oh I could do that all right, plenty of them, it's just that I wouldn't want to let you down at all, Old Boy, by suggesting a date and then not being able to make it.

—Maybe we could take that risk; you could give us a date and then confirm it later. Or you could do it out of term-time; it's not absolutely essential, you know, if you can't manage. And that would help us to narrow it down at the other end a bit.

—Yes, of course, that's getting on more towards the end of the year, though, isn't it? Maybe it would be more sensible to do it in term-time after all. The end of the year is always dicey one way or another, weather and holidays and suchlike. As I say, I wouldn't want to disappoint you for any reason that we can avoid and I can just foresee there may be some silly sort of nonsense at the end of the year that may just spike our guns. You do see my point?

—Yes.

—It's just that I think we should look at every aspect of the thing; see it in the round, so to speak. After all quite a few people might be involved.

—I'm sure you'll get a good turnout, Mr. Simpson. We've been looking forward to seeing you for a long time.

—That is kind of you. Quite frankly, I think of it more as a treat for myself. It's not often I'm fortunate enough to have a captive audience, so you see I want to make a special effort not to disappoint you all.

—Naturally we don't want to disappoint anyone, but maybe we could just fix a date as a starting point. I think you're quite right about the winter being a bad time, so that's out and then if we say another month for these wretched exams we're back with some time next month.

—Next month eh? Jolly good, you know we're starting to get somewhere at last. Now if I can fit you in some time next month that should be just grand.

—Fine, Mr. Simpson.

—But when: you see we're back to this dreadful work problem again. I will have the time I'm pretty sure, but exactly when it's so difficult to say, you see?

—If its inconvenient then maybe we could forget . . .

—Not at all, Old Boy, I'm looking forward to it. It's just fitting it in that's the trouble. Look, Old Chap, I really think our best bet is for you to give me a ring, fairly soon, and then most likely I'll be in a better position to know how things are going at my end.

—Right, shall we say towards the end of the week, Thursday?

—Mm, bit dicey there.

—How about Monday then?

—Tell you what, Old Man, how about me ringing you?

TOM BOWLES

The Editors

SEMI-ARCHITECTS WANTED FOR THE DULL WORK

ONE of the RIBA's allied societies is endeavouring to adulterate the architectural profession by obtaining recognition from the RIBA of the need and desirability for a class of architectural assistants. These assistants, with three GCE "O" level passes, it is suggested, would train by "day release" or evening classes, pass an examination of RIBA intermediate standard and receive a "certificate or diploma". Control of entry would be maintained by the RIBA, and "exceptionally qualified" assistants would have facilities to qualify for associateship of the RIBA.

This proposal arises, apparently, because the poor relations in the architectural profession, the smaller provincial private offices, claim that they not only cannot afford to employ architects as assistants, but that the qualified architect would be frustrated in such a post.

There is, or should be, plenty of work in architects' offices for perspective artists, model makers, secretaries and, more important, administrators. There *may* be scope for tracers and draughtsmen. But what work can a half-trained (i.e. intermediate level) architect do? What aspect of the design and supervision of a building can be taken over by the semi-qualified? Where does the fully-qualified architect's work stop so that the unqualified can take over? The advocates of a two-tier profession never answer this point clearly. But they are not interested in the status of the profession. They are only interested in trying to obtain cheap labour for their practices by offering a back-stairs route to semi-professional status.

A study of post-war building shows how poor our architectural standards are. This reactionary proposal for a yet lower tier will not improve standards but merely give another lease of life to a type of private practice which needs radical overhaul. The RIBA must resist at all cost any pressure for the creation of half-baked architects.

REFORM IN THE OFFICE

Today we publish (on p. 902) the second of our series of articles on how the Architects' Department at the War Office is organized. We invite readers seriously to study this article, which describes the exceptional responsibility and freedom being enjoyed, as a result of well organized teamwork, by young architects, in a branch of government service where one might have expected red tape to be most tightly knotted. These conditions of responsibility and freedom should now exist in architects' offices and departments everywhere, because they benefit both the men and their work, and now, while there are more jobs than architects around, is surely the moment for assistant architects to persuade their employers to reorganize their methods of work so as to create a stimulating instead of a frustrating environment, and thereby create the conditions in which a more progressive service can be offered to the client.



IT'S ENGINEERS WHAT COUNTS

ASTRAGAL is glad to hear the JOURNAL is publishing something of Alan Harris's recent RIBA talk in the next issue. In his fluent, entertaining and outrageous revelation of "The Architect's Misconception of Engineering," he said the engineer was as much an artist as the architect (if art meant making things), and that engineering was based on knowledge not of mathematics but of materials. In his demolition of the current antithesis between engineering and architecture, Mr. Harris said that if engineers seemed better up in mathematics it was because they had taken more trouble to achieve "numeracy," which was just as necessary today as literacy used to be.

UP VAUXHALL WAY

How would you put 2,000 people on a 10 acre site in Pimlico? Imagine you have over £2 million to spend and that about 70 per cent of the dwellings must consist of one or two rooms. When you've worked it out, in between pulling crackers, you might like to have a go at doing it thoroughly for a prize of 1,500 guineas. Keep an eye on the JOURNAL in January and you will see a competition announced by the City of Westminster. The site will be off Vauxhall Bridge Road, the assessor will be Philip Powell (co-designer with Hidalgo Moya of the competition-winning Churchill Gardens housing nearby) and the running-up prize money of 1,500

guineas will be distributed as the admirably-chosen assessor thinks fit.

WHAT GOES UP

It's a pity, of course, that one million pounds worth of offices now going up near the Harrow Road have to come down again in seven years' time to make way for a road. But it is more of a pity that BBC television should attribute this fiasco to the folly of planners. Roads aren't built in a day, and it would surely be impossible to stop all building development while the vast amount of research their plotting requires was carried out. It may be that the cost of compensating the developers will be chicken feed compared with alternative schemes which might have involved the costly demolition of engineering works or glue factories. The real tragedy is not so much that all this money is being spent on an agonising reappraisal, but that such money is seldom spent on bold and comprehensive planning.

PRETTY SPRUCE NOTION

If ASTRAGAL is given a car for Christmas he undertakes not to hunt out the anonymous admirer and send her a bill for tax and insurance. It seems, however, that the MOW has no such fine feelings, for it habitually posts the Norwegian government a bill of £70 for electricity for that handsome Christmas tree. Maybe the Norwegians actually offered to pay for the whole thing, but isn't it rather close-fisted to accept?

WAITING IN THE WINGS

The Press have recently given headline treatment to big architectural names—notably Sir Basil and Miss Jane. It's nice to see architects being recognised as Important People, but let's hope the personality cult won't disguise the fact that some of the best architecture is due, as they say in the theatre, to all those hard working people behind the scenes without whose etc., etc. At least Donald Gibson remembered them on television the other night, when he spoke—in an interview—about the collaborative effort which produced Britain's prizewinner in Milan—the CLASP school.

THE MOOR THE MERRIER

The abolition of Dartmoor prison is one of those small advances in civilisation that make progress seem more than a delusion, though the news is said to have shed gloom over the

honest villagers of Princetown this Christmas. Their feelings are understandable, leaving aside trade considerations. If you are faced with the choice of having a monument to barbarism or nothing, it is hard to choose nothing.

*

Leading members of the Dartmoor Preservation Society, who have campaigned for the removal of the prison, now see the old dump as a promising tourist attraction. A tour of the cells, followed by a cream tea with a file in it, could bring a new and jollier life to the village. If Stately Homes can make their pile, why should not this superannuated State Home? Its cells could be neatly labelled with the names of distinguished occupants who slept there. Its guides could be recruited from the best informed sources, recalling the witticisms of Jim Phelan of the I.R.A. And the half crowns would rattle in for the use of the high-minded organisations which saw that Dartmoor would be more valuable as a money-spinner than as a very expensive and inconvenient penal establishment.

LATEST BID

Recognition of the value of trade literature of standard size and format has resulted in the RIBA and the Building Centre supporting a regular competition for the design of it. The latest association to encourage manufacturers to present information in a form easily usable by architects is that influential body the Building Industry Distributors—that is, the builders' merchants—with the co-operation of the British Federation of Plumbers' Merchants and the National Federation of Ironmongers. President K. J. Fisher of the BID has written to all manufacturers asking for their support for, as a start, a standard page size (A4) and a classification number (unspecified, but presumably SfB).

*

The only large-scale publishing anywhere of standardised information of quality on manufactured products—such as Mr. Fisher is requesting—is the long-lived AJ library of Information Sheets. The Editors tell me that demands for sheets have markedly increased recently, no doubt due, in part, to the growing demand from architects and other users for information on products which is easy to file and refer to. The great advantage of Sheets to

manufacturers, of course, is the ease and fantastic cheapness of publishing facts about their products. The AJ Information Sheet Library has a staff who know how best to present the information and, of course, there is no trouble about distribution as the AJ's 14,000 readers automatically get a copy.

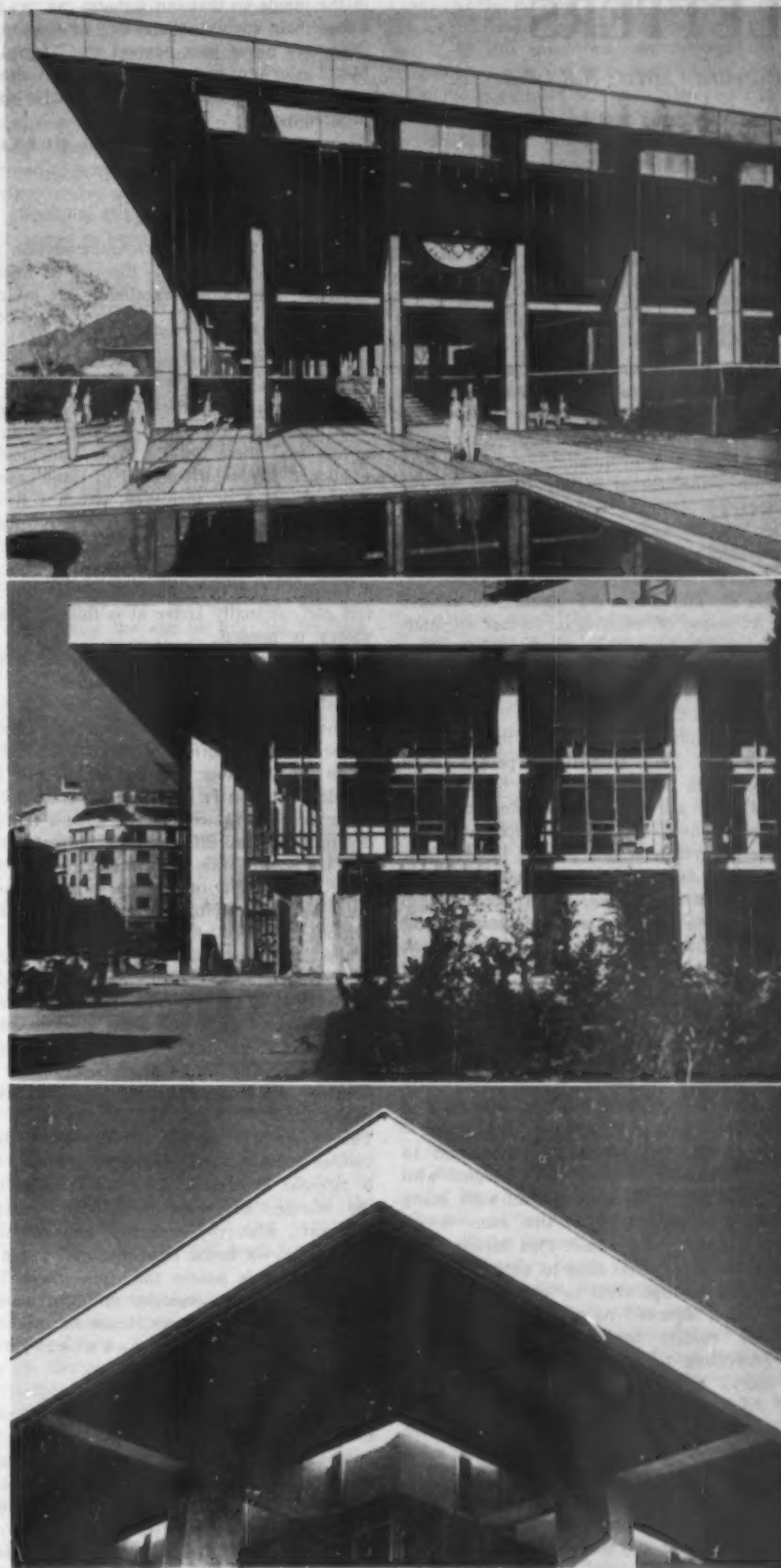
Some manufacturers would get a shock if they realised how many architects threw their expensive, lavish, trade literature into the waste-paper basket because it was too large to file or too muddled in presentation to comprehend quickly.

GREEK REVIVAL

The illustrations opposite show the nearly-completed U.S. Embassy (by Walter Gropius and the Architects Collaborative) on Queen Sophia Avenue, in the smart residential area of Athens, is a square 3-storey building with an internal courtyard. An interesting feature is the peristyle of concrete columns, faced with pentellic marble from the same quarry as the Parthenon, from which is cantilevered a deep cornice (detail, bottom). The neo-classic elegance is spoilt by the (English) curtain walling facing the suspended office floors behind. This fails to cope with the early morning and late afternoon sun. The Greeks, by the way, for all their wealth of marble, take great care by protecting surfaces and edges with plaster and sacking during construction. Also opposite, is a perspective from the architects' office showing that, however high an architect's reputation, the perspectivist cannot resist those dramatic distortions which begin by fooling the client and end by fooling the designer too.

MODESTY FORBIDS

When planning application was made for an illuminated sign outside a Bristol tailor's shop, it depicted a man wearing a loin-cloth and beard. In the actual sign, however, his apparel was reduced to a fig leaf. Following complaints from the public, the local corporation have asked for the sign to be covered up with brown paper. The manager has refused and will contest the matter. Meanwhile, in the village of Cowling in Yorkshire, the parish council have asked Skipton RDC to change the wording on a new illuminated sign from "Public Urinal" to "Gents." Although, as the surveyor to the RDC



The US Embassy Office Building, Athens

points out, this is an approved sign shown in diagram 423 of the 1957 Traffic Signs Regulations and General Directions, the change will be made,

and if space permits the lettering will read "Gentlemen" rather than "Gents."

ASTRAGAL

LETTERS

Edward Curtis, A.R.I.B.A.

Paul Ritter, A.R.I.B.A.

B. Bednarczyk

Bryan Westwood, F.R.I.B.A.

J. H. Chandler,

Hon. Sec., Chester Civic Trust

Teaching the Teachers

SIR: As a teacher (will this practice *never* build up) I was most interested to read the letter from G. P. W. Taylor with regard to increasing the status and rejuvenation of the teaching profession.

I am wholehearted in my support of the ideas put forward and am in touch with Mr. Taylor to see what can be done in a practical way, but nevertheless I should like to make the following further points. It is not enough, in my opinion, to achieve a technique of teaching or further an interchange to improve knowledge of teaching practices, without some agreement on the fundamentals of *what* is to be taught (Idea becomes a thing in itself).

I would submit that the first thing to aim at in this fluid, transitional period is an interchange of ideas on basic training layouts which are capable of keeping pace with outside knowledge and practice, as I am sure no system at this present time is fully equipped for preparing a student, not for today, but for the much advanced rhythm of a technological society five years hence. It is apparent that more and more emphasis must be placed on practical realisation of architecture (jungle fighters must know how to live off country) and one outlet for the medium proposed by Mr. Taylor might well be a closer link up with "live" architecture and industry.

I would propose that this could be done in the following ways:

1. Selected architects approached to "foster" small groups of students who could then keep in touch with work going on in office and on site even if no "weapons" were used. This liaison to be reported on from time to time.

2. Exchange visits to schools by above "foster figures" to give crits and generally mingle among "attack groups." (Anything to break down monastic barriers.)

3. Flexible approach to course layout with interchange between above selected architects and teachers to balance techniques between theory and practice.

Personally I feel that *all* teachers should be practising architects (limit the size old boy!) in some way or another and in that case can themselves pull in students to assist in their work, not *via* "hack" jobs but with full recognition of the part played in realisation of the job.

Finally, I would suggest that we as teachers should now begin to "flush in" a drop of clear water from the best practices possible

in the jungle so that our fighters can get to know their enemy; otherwise, who knows, they may never pass beyond the "fringe." Mr. Taylor's proposals could help to show part at least of the best way to tackle our programme.

EDWARD CURTIS

Rickmansworth, Herts.

What Sciences Lack

SIR: Llewelyn Davies's recommendation to become familiar with the theories of many sciences, is obviously excellent. But taking up Michael Leonard's criticism, who objected that theory of design also has factual content which can be taught, may I be allowed a comment?

When the architect tries to come to grips with the basic theory of sciences he discovers that these are far from convincing or indeed particularly useful in some cases. Take the case of sociology, which I have experienced: the theory is virtually non-existent as anyone can find out for himself by reading Prof. Sprott's book *Sociology*. The only conclusion the architect can rationally arrive at is this: a basic theory is needed.

I submit that even those sciences which have a developed theoretical basis suffer from a devastating shortcoming: it is the lack of means of communication with the other sciences, their theories, and their specialists. From this I deduce that the architect is in an ideal position to note the desperate need for a unifying principle. Only such a unifying principle can allow the development of the Universal Man. Otherwise the unconnected multiplicity of subjects, as it is today, must result in arbitrary, contradictory, collections of scraps of theory, at very best.

While Llewelyn Davies's suggestion, to teach basic principles to students at an early age, is excellent, it must include an awareness of the shortcomings of scientific theories and the need for unifying concepts. These latter have emerged in promising profusion in a number of fields including Gestalt Psychology.

They must fuse the present theories of the various sciences, and enrich them, before it is rational to depend upon the scientist in the manner suggested by all too many architects, who, too modestly, believe that only their *own* house is in disorder. I think the contrary is nearer the truth: both in education and in practice, the profession, in its awareness of needs, leads the rest.

PAUL RITTER

Nottingham

Educational Journal

SIR: The magazine for the staff of architectural schools that you mentioned in your editorial is already in existence: it is published in the USA.

It is the *Journal of Architectural Education*, the official publication of the Association of Collegiate Schools of Architecture. More can be found out from G. Downes, College of Architecture, University of California, Berkeley 4, California, USA.

B. BEDNARCZYK

Harlow, Essex

Distinguished Visitors

SIR: I am delighted that Yamasaki was so well received and fully reported, I would, however, like to add that the initiative for bringing architects of international significance to this country came from Mr. Owen Aisher of the Marley Tile Company. Through the Yerbury Foundation he financed this event as the first "Marley" lecture. It is hoped that others will follow each year.

May I correct your contributor's remarks about other lectures? Mr. Yamasaki is the first visitor from abroad to be chosen by the Yerbury Foundation. Ely Kahn was coming anyway and had a prepared lecture; Varming, Candilis, and more recently Torroja, have all been invited by the AA and their expenses have been met by the Foundation. In their various ways they have had much to give to those willing to listen.

The purpose of the Foundation is to assist in filling gaps in architectural education. Thus lectures are designed to interest various differing sections of the building industry. For instance, a series on the effect of design on productivity has just been completed.

Apart from lectures, may I add that the Foundation has been able to provide the scientific apparatus needed at the AA for instruction in mechanical services in buildings, and ways and means are now being sought to enable the AA to go much further in the direction of practical training. Appeals for funds to further this work will be made shortly.

BRYAN WESTWOOD

London, W.C.1

Townscape Exhibition

SIR: This Society is arranging for next summer an exhibition of photographs of contemporary buildings in a traditional townscape. The object is to show the public that "modern" urban architecture does not necessarily mean big-city office blocks, and that buildings in the style of our own time can take their place as equals among older two- to four-storey neighbours, even when the existing townscape has unusual architectural merit.

Although the exhibition is intended primarily for the public in Chester, where it will be shown, its theme could be of interest in many other towns, provided enough material of the right sort can be found for photographing. After the exhibition therefore, we intend to offer the photographs, if they are good enough, to The Civic Trust in London as a possible basis for an exhibition to be given a wider showing in the country.

I would be most grateful for any information your readers may be able to send me about buildings which illustrate the point we are trying to make. First class examples seem to be far from plentiful in this country, and we are quite ready to take some from the Continent, too, if necessary.

J. H. CHANDLER

14 Curzon Park North,
Chester.

NEWS

TPI

Discussion on residential densities

There was a very good turn-out of people at this discussion conducted, as was to be expected from the TPI, in a very brisk way. Under the chairmanship of the new President of the Institute, Rowland Nicholas, we had a good-humoured, intelligent exchange of ideas; and occasional flashes of conviction gave colour to the evening. The discussion was between a panel of speakers, who commented on written questions from the floor. The speakers, who between them produced a strong variety of viewpoints, were W. G. Bor, Deputy Planning Officer to the LCC; J. P. Macey, Housing Manager at Birmingham; Lewis B. Keeble, Senior Lecturer under Sir William Holford; J. B. Cullingworth, Department of Social Studies, Durham University; and Mrs. Muriel Smith, London Council of Social Service Community Development Officer. The main part of the discussion was concerned with the elements of density. Mrs. Muriel Smith brought out very well that when one is planning a housing scheme the population density is only one of the factors that contribute to the final outcome: in her view perhaps the most decisive factor of all is the quality of design. She reminded us, too, that density is essentially a technical study. "From the point of view of the tenant density is not important. One may go as far as to say that it is meaningless. True, he knows if he lives in a house or a flat, if he feels his environment to be cramped and overcrowded, if he is living in suburban sprawl or the centre of a city, but what he likes and dislikes about living in any of these conditions has little to do with density; it has to do with architectural design and layout, with social amenities, housing management, transport and proximity to work, the size and structure of his family, the rent and such intangible factors as whether he likes the neighbours and how much or how little he misses relatives and friends in his former environment."

On the subject of the development of double-banked blocks of maisonnettes or flats with an internal access corridor; Walter Bor pointed out that this solution has many advantages, provided the block is not too long, and the internal corridor can be properly lit and ventilated. However, double-banked blocks must be orientated strictly on a north-south access to face due east and due west and dwellings will only get either the morning or afternoon sun. A variation on this theme is the cross-over maisonnette, a slab block in which all living rooms and kitchens are situated on one side of the block with the bedrooms at different levels on the other side. The advantages are cross-ventilation and living rooms over living rooms, which is desirable from a noise point of view. However, he did not point out one snag: a builder can

need a lot of practice in this before cross-over construction becomes a speedy operation. Bor is a firm advocate of the high point-block; it is preferable to the high slab-block in almost all respects; it is better proportioned and may even have real elegance. Overshadowing by point-blocks is reduced to a minimum by virtue of the relatively slender and fast travelling shadow. In discussing the characteristic features he had some pertinent things to say on the current problems of high density design. He was convinced that at densities of over 150 persons per acre it is now no longer possible to accommodate successfully vehicles and pedestrians at one and the same level, and we shall have to solve the problem by vertical segregation.

The inevitable chestnut of the gardens came up; Macey seemed to have no doubt that the case for gardens can be overstated: it is foolish to talk about everyone wanting to have gardens, although they are most valuable for children's play. The merits of the deeply recessed balcony were recognised. Surely the fundamental point is that whatever facilities are provided for all age groups above the age of five, for mothers with children below this age there is no substitute for the open air space on the doorstep. If in some areas high density buildings for some families is inescapable, these facilities should surely be the first charge on cost.

Cullingworth provided the more detached viewpoint to be expected from a senior university member, and spoke with the background of having just prepared his book *Housing Needs and Planning Policy*. After commenting on how many British cities are just not worth living in, his view is that if some way could be found to rejuvenate the central areas, many suburbanites would forgo their lawn (and their daily cattle-truck journey to work) in order to live in the centre of things. Few people would quarrel with his observation that for the young family with children suburbia may always provide the most suitable conditions—assuming presumably, that in this context one ignores the village. He mentioned that such young families do not by any means constitute a majority. Of the 16 million households we can expect in 1978, only a quarter will have heads aged under 40.

Macey emphasised that in practice it is no good building strictly in accordance with the population age group structure. In broad terms, to meet changing requirements his principle is that a housing programme should provide each dwelling with one more room than the theoretical requirement. The general conclusion was also that the pattern of housing distribution should at least be on a neighbourhood basis, so that people could exchange dwellings as their needs change, without having to break off ties. The necessity of reviewing internal space standards within dwellings seems to be coming more and more urgent. The signs are that we have been looking at housing too much in terms of accommodation, and too little in terms of how it can provide a base for a full life.

Lewis Keeble is well known for being in favour of relatively low densities. As he put it at this discussion, an average net residential density of 40 persons to the acre gives the conditions within which you can provide the full range of housing types; and in his view this standard means that one-third of the housing should be in flats. As he summed it up, he thinks housing should be either at fairly low density with gardens and so forth, or at a fairly high one, the figure of 40 representing the statistical average density. This, he thought, should be the basis of a policy of massive decentralisation into smaller towns. He went on to say that if you make a two-fold increase in residential densities, after taking into account other land requirements within the town, you only make a 50 per cent saving in space. Is this worth it? Walter Bor came back with the comment that he thought the sheer pressure on the need to redevelop within towns would decide the issue. I think Bor is perfectly right; but at the same time the effect of the limitations in the average spec building should not be under-estimated. It was interesting to see the pattern which the discussion followed. It was largely taken up by consideration of the residential density elements, i.e., the technique of housing design for different densities; but there seemed to be an emerging trend towards consideration of problems on a bigger scale than the density of an individual scheme. In effect one might say that this discussion very adequately brought together the issues involved in the first phase of the science of density.

The President summed up by saying that it seemed quite clear that in planning redevelopment, and disregarding exceptional circumstances, the density range of 70 to 100 persons net seemed to offer the best prospect—earlier Macey had been in no doubt that generally all needs can be met up to a density of 100. This, of course, was one of the conclusions put forward by Jack Whittle and myself in our AJ article (Sept. 8, 1960) *Space and Housing*. The President, however, gave the impression that the force of Walter Bor's argument had gone home, to the effect that densities as high as 200 could be effective if a scheme were to be planned on a sufficiently large scale. In terms of the suggestions which Whittle and I put forward in *Space and Housing*, a suitable scale for the development of the 200 density would be a housing unit for 7,000 people; but the use of this density could be extended further provided that each such unit were to be given a different architectural treatment, or were the units to be separated by a strong topographical feature, e.g., a well-developed park.

The frequency of discussions which could now be held with advantage should perhaps be on these lines: in terms of the wheel, knowledge of its structure should be taken to a further stage—by more discussion on relationship between layout and the motor vehicle; the theme should then be concerned with the size of the wheel—the relative extent of any particular type of development; the number of wheels to make a machine—the size of the town; the

number of machines for the particular installation—the number of towns needed to make a coherent urban region.

From a practical point of view, the way in which they are thrashed out will have a great bearing on future development. The scourge of modern urban society is the blight of monotony, an important contributory factor being the relative quality of the physical environment. The prospect before us is that with the need to step up within five years housing output to, say, the annual rate of 400,000 dwellings, if a real impression is to be made on the twilight areas, and if at the same time a balanced housing programme and other building activities are to be maintained, there will be pressure for increased standardisation and simplicity. Other causes may, in any event, create such pressure. What ever the reason, the result would be a worsening of the blight. The fact that there is a trend towards improvement in layout design may scarcely affect the general situation.

To try to resist this blight of monotony spreading, at least in terms of the physical environment, we need nothing less than a really imaginative reappraisal of the planning issues involving the art and science of density planning as a whole—the relative use of the different densities and the extent to which they are used. We should begin by exposing the conditions which lead to monotony in town and suburb. The issue is urgent.

D. RIGBY CHILDS

MILAN TRIENNALE

Awards to Britain

British designers did a lot better at Milan than British sportsmen did at Rome, winning the highest award at the Triennale—a *Gran premio con menzione speciale* for the CLASP primary school designed for the MOE by Notts County Architect, W. D. Lacey.

In addition, British designers have been awarded prizes as follows:

Gold medals:

Sanitary equipment designed and manufactured by Adamsez Ltd.

A swoe designed by Hulme Chadwick, manufactured by Wilkinson Sword Co.

Silver medals:

School desks designed and manufactured by Sherwood Industries Ltd.

Pupil chairs by A. & F. Howland Ltd.

Ovenware designed by John and Sylvia Reid, manufactured by Izons.

Exhibition of work of the Royal College of Art, designed by Frank Height Des.

The swoe and the ovenware have previously won Design Centre Awards.

ILA

Foreign Travel Prize

The Institute of Landscape Architects 1961 Foreign Travel Prize of £100 has been awarded to H. W. Booton, of the Department of Architecture, Royal College of

Science and Technology, Glasgow.

Mr. Booton proposes to study Muslim Gardens in Spain, with particular reference to the relationship of building to planting, siting, planning and design, use of water and problems of irrigation and plant materials.

SOCIETY OF ARCHITECTURAL HISTORIANS

Award to Sir John Summerson

The Alice Davis Hitchcock Medallion for 1960 has been awarded to Sir John Summerson for his *Architecture in Britain, 1530-1830*, first published by Penguin Books in 1953.

The award is made annually by the Society of Architectural Historians, and it is intended in future that books nominated should have been published not more than five years previous to the year in which the award is made. Any member of the Society may nominate a book.

IHVE

International Conference

An International Conference on heating, ventilating and air conditioning is being organised by the Institution of Heating and Ventilating Engineers at Olympia next year, from September 27 to October 4. The Institution is planning the conference in association with the Heating and Ventilating Research Association and the Association of Heating, Ventilating and Domestic Engineering Employers, and it will be accompanied by an international exhibition. The Conference Secretariat has just produced explanatory leaflet and application form for delegates in English, French and German.

SWEDEN EXPORTS

Two-year Design Drive

A Swedish export drive will strike Britain in January and is to continue for two years, with some 500 Swedish firms sending building materials, furniture, textiles, plastics, kitchen equipment and gadgets, for exhibition at a series of trade exhibitions throughout the year, starting with a showing of Swedish furniture at the Central Hall, Westminster, from January 31 to February 4, planned to coincide with the Furniture Fair at Earls Court.

MOTORWAYS

Should they be Lit?

In a paper last week to the Illuminating Engineering Society J. M. Waldram, who is head of lighting research at GEC, made out a technical case for the lighting of motorways by night. This was done by an examination of the visual problems involved in driving on the M1 by both day and night, in comparison with normal roads in built-up

areas, using film and sound recording techniques to show what the driver saw, in terms of the road itself and other vehicles, and the actions he took as a result to avoid accidents.

Although Mr. Waldram admitted that motorway driving is less exacting, he believed that by headlights alone by night the driver is presented with inadequate information. At a typical speed of 70 m.p.h., for safety reasons the driver should be aware of the alignment of the road ahead and any obstructions on it for at least 1,000 ft., whereas headlights alone could not do this job in any way effectively for more than about 400 ft. There are the added dangers at night of patchy fog and stationary vehicles. He believed that the problem does not yet cause many accidents on the M1 because of the relatively low density of traffic in comparison with motorways abroad, but that the problem will become much more critical as the density increases. As factual evidence in favour of lighting he mentioned the experimentally lit section of the Autoroute de l'Ouest out of Paris which resulted in a drop of 29 per cent in the accident rate by night.

Mr. Waldram was, of course, speaking for an interested body, but the facts he gave deserve independent examination by the Road Research Station, which should give the Minister an independent opinion as to whether or not the motorways should have fixed lighting, while the industry could usefully explore the many new technical and design problems involved.

LETCHWORTH TAKE-OVER

Bill in Parliament

New bids to take over First Garden City—the company that created and owns most of Letchworth—continue to be reported in City columns, while Letchworth Civic Trust, the Urban Council and other interested bodies go ahead with their plan for frustrating all such efforts.

Hotel York Ltd., the latest bidder, claimed last week that it owns 40 per cent of the voting power, but a spokesman of the council denied that this would make any difference in the plan to get a private Bill through Parliament which will set up a trust to take over the First Garden City Ltd., and run it on behalf of the community.

This proposal was made by Mr. E. G. Gardiner on behalf of Letchworth Urban Council, at a public protest meeting earlier this month, and has been confirmed by the local M.P., Mr. Martin Maddan, who has been canvassing for, and getting, support for such a Bill in Parliament, from Conservative M.P.s, including the Minister of Housing.

Moves to prevent First Garden City Ltd.—“a private company with a public purpose”—from being taken over by a private company with a private purpose have had enthusiastic support from the Town and Country Planning Association, which regards Letchworth as an important pioneering effort in town planning, that should be

maintained as a unit, free from the dangers of commercial exploitation.

"Part of the chain leading to modern architecture goes through Letchworth," said Sir Frederick Osborn, chairman of the T.C.P.A., last week. "It is not sufficiently realised what an influence the town had on the simplification of architecture. We talk about the work of Norman Shaw and Voisey, but often forget that Unwin and Parker brought that kind of architecture to working class housing."

The inhabitants of the Garden City, said Sir Frederick, had enjoyed the benefits of planned, unified development long before town and country planning was generally recognised as being necessary. As a result the whole town is very pleasant and healthy, everyone lives close to his work, the whole area is beautifully planted with a permanent green belt, with plenty of halls, churches, shops and playing fields.

Letchworth has its oddities too: up to the last war the population voted seven times on whether or not to allow public houses in the garden city, and each time the total abstainers won. Only in 1957 did what is rather oddly called the "non-temperance" vote win the day, and Letchworth's first pub is now under construction, although long before the voting it had become the town with the largest number of licensed clubs for its population of any in the country. It must also be the only town in Britain which is proposing to maintain a nature reserve near its centre—ten acres of wood and marshland containing rare wild plants and birds, which the local naturalists are asking the urban council to conserve.

ARCHITECTS IN INDUSTRY

Discussion Forum

The Architects in Industry group, set up in 1959, held its first informal meeting recently, at the Building Centre, which was joint host with Semtex Ltd., who arranged the programme, laid on refreshments and staged an exhibition. The meeting heard the technical director of Semtex talk on the manufacture and properties of thermoplastic tiles and p.v.c. flooring.

Chairman of the group, Stuart Bentley, opened the discussion which followed and promised a series of similar discussion evenings in 1961, as well as visits to industrial projects and the formation of various working parties.

Applications for membership should be sent to G. A. Grey, 37 Clifton Rise, Windsor, Berks. The Annual subscription is 21s.

COVENTRY ARCHITECTS DEPARTMENT

Building Materials Exhibition

An exhibition of new building materials was opened in Coventry, on December 5, sponsored by the Department of Architecture and Planning of the City Corporation and

consisting of displays by 12 manufacturers and suppliers, covering a wide range of building materials and components, illustrating new developments in flooring, roofing, wall cladding, windows, etc. The materials shown include plastics, aluminium, concrete, glass fibre, plasterboard and cork. It was opened by F. R. Yerbury, Director of the London Building Centre.

The exhibition is part of the activities of the new Building Information Centre which the Corporation is establishing in Coventry for the use of architects, builders and others concerned with development. This centre will have the support of the Building Centre in London and will aim at providing a local service of technical information on building matters.

BUILDING APPRENTICESHIPS

National Joint Council Plan

A memorandum has been issued by the National Joint Council for the Building Industry which, after considering the recommendations of the Carr and Crowther Committees on craft apprenticeship, and training for the building industry, is proposing that full-time pre-apprenticeship courses should be organised with the co-operation of education authorities and technical colleges.

These courses would provide school-leavers with a further period of general education combined with a practical introduction to building, and so help the technical colleges and the industry to select boys of the right calibre for building craft courses and reduce the risk of wastage.

IUA

Two Awards

Two biennial awards have been instituted by the International Union of Architects, in memory of its two first presidents, Auguste Perret and Sir Patrick Abercrombie. The diplomas will be presented at future Congresses or other important meetings of the IUA. In instituting these prizes the IUA does not aim so much to confer further distinctions on architects with an established world-wide reputation, as to encourage new work of international significance. The Auguste Perret prize will be for advances in the field of architecture, and its applied techniques; the Sir Patrick Abercrombie prize for town planning, criticism, and the furtherance of international collaboration among architects.

They will be awarded by a committee composed of the President and Secretary-General of the IUA, and five qualified nominees elected at meetings of the Bureau of the IUA. The first jury, in addition to the President and Secretary-General, will consist of Maté Major (Hungary), Alexandre Persitz (France), J. M. Richards, Alfred Roth (Switzerland) and Bruno Zevi (Italy).

Candidates for the awards may be nominated by the national section of the IUA,

or by a group of architects, who are free to nominate candidates of any nationality or country. Their recommendations should be sent to the Secretary-General at least two months before a meeting of the Committee—a date which is always announced six months in advance.

WATER, WATER . . .

Big Changes Coming

The Minister of Housing told the Institution of Water Engineers earlier this month that important changes in the development, use and control of Britain's water resources may be recommended when the Central Advisory Water Committee, set up to study conservation problems, reports next year.

The drought of 1959 and the floods this autumn had aroused a new public interest in water, which people usually take for granted, said Mr. Brooke, and he went on to comment on recent proposals for a "water grid."

"People who talk about a water grid being as obvious a device as an electricity grid or a gas grid, fail to mention that water—unlike gas or electricity—will not run uphill, at any rate not without quite disproportionate pumping effort," he said. "Besides that you can make gas or generate electricity anywhere but you can only develop water sources where Nature has placed the water. To make sure of keeping water cheap, therefore, the first thing is fully to develop the local sources of water near to the point where the water is required." Two recent hydrological surveys for the Great Ouse and the Severn on the Ministry's behalf had shown how this could be done in the case of these rivers.

The Institution would unquestionably have a big part to play in tackling and solving the water problem nationally, and "we may be on the threshold of epoch-making changes," said Mr. Brooke.

NFBTE

Safety Memorandum

The NFBTE has drawn the attention of the RIBA to the importance of proper provision being made in the design of buildings for safe and easy access to all parts of the structure, including roofs on which maintenance work may have to be done.

The Federation is concerned at the notable increase in the number of accidents on maintenance work, and points out that the largest single cause is falls from height, which accounted for 35 per cent of accidents on buildings in 1959.

BRITISH RAILWAYS

Architect to Western Region

R. L. Moorcroft has been appointed by British Railways' Western Region as Architect, Chief Civil Engineer's Office, Paddington. He has been principal assistant since 1958.

AA

Talk by Torroja

It is always a pleasure to hear a man of the stature of Professor Torroja, but when he addressed the Architectural Association on November 30, such was his apparent diffidence about his own achievements that to the uninitiated his greatness must only have emerged slowly.

His subject was "The Influence of the Structural Form in Architecture" but his talk was solely about roofs and largely about shells. Professor Torroja stressed the need for collaboration between architect, engineer and contractor in this field and predicted future developments to be in the direction of spraying and precasting. He made acute observations on fashion in architecture, on the limited applications for shells, on difficulties of analysis, on the romantic attraction of technical shapes, on the perennial question of structural honesty and on many other matters.

All this was excellent but it was disappointing that Professor Torroja chose so narrow a range, and that so many of his most telling general points came out, almost as if reluctantly, during the discussion. After all he is one of only a handful of great international designers and what is more his experience covers a wide variety of materials and techniques, all of which he had handled with distinction. He could have traced the "influence of structural form" in recent years on a much broader front almost wholly from his own experience and at the same time given a fascinating picture of his own career.

R. J. M. SUTHERLAND

LMBA EDUCATION CONFERENCE

Questions of Ethics and Joint Training

Professional conduct, and the joint training of architects, quantity surveyors and builders, were the subjects of an interesting address on advanced training in the building industry, given by Mr. D. Neale, Secretary of the Institute of Builders, at the recent Annual Education Conference of the London Master Builders' Association.

Mr. Neale prefaced his remarks by outlining the forthcoming changes in the structure of his institute and mentioned the new system of examinations for corporate membership which will be introduced for the first time in June 1961. The new classes of membership will be comparable with those of many professional bodies; non-corporate classes of Student and Probationer, and corporate classes of Associate and Fellow. This progression in membership in the sequence: technological knowledge followed by proof of practical ability, "is that normal to a professional body," Mr. Neale emphasised. "So far as the new pro-

fessional examinations are concerned," he continued, "the standard of general education has been raised to the G.C.E. with five subjects at O level, although provision has been made for the acceptance of the Ordinary National Diploma or Certificate in Building together with a G.C.E. at O level in English for some time to come, and candidates over 35 have fairly generous concessions." The Associate Diploma examination would include papers on the history of building, the structure of the industry, and economics. The subject of management, hitherto cast in a minor role, would be appreciably developed.

On the question of exemptions from the new examinations and the future membership of the I.O.B., Mr. Neale suggested that "there is a place . . . for those who have qualified as architects or quantity surveyors and have then moved into building. Subject to certain very modest conditions, the experience gained in these fields will count towards that required for Associateship." What these modest conditions were he did not specify, and the few architects in his audience were left speculating as to their nature.

"Status" was a subject obviously very dear to the heart of Mr. Neale, as it is to many of the members of the building team, and the speaker could be forgiven for waxing slightly lyrical: "Much thought has been given to the means of producing a technologically competent builder, but this by itself will not entitle him to be regarded as a truly professional man or give him the status to which he is entitled. To technological competence must be added ethical conduct of high quality. Ethical conduct is not the prerogative of architects or quantity surveyors. If one takes the dictionary meaning of profession as a calling or vocation, especially an occupation involving high educational or technical qualifications, it is evident that builders could claim this status with some justification. It is up to the industry to demonstrate to its professional counterparts and especially to the man in the street that they are men of learning and integrity." The Institute was about to turn its hand to the preparation of a code of conduct and the necessary enforcement machinery, Mr. Neale explained, and commented, "It will not be easy to devise such a code or make it work. The problem is further complicated since we are concerned with an open industry in which proof of competence and adherence to a high ethical standard is not essential as yet."

On the joint training of architects, quantity surveyors and builders, Mr. Neale's comments were of particular interest. Referring to an LMBA Management Course at Sundridge Park earlier this year, when this subject was included for discussion, he recalled that two different points of view had there been expressed. There were those who advocated combined training, or education, during the formative years when each was obtaining his own specialist professional education; and there were others who felt that the combined training should come later, in the form of special post-graduate studies. The one thing Mr. Neale considered beyond question was "that it is essential

to have some form of combined education." He told the conference, "You are no doubt aware of the thought that is being given by the RIBA to what is termed a two-tier profession—the master architect, if I can call him such, with a standard of general education of university entrance level and a full-time architectural training . . . and a sub-professional grade—the architectural technician who will support [sic] the master architect. A view has been expressed that his education should lie along the lines of a Higher National Diploma course in building with what might be termed architectural additives. Why not the same for builders?" suggested Mr. Neale, "why not the same for quantity surveyors?" This could be taken further. "Would it not then be possible to create a matter of agreed policy an interchangeable sub-professional grade with a common course—a man equally at home in the office of an architect, quantity surveyor or builder?"

While his audience was chewing over the pros and cons of the interchangeable sub-professional grade fellow, Mr. Neale continued his enthusiastic peroration. "So far as the upper tiers are concerned, the master architect, the master quantity surveyor and the master builder, ensure that in their formative years they have joint education in the subjects that are common to all three, the principles of building . . . and at post-graduate stage let them come together in conferences concerned with the strategy of building. Thus, to use an army analogy, your tactical commanders would share a common education, and your strategical commanders would develop their individual characters from a joint base of principles." Mr. Neale concluded by asking "would this not overcome many if not all of the problems arising from the lack of understanding between the various branches of the building industry?"

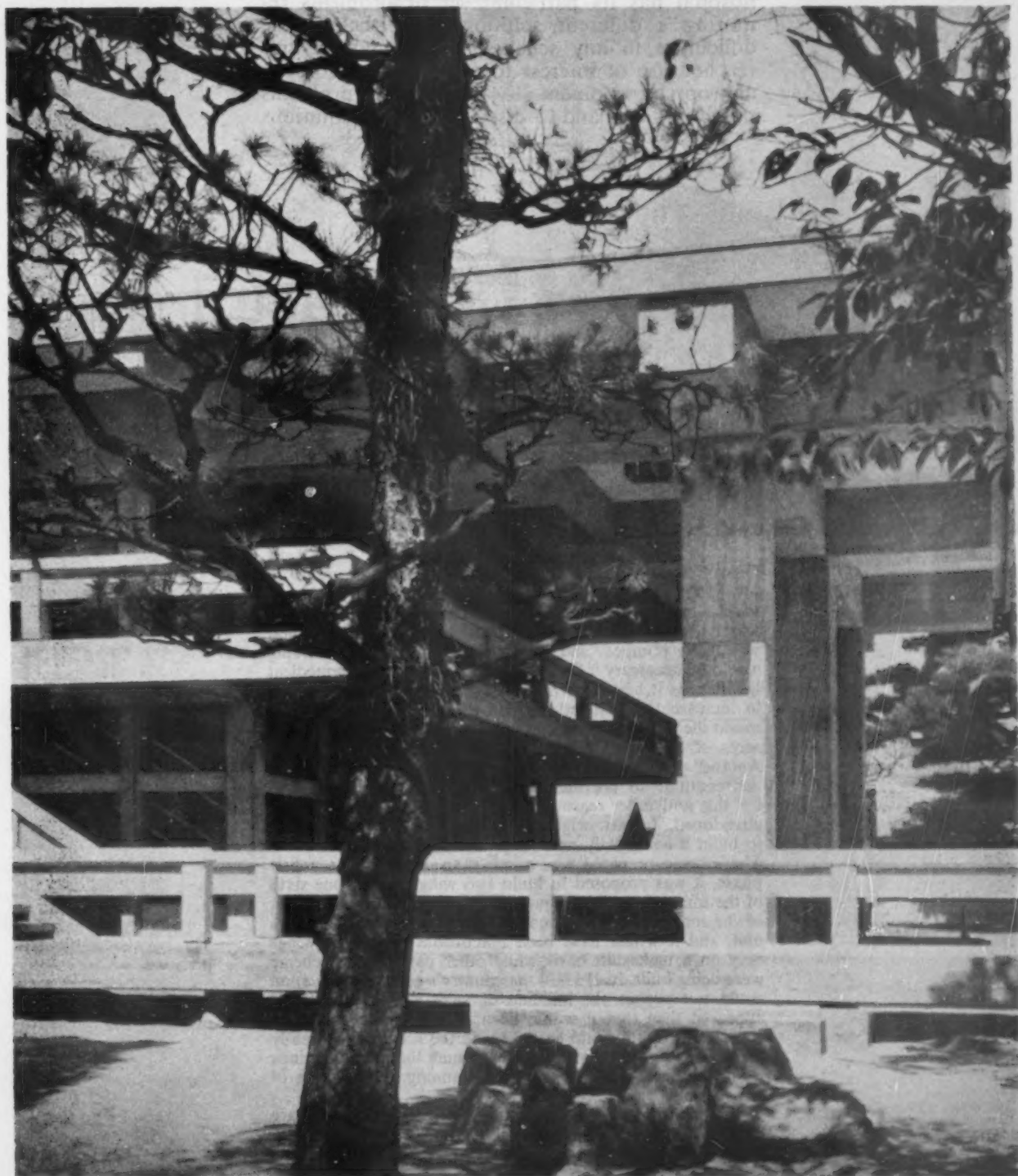
The subsequent discussion was desultory and inconclusive, preoccupied mainly by the vexed question of status ("What is it?" asked one passionate doubter) to which no builder, and certainly not the architects who teach in technical schools, seems to know the answer. And although LMBA President, E. J. Cook, in referring to the difference in the ways in which builders and architects and quantity surveyors earn their living said, "we make a profit and they charge fees—the animals are really the same!"; his words had a somewhat hollow ring. Other matters discussed at the conference included apprenticeship, which was introduced by E. Smith, Chairman of the LMBA Apprenticeship Committee; problems concerning general foremen and site agents; labour difficulties and wastage; and craft and technical schooling generally.

The conference was held in the pseudo-medieval and genuinely chilly Ironmongers' Hall and was attended by representatives of the technical colleges and schools, the Ministries of Education and Labour, the associations and institutes which concern themselves with industrial education, and the various building organisations and professions.

JOHN SMITH

Japanese Re-think

The refined, simple aesthetic of the Japanese has always interested modern architects. Of particular interest today is the endeavour of Japanese architects to be abreast of Western efforts. Sometimes this leads to sterile copying of a so-called international style, and sometimes to earnest endeavours to reinterpret Japanese architectural philosophy in terms of contemporary techniques. The great successes and failures achieved over recent years by Japanese architects are well demonstrated in the splendid photographs illustrating *New Japanese Architecture* (Architectural Press, 63s.) by Udo Kultermann. Most of the modern Japanese buildings which excite respect are public buildings, town halls, public halls, cultural centres and the like. A typical example is shown below and right: the Shimane Museum by Kiyonori Kikutake, where massive concrete members so closely, and curiously, emulate traditional timber construction.

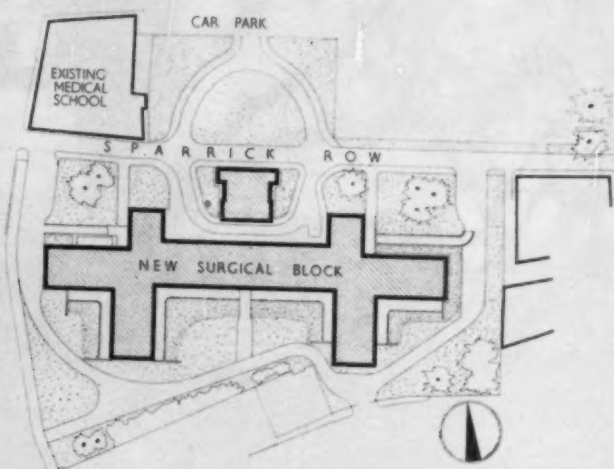


New Surgical Block at

Guy's Hospital

by W. H. Watkins, Gray and Partners

The new surgical block at Guy's Hospital, London, costing £2½ million, is the first of many schemes involving extensive rebuilding of established hospitals in city or town centres. Each hospital has its particular set of problems requiring a different solution. Nevertheless, the difficulties in any scheme and the conclusions reached are of interest to all. It is therefore an appropriate moment to review the problems raised at Guy's and to discuss planning solutions

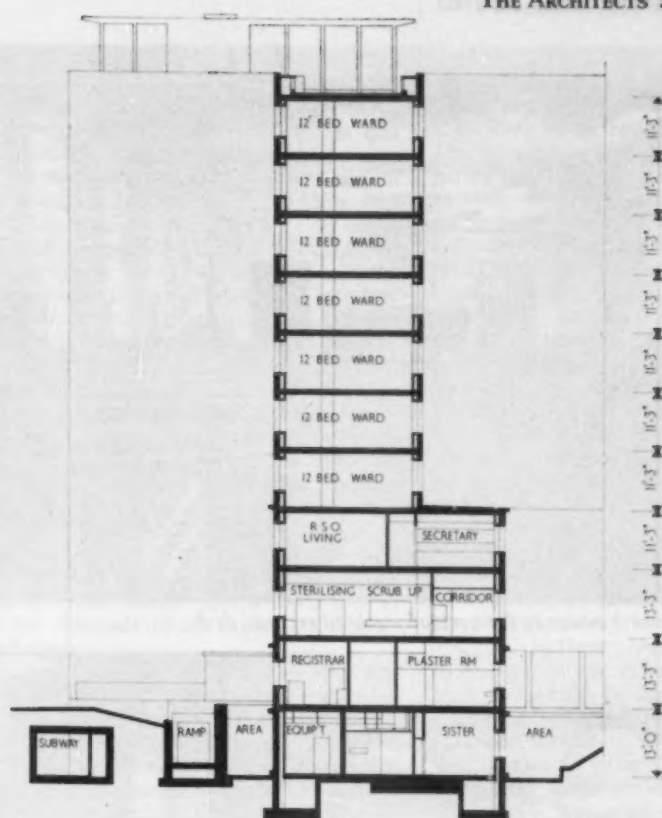


One of the most difficult aspects of rebuilding hospitals on town sites is how to find space to build anew. In this case, thanks to the foresight of the Governors, space restriction was not an overriding factor. During the war the hospital was badly bombed, and it was clear that much rebuilding would be necessary if Guy's was to provide the same medical facilities as it had done previously. The Governors decided to increase the number of properties they already owned round the hospital, and eventually they acquired about seven acres of blitzed property to the east.

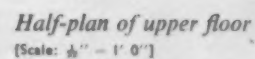
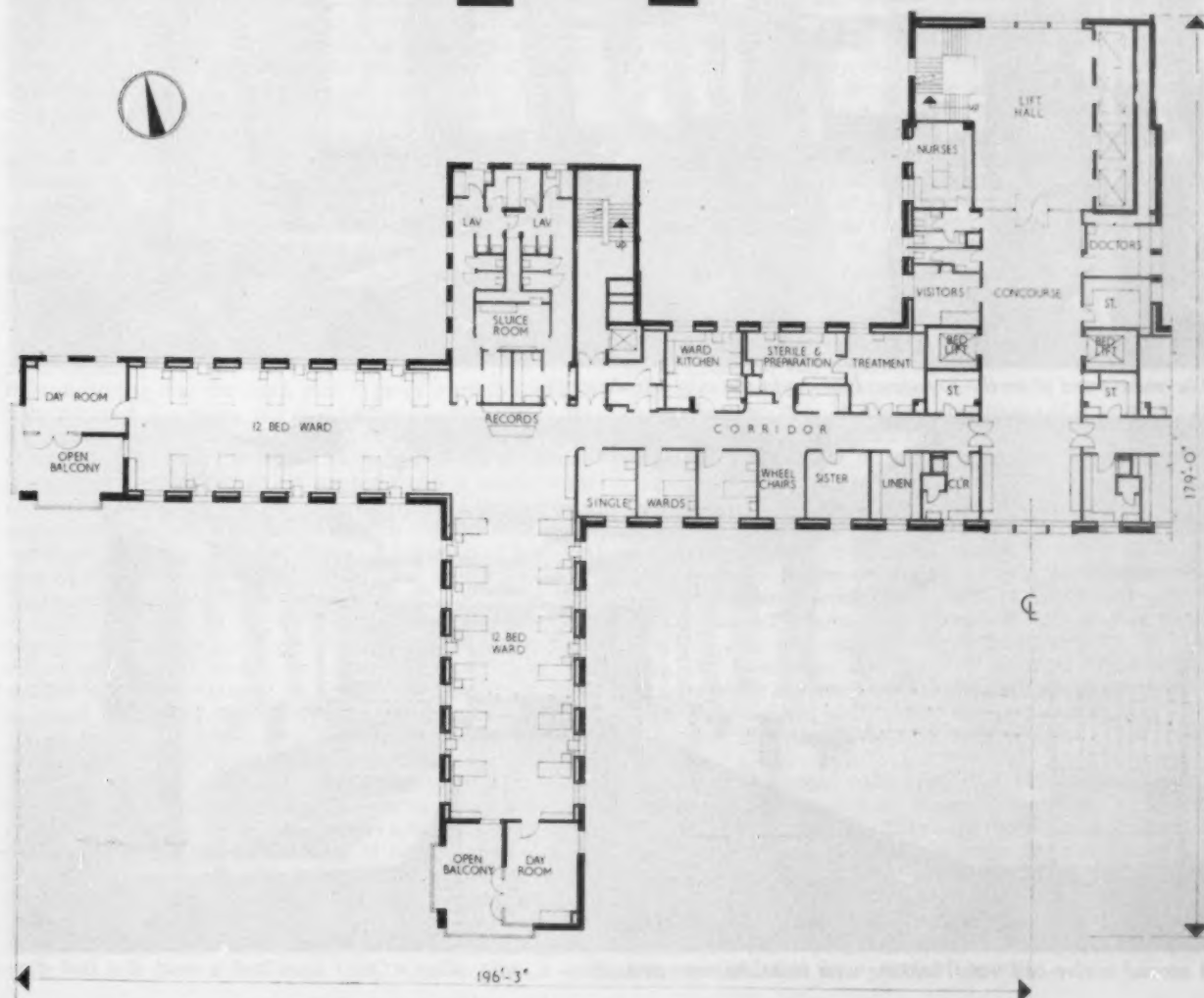
Another problem is to phase rebuilding so that the hospital can continue to provide a full service to patients. It was for this and other reasons that the first Guy's scheme was abandoned. It was originally proposed by the Governors to build a completely new hospital on the seven acres.

The scheme prepared was a star-shaped design. As a first phase, it was proposed to build two wings (about one-sixth of the total scheme). Although the two wings provided most of the surgical beds required, they did not make a complete unit, and it would have been practicable to use the wings only on a makeshift basis while other parts of the scheme were being built. In 1953-54 the country's economic situation could not permit the building of such a vast scheme. It appeared then that it would be a very long time before a complete hospital could be built, and the scheme was finally abandoned in 1954 when it was found that modifications would be necessary to meet town planning requirements of day-lighting.

A second firm of architects was then instructed to prepare a design for the following accommodation, mainly to replace the blitzed department: deep X-ray therapy, casualty, nine



North-south section through west wing

[Scale: $\frac{1}{8}" = 1' 0"$]



One of the twelve-bed wards looking north towards the centrally placed records desk



The same ward as in the top view, looking in the opposite direction



A second twelve-bed ward, looking west from the records desk

Guy's Hospital (continued)

operating theatres with recovery beds, central sterilising departments and wards for 378 surgical beds, offices and teaching rooms. The architects were also instructed to design the scheme so that the authorities were not committed to a fixed design for the whole hospital when building this ultimately became possible. These instructions were no doubt administratively desirable, especially in the light of the original proposal, but it would have been better to ask the architect also to prepare a development plan on a schedule of requirements. This is not to say that a development plan should be irrevocable, but such a plan should be conceived in broad terms so that modifications can take account of latest medical ideas and requirements.

The architects have met the particulars of their brief regarding future expansion by concentrating all accommodation in one large 11-storey building and by siting the block on the southern part of the plot. But does this type of planning really meet the functional requirements of hospitals?

Grouping of departments into one building has the advantage of compactness and short travel distances, but it will lead to difficulties that are already only too familiar in so many existing central hospitals, and where efforts have had to be made to provide the demands of an expanding department within a defined space.

A multi-storey building of such size is difficult to alter and adapt to meet the changing needs of each department, because relative sizes of each department cannot be altered to any great extent. In this case, the requirements are based on those thought necessary in 1954; modifications have of course been incorporated and plans brought up to date as work proceeded. Nevertheless, much of the planning is based on 1954-55 thinking and, however farseeing this may have been, change will inevitably become necessary within a few years of opening. For example, the requirements of neurosurgery and deep X-ray have changed considerably. Another example of developments in medical ideas is central sterilising departments; but in 1955 when the idea was first mooted, it was regarded as being new and experimental. There are many advantages in placing similar units such as wards one above the other, when engineering services can be grouped, integrated and rationalised; but few advantages can be claimed for thus planning dissimilar units. For example, wards demand different plan shapes and space requirements from theatre suites. The architects have overcome the problem by widening the building below the wards to house both operating theatres and central sterilising departments.

It is surprising that the open plan type of ward design has been adopted. To many this is a retrograde step. Since the war nearly all wards have been based on the Nuffield type plan, though a few are based on the Scandinavian or American corridor type. The writer cannot recall a single ward unit built on the open plan. It is claimed by the hospital authorities—and other teaching hospitals support their claim—that open plan is best for teaching purposes. This view may well be justified, but should it be given so much weight? There are fluctuating demands between the specialties, and it is an advantage to have wards designed so that these changes in demands can easily be met. Although the ward unit can be large, it should be capable of sub-division into smaller units; for example, it should be possible to have part (not necessarily half) of a ward unit for men while the rest of the unit is for women. In each ward unit at Guy's provision is made for both men's and women's lavatories and bathrooms at the corner of the L-shaped plan.

Curtains can provide a certain amount of privacy for the patient, even in an open plan, but no amount of screening can overcome the patient's feeling of being one of a large number. There is also the problem of noise; so many patients grouped in one open area will be subject to a great deal of disturbance.

Patients will, however, be provided with many amenities: each bed will have a bed-head light, a radio plug, a call

button and a telephone plug for personal calls. There is also a lavatory basin between every pair of beds.

The hospital is also going to continue its tradition of preparing breakfast in each ward unit, so that the food can be specially cooked and served to each patient.

As is to be expected in a modern hospital building, there are many engineering services provided. These include high pressure steam mains from the existing hospital boilers, heating, plug outlets, lifts, pump fans and other machinery, gas, oxygen and suction pipes, ventilation ducts, as well as pneumatic tubes.

In the lower ground floor there is a horizontal service sub-way. Despite what seems generous provision of ducts, etc., for engineering services, insufficient thought appears to have been given to actual runs of various pipes, so that ducts are full of intertwining pipes and services. The lesson to be learnt from this is that a consulting engineer should be appointed in the early stages of design and that much more careful planning of services is necessary in new hospital buildings, if services are to be accessible for maintenance.

Commenting on various points raised in the foregoing article, the architect says:

Although in theory one should build all departments subject to change on the ground floor, as your writer points out, to do so would be impracticable. In all hospital buildings it is necessary to build some upper storeys, and as such they are subject to risk of alteration.

The theatre floors and departments of surgery, gynaecology and anaesthetics are generously planned. Spaces under the south wing are available for expanding the ground floor casualty department. The central sterile supply department is planned on such generous lines that we have been told it is superior to many in the United States: in any case there is a tendency to increase the use of consumable items, thus reducing the number of articles returnable for sterilising. The neuro-surgery department, in an undeveloped wing of the basement, has been planned much more recently than the rest of the building. The same applies to deep X-ray, which is already expanding at lower ground floor level to contain a linear accelerator not originally envisaged.

There is no question of allotting fractions of the fourteen wards to specialties or to different sexes. It is doubtful whether any wards would have to be sub-divided, although provision has been made for doing so.

Planning dissimilar units one over the other does not necessitate structural and engineering gymnastics, and such planning provides many advantages in vertical circulation that would be difficult to obtain in other forms of hospital building. For instance, lifts can keep to their respective areas; passenger lifts can be placed outside and bed lifts within operating theatre areas.

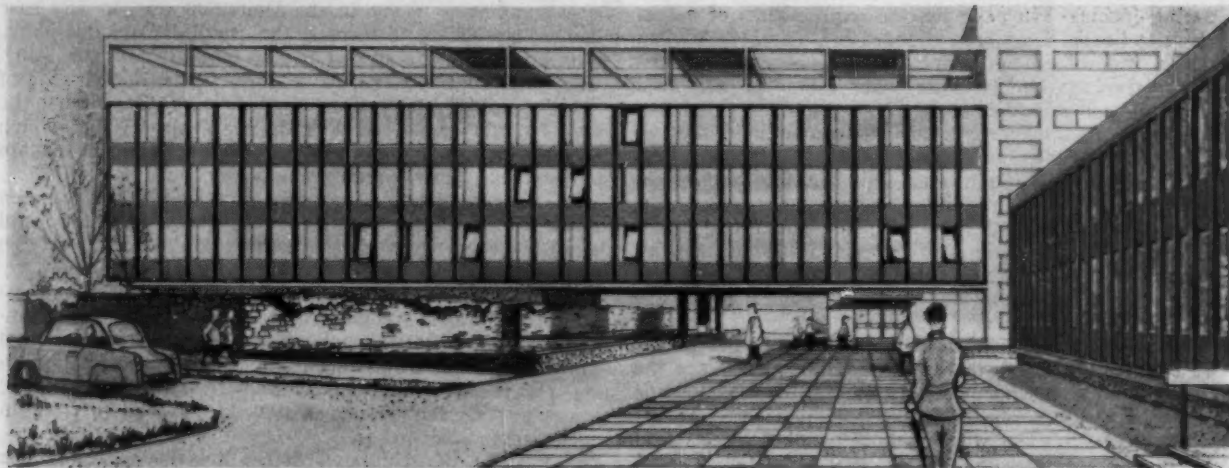
Dr. A. L. G. M. Rombouts of the hospital section of the Bouwcentrum in Rotterdam shares our alarm at the spread of the passion for small wards, which he attributes to the adoption by Scandinavia during the 40s of the American insurance-aided hospital plans. Both in Scandinavia and in America we have found doors propped open so that nurses could be sure that patients received attention at the right time. Dr. Rombouts says there is no real evidence that patients prefer the small ward. Most patients, some of whom have been medical staff, prefer the open ward to a small one where they would have to be happy with their neighbours.

Consulting engineers were appointed before the architects and should have been fully aware of the services required. The difficulty seems to be that until the consulting engineers have prepared their detailed drawings they are not able to say what space they require, and in the early stages they do not make sufficient allowance for unknown factors.

With regard to amenities, the bed light, night light, call button and radio plug are all mounted on the *locker*, for easy manipulation by a surgical patient.

New Offices for Dunbarton County Council

In a previous issue (AJ, Dec. 15, 1960) we announced the result of the competition for this building. We publish here the winning design, by J. Armstrong Lane, Duncan S. Bremner and J. Alan Bristow, which was chosen out of six entries which continued to the second stage. The assessors were F. R. Wylie, F.R.I.B.A., Professor J. H. Napper, F.R.I.B.A., and James Mottram, A.R.I.B.A.



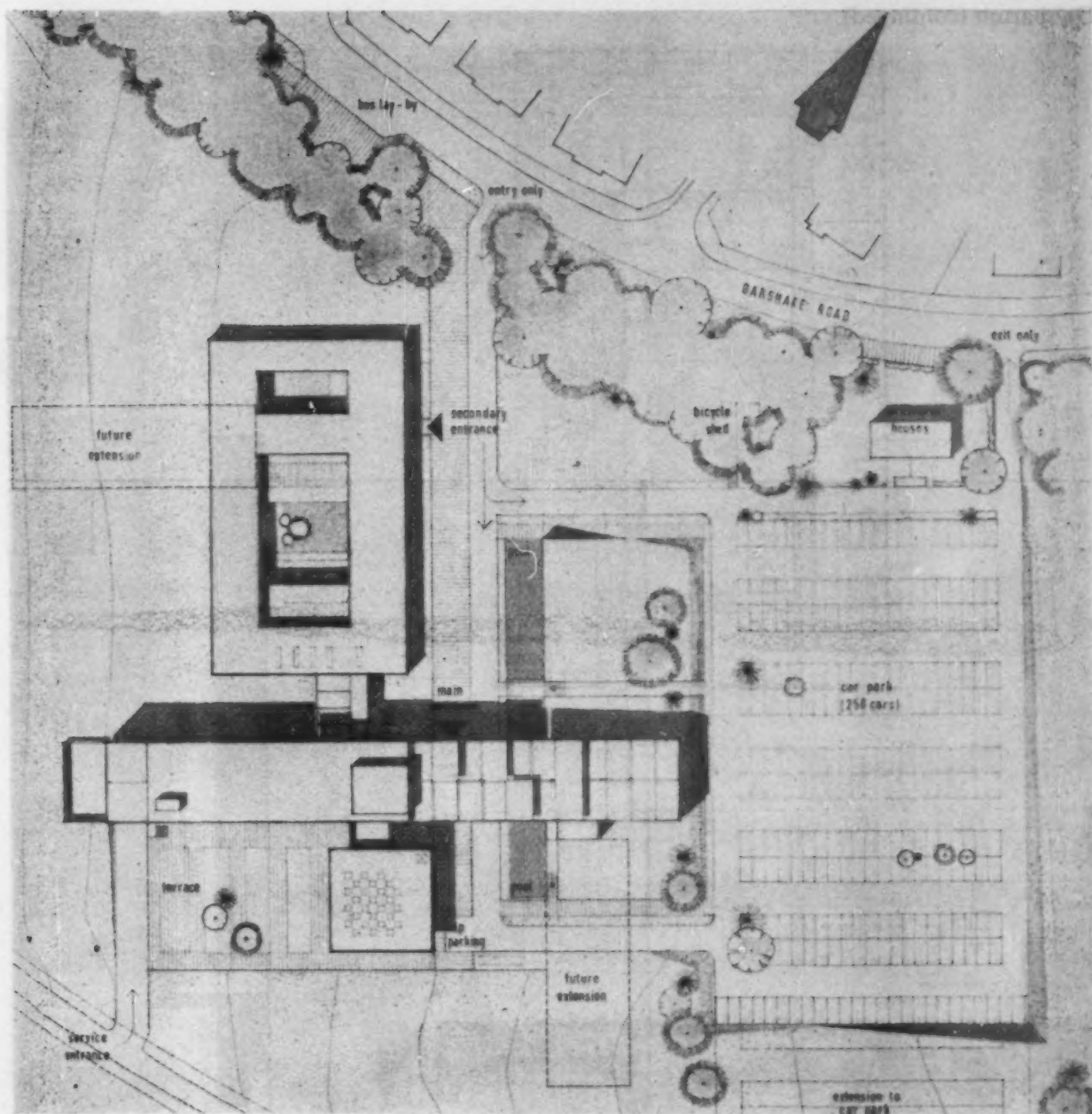
The main entrance

The designers of this scheme saw the schedule of accommodation as falling naturally into two main groups: first, the two large departments for the County Treasurer and County Clerk; second, the smaller departments such as that of the County Surveyor and Architect. This division they have expressed by placing the two large departments in a low two-storey block, and the remainder, together with the Council suite, in a taller five-storey block at right-angles to the first. In the detailed planning of the taller block, they found that if the Council suite and chamber and the County Clerk's department were all placed on the ground floor, the layout became too

diffuse. They have therefore placed this accommodation on the first floor of the main block, with the Council chamber projecting out as a separate unit, carried on pilotis with an open access stair under to the public gallery. The main block has been planned round a central core of stairs, lifts, lavatories and cloakrooms, with additional stairs at both ends as fire-escape routes. In contrast, the low block is planned round a courtyard, partly taken up on the ground floor by the cash department and collecting hall, which allows both to have a higher ceiling level than the rest of the ground floor.

The whole building has been planned

on a 5-ft. module, which throughout is expressed externally by structural mullions to give continuity to the design. These mullions are envisaged as precast, with a finish of exposed black aggregate, carrying the upper floors in conjunction with a spine of internal columns, so as to leave large areas of unobstructed floor space. The structure is stiffened by solid reinforced concrete walls at the ends of the main block and round staircases. The external cladding is of sawn sandstone slabs to solid walls, and precast concrete panels with exposed granite aggregate under the sills. In contrast, the Council chamber is clad in light grey granite slabs. Windows through-



Site plan

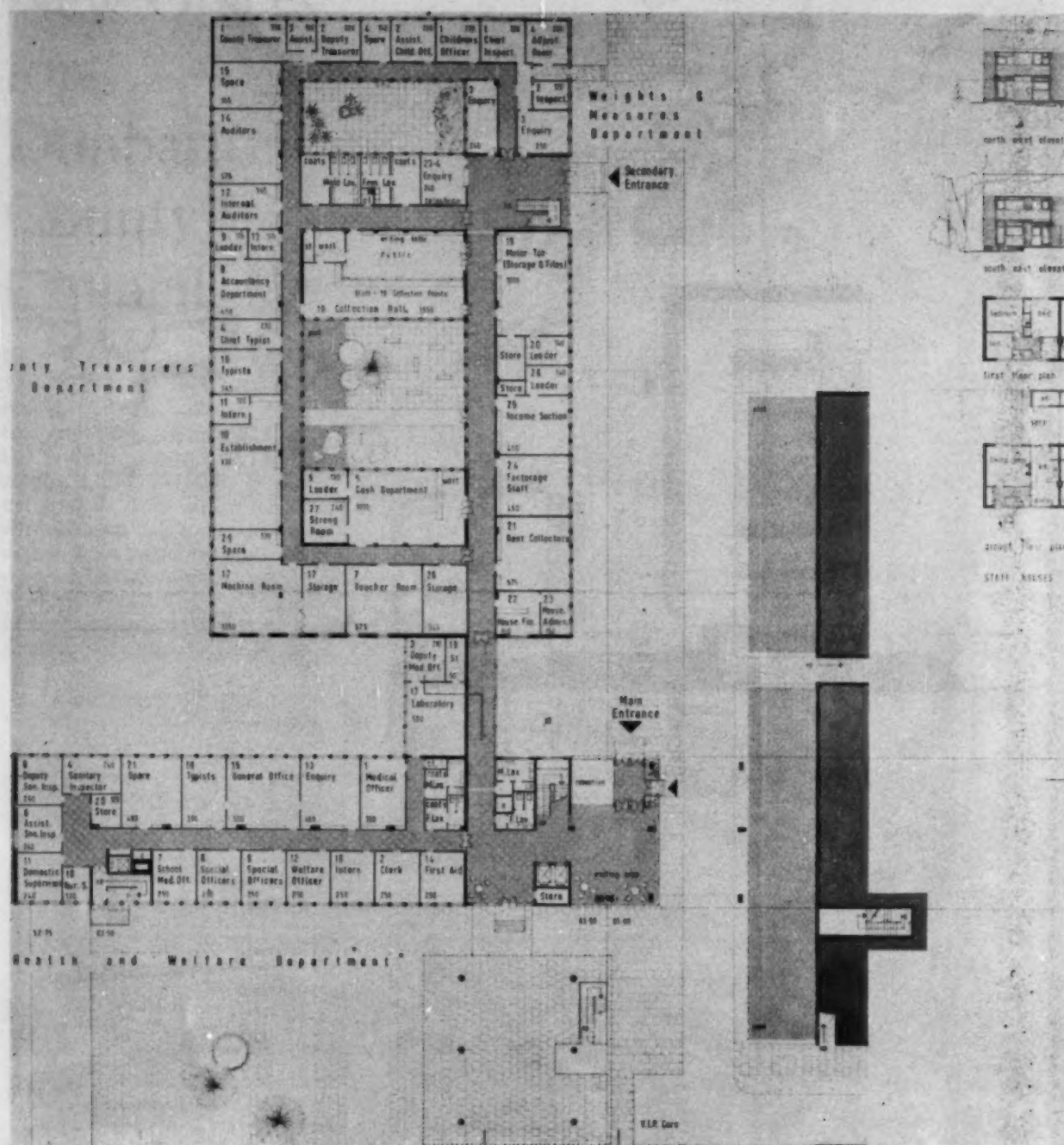
out are double-glazed units formed of aluminium frames in hardwood sub-frames.

In their report the assessors state that *the building has been cleverly arranged on the site, with a logical and well-defined grouping of the various elements.* They particularly commend the handling of access roads and car park, the latter having been treated so as not to compromise the visual appreciation of the building. They note that circulation is direct and economical, and that departments most used by the public have been grouped around the approach from Garshake Road. They offer a number of points of minor criticism by which they believe the

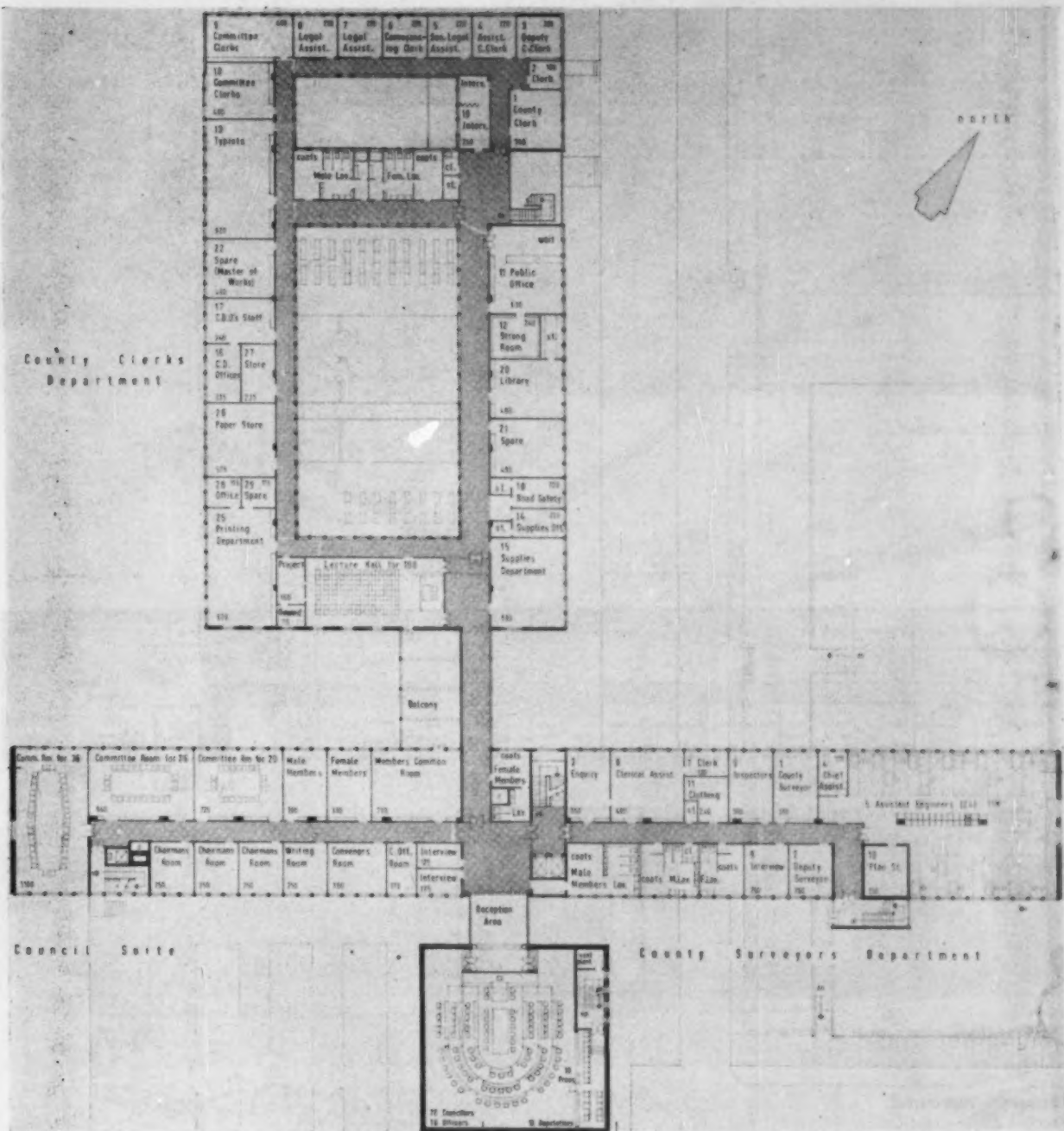
design could be improved. These include a suggestion that the reception area to the Council chamber should be doubled in size, that the public route to the lecture theatre should be made more direct, that one of the dining-rooms should have a longer counter to allow for cafeteria service if required, and that the printing department might be better placed in the basement in view of the heavy floor loads involved. The cost of the building is estimated by the designers at £562,995. The basis for this figure has been examined by the quantity surveyors, James Barr & Son, who consider that the scheme would cost £664,219; but they point out that by

using single glazing instead of double, and exposed aggregate concrete instead of granite on the Council chamber, the cost would be reduced to £618,619, within 10 per cent of the designers' figure. The assessors feel that the first saving could be adopted, but do not advise the second. They recommend the acceptance of outline specification for the building except for omission of the double glazing. It seems a pity that in the conditions for this competition no guidance whatever was given as to cost, some notion of which must surely have been in the Council's mind. The controlling factor has become the guessimate accompanying the winning design.

Dunbarton (continued)

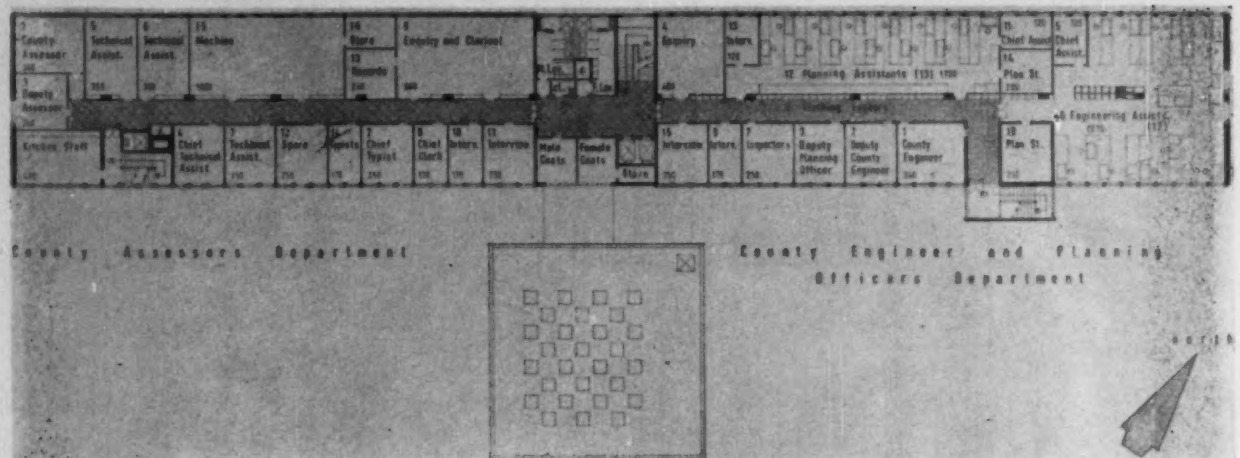


Ground floor plan [Scale: 2" = 1' 0"]

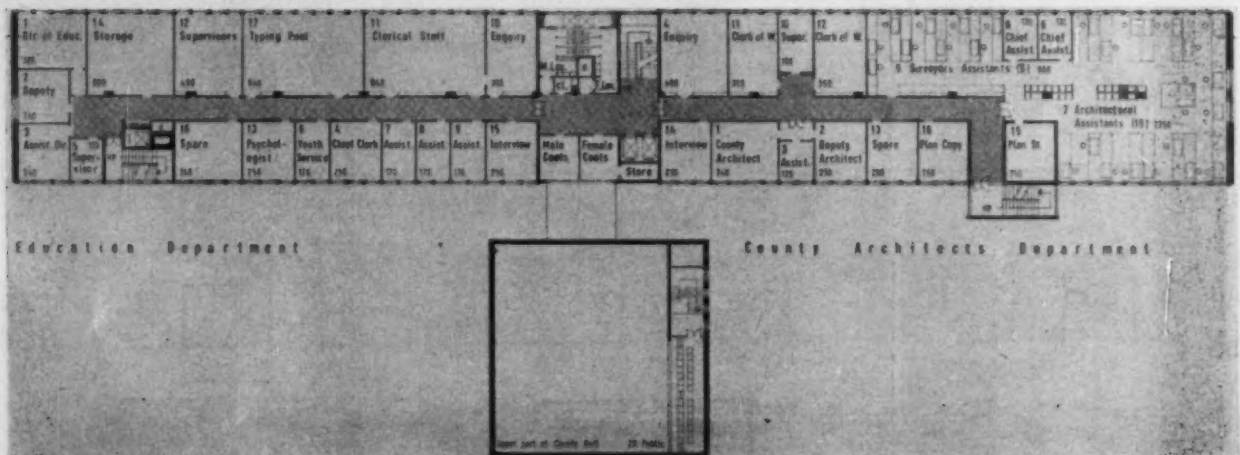


First floor plan

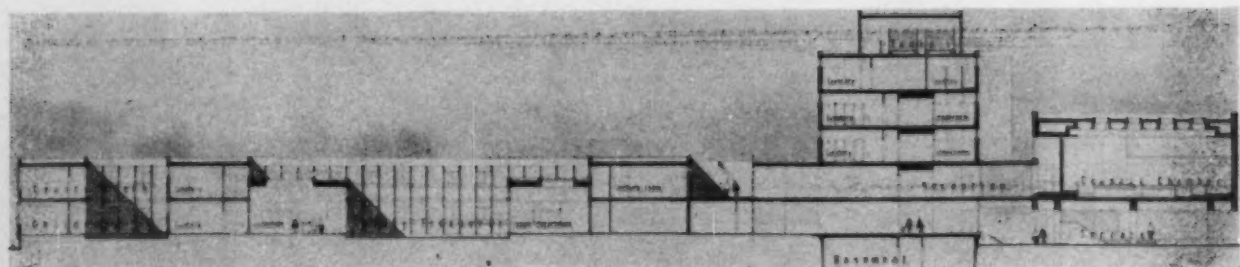
Dunbarton (continued)



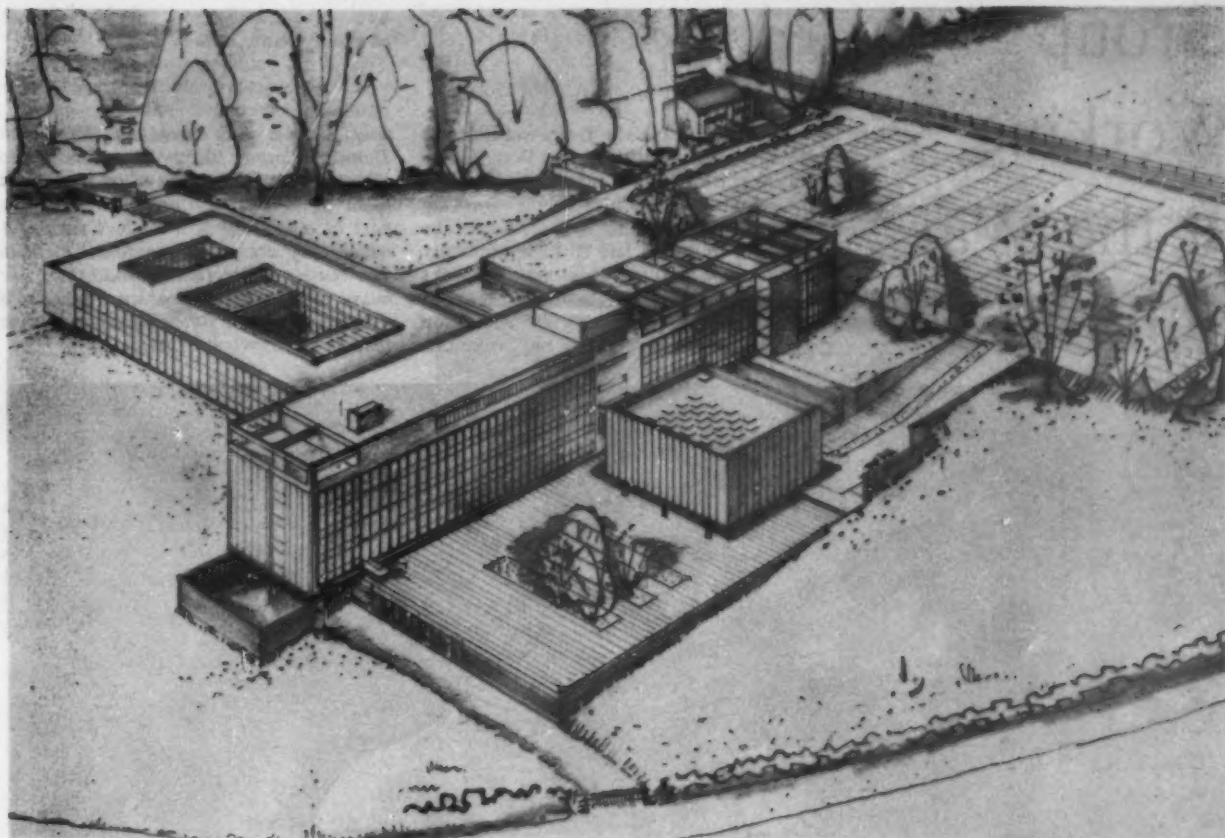
Third floor plan



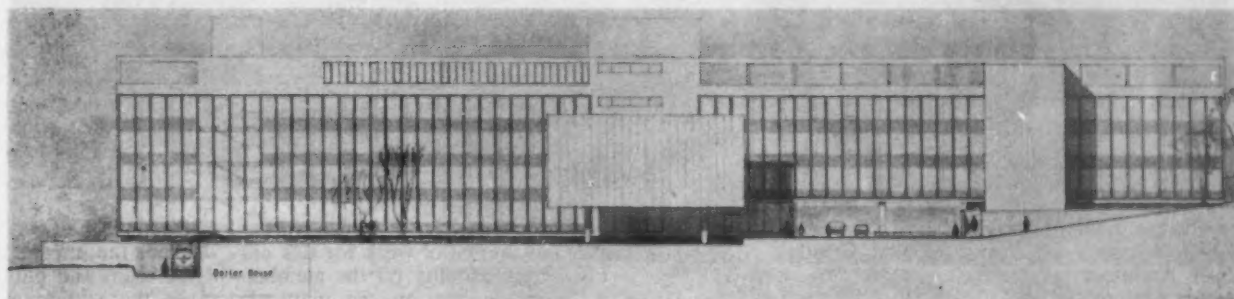
Second floor plan (Scale: 1/8" = 1' 0")



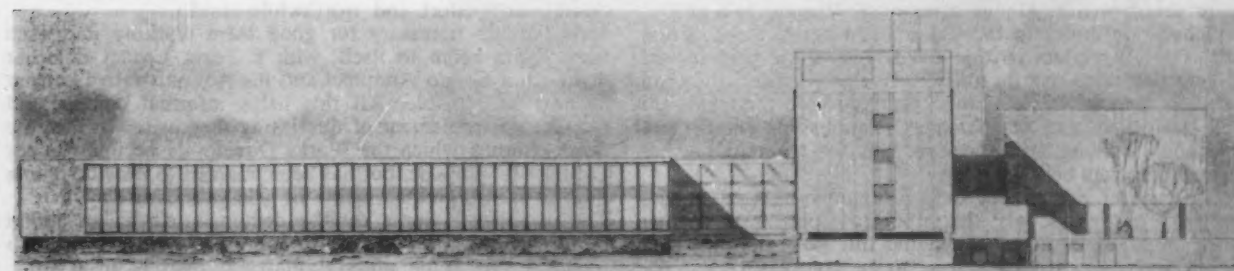
North-west/south-east section



Perspective of the scheme



South-east elevation



South-west elevation

Group Working at the War Office 2

In the last article the framework of the Works Directorate of the War Office was described and it was apparent that the eight-man team was the working unit. The point was made that to be effective the team had to have authority and responsibility. This article looks more closely at the team and how it does its job. Method and the reason behind the method are equally relevant.

John Collins, Job Architect (left) with Dennis Bloom, Alex Josephides, and Rhys Williams, are part of an eight-man team in Works Abroad. The model is part of a housing scheme in Cyprus for which they are jointly responsible, from user survey to erection. Abroad there are many more difficult problems connected with climate and other local conditions than occur in work at home.



The hierarchy above the eight-man team is:
Director-General of Works (Donald Gibson)
Chief Architect
Group Architect
Team Leader
Team

... which looks frightening but in fact is not.

The general idea is that everything for day-to-day business is delegated to the Group Architect and his Administrative partner. The Group Architect is equivalent to a principal in private practice. He in turn must delegate full professional responsibility to the Team Leader and through him to the Job Architect so that the whole of the professional skill in the office can be utilised. In this way decisions can be made without waste of time, and provided the teams are well composed, and the personal relationships good, there is enough wisdom and experience in the team to prevent serious mistakes being made.

The degree of delegation, of course, must depend on the ability of the individuals; the important point is that at the outset individuals must be told the full story of what they are expected to do, when it is to be completed, and the general policy to be followed; they must then be given their head to get on with it as best they can within the limits set.

They must not be given unexpected instructions half-way through a piece of work for this only weakens the impetus, takes responsibility off the members of the team and puts it back squarely on the man who gives the additional instruction. This is the reverse of delegation. Generally watching progress and results, asking far-seeing questions, making suggestions, and offering advice are the proper function of the Group and Team Leader. This does not detract from the responsibility of the junior; instead it puts very great responsibility on him, and usually results in a considerable effort and worthwhile results.

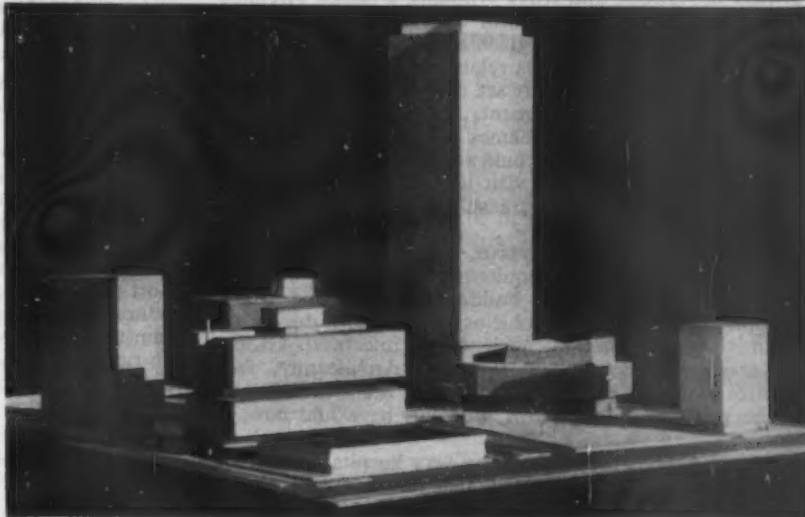
It is thought necessary for good team working that each team has a room to itself, with a Team Leader adjacent and with a Group Architect and his Administrative partner as near as possible. All this helps informal contact and helps quick settlement of queries as they arise. In fact the office building which the Works Directorate occupies is not ideal for its purpose, but has been adapted to provide offices that meet these requirements in a large measure.

The way it all works can be demonstrated by an actual job. John Collins, who came from Coventry, is the Job Architect for some officers' married quarters in Cyprus. He was briefed by the Group Architect Charles Cuthill, recently with Hertfordshire, through George Lackie, the

Because of the immediate heavy load of work at the War Office, much is being done by private architects, briefed on the same principle of "here is the problem—you work it out." This photograph is of a model of a preliminary scheme by Basil Spence & Partners for a new barracks in London



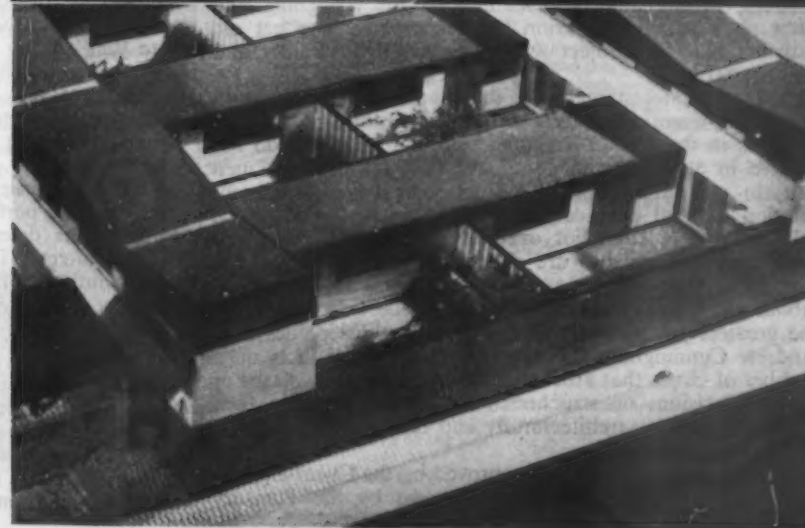
A sketch model in cardboard of a scheme for a hospital (centre foreground) in Millbank. This model was made to study the prospects in relation to the new Vickers building, the tower of which dominates the picture. The project is being handled by Works Home Hospital Team.



An architect's sketch model for a new barracks at Combermere designed by Works Home, Eastern Command Team



A "patio" housing scheme at Aldershot, by Works Home Housing Team, previously published in the AJ of Feb. 18, 1960



War Office (continued)

Team Leader who had been with the development group of Scottish Educational Department. John Redpath, the Chief Architect of Works Abroad, late deputy County Architect of Somerset, was not concerned with the detail at this stage; he had only to know that this team was to do this job at this time.

To help John Collins on this project are Alex Josephides, previously Housing Architect with the Planning and Housing Department, Cyprus, Dennis Bloom, late of Vamos & Partners in Nairobi, and Rhys Williams, a Senior Architectural Assistant. These four form what might be called "a sub-team." Collins was first given a written brief by George Lackie and since Collins was relatively new to the Department it was fully detailed. It set out the essential requirements of the client department, what was known about building in Cyprus, the names of the Engineers and Quantity Surveyor that he would work with, and an outline procedure. This included a visit to Cyprus, preparation of a timetable and programme, a submission of sketch plans for Group discussion.

Collins spent a month in Cyprus, where he did some field research into the detailed requirements of officers' families. He studied the site, local building methods and design solutions to the climatic problems. Incidentally during the previous winter he had attended the Architectural Association series of Lectures on Tropical Architecture, fees, expenses and time off being allowed by the War Office so that he was well prepared for problems he would have to face.

In Cyprus, Collins found the army very hospitable, and the officers and families delighted that an architect should actually visit the site, and take an interest in the problems of families living out there. He stayed in officers' messes and clubs, or hotels convenient to his work. Incidentally all professional civilian staff rank as officers; on formal occasions which, in fact, do not often arise, a main grade architect or QS for example ranks as Major, and a Senior Grade as Lieutenant-Colonel, while Donald Gibson himself ranks as Lieutenant-General.

When Collins returned from Cyprus he and his colleagues in the sub-team produced a sketch scheme which was explained to a meeting of the whole group including QS, engineers and administrators. The Group Architect Charles Cuthill and Jolyon Dromgoole, his administrative partner, and the others made what comments they thought apt, and then the co-designers went away to consider the validity of the comments and how to incorporate what was good.

The cost plan was prepared and the design work went on according to the programme Collins had made.

John Redpath kept in touch with the work, and at one stage Donald Gibson came in to see how the job was going, and after an informal discussion left the architects to get on, satisfied that the project was being handled sensibly and competently.

One of the interesting things that appears from the work of the sub-team is that in work abroad nothing is quite the same as in the United Kingdom. Building materials do not behave in quite the same way, the things which workmen can do well are different, labour costs have a different relation to total cost, cost of the individual items has no relation to UK cost. For example, terrazzo is cheap and well done, plastic tiles are expensive and are not always successful. It is sometimes cheaper to use a lot of manual labour rather than a machine and so on. To help to develop the greatest potentialities of Cyprus, Alex Josephides with Andrew Cunningham (QS) went out to get the facts on a number of issues that arose during the preliminary stages of design; decisions on structure and specification were then made that will be architecturally and economically sensible in Cyprus.

When the designs have been approved by the Client Department and the users at a cost approved by the Treasury

(submissions arranged by Charles Cuthill and Jolyon Dromgoole) working drawings will be produced by the sub-team, with cost checks by the QS, and when the contract has been let the work will be supervised by Collins or one of his colleagues. Those not engaged in the later stages will join another sub-group each in turn to act as Job Architects for jobs within their competence. The normal build up of a job in the office is for one architect to initiate the project and later to supervise its erection, with two or more in addition for design and working drawing stages. Within an eight-man team there can always be two or three jobs in different stages all benefiting automatically from previous experience. Each architect has a chance to try his own strength and develop an all-round experience.

This is exactly as Donald Gibson thinks a job should be run, and has made it clear that jobs must happen this way in all groups. In the nature of things it will take a little while for those not accustomed to such freedom and responsibility to learn how to adapt themselves to it.

Since teams are apparently so self-sufficient the need for an upper hierarchy of architects may not be clear at first sight. Their function is to think about wider issues so that War Office building policy makes sense in the long and the short term, and to ensure as far as possible that all procedural difficulties are ironed out, giving the production team a clear run with their job. They must also ensure that the right sort of architects come into the organisation, that those that come fit the right niche, and have every opportunity to develop their professional skill by post-graduate training and variety of experience. They have of course to decide the broad issues of design policy and bring the weight of their experience to bear when necessary; they must take the responsibility for decisions on particular difficult or far-reaching problems. Above all they must co-ordinate. Architects in senior positions have to be sure that designs produced in their group are sound generally and in detail. In group working this is assured not by personally checking everything that is done, but by relying on the strength of the team, and the acceptance by the job architect of his colleagues' views.

Professional responsibility can only be delegated, of course, when architects have confidence in their subordinate. This means that team leaders must have a say in the selection of their team members and this might appear to be a difficulty in the Civil Service, but in a large organisation there is plenty of room to put individuals where they will fit.

One of the difficulties of the large office, which this system does nothing to alleviate, is the tendency for individuals to be unaware of what others are doing elsewhere in the organisation. That is being partially overcome by wall exhibitions of teams' work in main circulation areas.

Another of the difficulties of working in an organisation as complex as the War Office is that no one can ever be sure that all the relevant facts or views have been taken into account. This can be a deadly deterrent to doing anything at all. Donald Gibson's advice is to find out within reason everything that ought to be known, and then to do something sensible. In his view it is much more important to get on and produce a good job on the basis of common sense than to worry too much about ifs and buts, and the perfect answer. It is this view, of course, that leads to the delegation of responsibility and authority to Job Architects. The submission of queries to higher and higher authority for decision produces uniformity and sluggishness, and has yet to show that it produces the best answers architecturally.

A few examples of work being done in other teams show the vitality that results from the approach adopted in the Works Directorate. Not all the work is beyond criticism by any means, but it has freedom and individuality rather than the staidness of departmental architecture. It has these qualities because relatively young architects are gaining the experience that only responsibility can bring.

technical section

THE INDUSTRY

This week Brian Grant describes a new domestic boiler, and a range of guttering in plastics.

New Domestic Boiler

The Super 45 International boiler is produced in two models arranged for firing by gas or oil. Both models have an output of 45,000 B.Th.U. per hour, and have electric ignition, a particular advantage with the oil-fired version as it avoids waste of fuel when the burner is on low flame. Both boilers have balanced flue outlets and need location only on an outside wall; no fan is needed to provide artificial draught. The boilers are intended for use with small bore heating systems, and the makers also produce an electric circulating pump, controlled by a switch on the boiler and used only when heating is required as well as hot water, at the same time the burner rate is cut down to avoid a constant succession of cold starts. Overall dimensions are comparatively small, the boilers being 26 in. square, with a height of 36 in. The casings are neat, and are made of Stelvetite plastic-covered steel sheet, white or cream. Prices are £115 10s. for the gas-fired and £136 10s. for the oil-fired version: deliveries start in the new year. (*International Boilers & Radiators Ltd., Earls-way, Team Valley, Gateshead, 11.*)

Guttering in Plastics

Glass-fibre-reinforced plastic rainwater guttering is now being produced in a variety of colours, and, from the nature of the material, requires no painting. Since it is only $\frac{1}{4}$ in. thick it weighs very much less than cast iron and is correspondingly easy to fix. Standard six-foot lengths clip into moulded brackets and the joint is made watertight with a synthetic rubber seal. Stop ends, corners and outlets are available to match, and the cost of the complete installation is about the same as for cast iron with three coats of paint. (*G. F. Osborn Building Products Ltd., Hayes Middlesex.*)



Osborn plastic guttering

B

69·003·13

The prices feature this quarter again shows increases in the prices of many materials, chiefly brought about by the recent increase in road haulage rates. These increases will, no doubt, be reflected in tender figures which are already at a higher rate than a year ago with every prospect of the trend continuing in 1961. The prices are prepared by Davis, Belfield and Everest, Chartered Quantity Surveyors

8 ESTIMATING

current wage rates, market prices and measured rates

Wage rates

Rates of wages as from October 3, 1960, are as follows:

	Craftsmen		Labourers	
	s	d	s	d
London District	5	1	4	5½
Liverpool and District	5	1	4	5½
Grade classification A	4	11½	4	4

Market prices

Prices are given for the major items in each trade, they are intended as average prices and include delivery in the London area. They do not include overhead charges and profit.

Measured rates

Prices are for work carried out in the London area and include 10% to cover overhead charges and profit except in the case of work which would be carried out by specialists when 5% has been allowed. The prices given in italics represent the total value of the materials included in the measured rates, including an allowance for waste and 10% for overhead charges and profit. The cost of labour included in the measured rates (including its proportion of overhead charges and profit) can be ascertained by subtracting the prices in italics from the prices in heavier type.

Abbreviations

Inches: in. Feet: ft. Yards: Y. Yards cube: YC. Yards super: YS. Feet cube: FC. Feet super: FS. Ton: T. Feet run-FR. Thousand: M. Square: Sq. Number: No. Hundredweight: C. Pound: lb. Gallon: Gal.

Preliminaries

To all estimates based on prices for measured rates add, if required, for Preliminaries, water, insurances, etc., depending on the nature of the job.

Price changes

* Shows changes in market prices and measured rates since the last issue (October 6, 1960).

THE ARCHITECTS' JOURNAL for December 22, 1960

YOU CALL THE TUNE—HE PLAYS IT When it comes to cast iron pipes, he knows the score. He's our Mr. Powell, but he might well be one of our other eight area pipemen. Each is a personal pipeline to the Allied Service, ready to look after your interests at all times. You can contact him for prompt delivery of rainwater, soil and drain goods. You can send him your drawings for information as to the pipes etc. you should order and where supplies may be found. He will perform any variations on the theme of rainwater and soil drain goods you like to compose. No applause for Mr. Powell, please. He is just doing his usual job—at his usual concert pitch.

For Area 1 telephone Stockton 65291, for Area 9, Falkirk 2441,
for all other areas, telephone Wellington (Salop) 510.



rainwater and soil goods division of **ALLIED IRONFOUNDERS**

KETLEY WELLINGTON SHROPSHIRE



technical section

EXCAVATOR

Market prices

Carting away, up to 8 miles	YC		
Hand loaded	7	9	
Machine loaded	*6	0	
Hardcore	YC	*11	6

Measured rates

Hand excavation and disposal

NB: the following are applicable to excavation in heavy soil.

Excavating over site to remove top soil and vegetable matter, 6 in. deep	YS	1	4
As above, 12 in. deep	YS	2	8

Excavating over site to reduce levels and getting out	YC	10	9
-------------------------------------------------------	----	----	---

Excavating for basement and getting out	YC		
-----------------------------------------	----	--	--

Depth up to 5 ft.	12	1
Depth between 5 & 10 ft.	17	5
Depth between 10 & 15 ft.	22	10

Excavating surface trenches and ditto	YC		
---------------------------------------	----	--	--

Depth up to 5 ft.	14	9
Depth between 5 & 10 ft.	20	2
Depth between 10 & 15 ft.	25	6

Excavating basement trenches and ditto	YC		
----------------------------------------	----	--	--

Commencing 5 ft. below existing ground level	20	2
Commencing 10 ft. below existing ground level	25	6
Commencing 15 ft. below existing ground level	30	10

Wheeling surplus excavated material not exceeding 100 yards and depositing	YC	5	4
----------------------------------------------------------------------------	----	---	---

Add to last for: Roughly spreading and levelling	YC	1	7
Spreading, levelling and consolidating to make up levels	YC	3	6

Returning, filling-in and well ramming excavated material around foundations	YC	4	9
------------------------------------------------------------------------------	----	---	---

Loading surplus material into lorries and carting to tip, not exceeding 8 miles	YC	16	0
---------------------------------------------------------------------------------	----	----	---

Excavating from spoil heaps selected top soil, wheeling not exceeding 100 yards, and spreading, levelling and consolidating, not exceeding 6 in. to receive turf	YS	2	4
------------------------------------------------------------------------------------------------------------------------------------------------------------------	----	---	---

Mechanical excavation and disposal

Excavating for shallow surface excavation and loading into lorries or dumpers (using $\frac{1}{2}$ yd. cube excavator)	YC	3	0
------------------------------------------------------------------------------------------------------------------------	----	---	---

Excavating for surface excavation and removing,			
-------------------------------------------------	--	--	--

spreading and levelling not exceeding 200 yds. (using 6 yd. cube scraper)	YC	2	11
---------------------------------------------------------------------------	----	---	----

Removing excavated material and depositing, not exceeding 200 yds. (using 3 yd. cube dumper)	YC	2	2
----------------------------------------------------------------------------------------------	----	---	---

Planking and strutting

Planking and strutting to sides of surface or basement excavation	FS		
-------------------------------------------------------------------	----	--	--

Depth up to 5 ft.	9
Depth up to 10 ft.	11
Depth up to 15 ft.	11

Planking and strutting to sides of surface and basement trenches	FS		
------------------------------------------------------------------	----	--	--

Depth up to 5 ft.	2
Depth up to 10 ft.	3½
Depth up to 15 ft.	4

Hardcore, etc.

Hardcore filled-in in layers, each layer well rammed	YC	*22	11
		15	10

Bed of ditto, 4-in. thick	YS	*3	9
		1	9

CONCRETOR

Market prices

Portland cement, 6 tons and over	T	111	6
----------------------------------	---	-----	---

Rapid hardening, 6 tons and over	T	122	0
----------------------------------	---	-----	---

$\frac{1}{4}$ -in. down, washed, crushed and graded shingle	YC	18	6
-------------------------------------------------------------	----	----	---

$1\frac{1}{2}$ -in. ditto	YC	18	0
---------------------------	----	----	---

Sharp sand	YC	21	6
------------	----	----	---

$\frac{3}{8}$ -in. diam. mild steel rods to BS 785 delivered station	T	860	0
----------------------------------------------------------------------	---	-----	---

$\frac{3}{8}$ -in. ditto	T	922	6
--------------------------	---	-----	---

Measured rates

Portland cement mass concrete in foundations, etc.	YC		
----------------------------------------------------	----	--	--

1 : 12, $1\frac{1}{2}$ -in. "all-in" aggregate	61	2
	39	2

1 : 3 : 6, $1\frac{1}{2}$ -in. aggregate	70	10
	48	11

1 : 2 : 4, $\frac{3}{8}$ -in. aggregate	77	9
	55	10

1 : $1\frac{1}{2}$: 3, $\frac{3}{8}$ -in. aggregate	83	2
	61	3

Add for: Working around rod or mesh reinforcement	YC	5	4
------------------------------------------------------	----	---	---

Walls not over 6-in. thick	YC	26	10
Walls 6-in. to 12-in. thick	YC	18	9
Walls over 12-in. thick	YC	13	5

Columns not over 72 sq. inches	YC	51	8
--------------------------------	----	----	---

Columns 72 to 144 sq. inches	YC	40	3
------------------------------	----	----	---

Columns over 144 sq. inches	YC	32	3
-----------------------------	----	----	---

Suspended floors and roofs not over $4\frac{1}{2}$ -in. thick	YC	21	6
---------------------------------------------------------------	----	----	---

Suspended floors over $4\frac{1}{2}$ -in. to 6-in. thick	YC	18	9
----------------------------------------------------------	----	----	---

Suspended floors over 6-in. to 12-in. thick	YC	16	1
---------------------------------------------	----	----	---

Beds not over $4\frac{1}{2}$ -in. thick	YC	10	9
-----------------------------------------	----	----	---

Beds $4\frac{1}{2}$ -in. to 6-in. thick	YC	8	1
-----------------------------------------	----	---	---

Beds 6-in. to 12-in. thick	YC	2	8
----------------------------	----	---	---

Hollow tile floor of clay tiles 4-in. thick at 15-in. centres laid on formwork (measured separately), nibs filled in with concrete (1 : 2 : 4) and finishing top of tiles with bed of concrete $1\frac{1}{2}$ -in. thick including tamping around reinforcement (measured separately)	YS	*18	5
		10	9

Ditto, but tiles 8-in. thick	YS	*28	4
		18	7

Sundries

Finishing concrete with trowelled face to receive linoleum	YS	1	4
------------------------------------------------------------	----	---	---

Applying horizontal damp-proof membrane of Synthaprupe in three coats to surface of concrete and blinding with sand to form key	YS	5	11
		4	1

Supplying floor clips (p.c. 6d. each) and fixing	No.	1	1
--------------------------------------------------	-----	---	---

Formwork

Formwork including strutting easing and striking:			
---------------------------------------------------	--	--	--

Vertical faces of foundation	YS	19	8
		10	2

Vertical faces of wall	YS	20	3
		7	3

Soffite of floors not over 12-ft. high	YS	20	1
		9	0

Sloping soffit of stairs	YS	24	3
		9	10

Sides of columns	FS	2	7
			11

Sides and soffits of lintols and beams	FS	2	9
		1	1

Add to the above for wrot formwork including rubbing down concrete	YS	2	8
--------------------------------------------------------------------	----	---	---

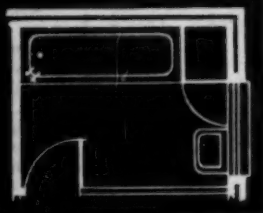
Reinforcement			
---------------	--	--	--

$\frac{3}{8}$ -in. diameter mild steel rods, hooked, bent and tied and fixing	C	69	18
		52	3

$\frac{1}{2}$ -in.	C	75	5
		54	2

$\frac{3}{8}$ -in.	C	82	4
		55	11

For design,
finish...
choice of sizes
and colours,
Architects
need look
no further than
Bilston, the
Bath Specialists



ATLANTA
MAGNA
CRESTA
MARINA
MERMAID
BERMUDA
PRINCESS



BILSTON

Illustrated literature sent on request

Bilston Foundries Ltd. Bilston, Staffordshire

technical section

Concretor continued	s	d
1-in.	C	96 8 60 8

Steel wire mesh fabric weighing 4.32 lb. per yd. super and laying in concrete

YS 4 1
3 5

Ditto weighing 6.57 lb. per yd. super

YS 6 0
5 3

Ditto weighing 9.32 lb. per yd. super

YS 8 6
7 4

Precast concrete

Precast concrete (1 : 2 : 4) finished fair on exposed faces and hoisting setting and jointing:

4½-in. × 6-in. lintels reinforced with one ½-in. rod FR 2 11
2 5

4½-in. × 9-in. ditto with two ½-in. rods FR 4 5
3 7

Piling

Reinforced pre-cast concrete piles, approximate prices for supplying, unloading, pitching and driving

12-in. × 12-in. up to 30 ft. long FR 35 0

14-in. × 14-in. up to 50 ft. long FR 41 0

Sheet steel piling, ditto T 1165 0
to 1230 0

BRICKLAYER

Market prices

Soft sand YC 18 6

Hydrated lime T 110 0

Plain Flettons M*132 0

Second hard stocks M*350 0

Lingfield Engineering wire cuts Grade B M 275 0

Hessian base damp-course to BS 743 YS *4 0

Damp course slates, 14" × 9" 100 *75 9

Wall ties, galvanised 100 15 8

Partitions

Clinker concrete, solid YS 2½-in. 5 7
3-in. 7 1
4½-in. 9 4

Thermalite YS 2½-in. 7 0
3-in. 8 5
4-in. 11 0

Hollow clay YS (6 cavity) 2½-in. *4 7
3-in. *5 9
(ditto) 4-in. *7 3

Normal quality wood wool slabs YS 2-in. 8 10
2½-in. 10 2
3-in. 11 5

Measured rates

Reduced brickwork in cement lime mortar, Lingfields in cement mortar

YS

Flettons *36 0

18 11

Second stocks *59 5

42 5

Lingfield Grade B 54 6

34 11

Half brick wall ditto YS

Flettons *19 10

9 0

Second stocks *31 7

20 9

Lingfield Grade B 29 8

16 11

11-in. hollow wall with 2-in. cavity and wall ties YS

Flettons *43 0

18 5

Second stocks *66 6

41 10

One brick wall built fair and pointed both sides YS

Flettons *43 0

18 11

Second stocks *66 6

42 5

Lingfield Grade B 60 5

34 11

Sundries

Extra over common brickwork for internal fair face and flush pointing YS 1 6

Horizontal damp-proof course of two courses of slates and bedding and pointing FS *4 3
2 4

Horizontal damp-proof course of hessian base bitumen FS *10 7

Facings

Extra over ordinary brickwork with bricks P.C. 132s. per 1,000 for facings as described

To solid wall in Flemish bond YS

Facings P.C. 250s. per M *15 3

8 7

Facings P.C. 350s. per M *22 6

15 10

Facings P.C. 450s. per M *29 9

23 2

To cavity wall in stretcher bond YS

Facings P.C. 250s. per M *12 8

6 7

Facings P.C. 350s. per M *18 2

12 1

Facings P.C. 450s. per M *23 9

17 7

Half brick wall in facings built fair and pointed on one side YS

Facings P.C. 250s. per M 31 3

16 1

Facings P.C. 350s. per M 36 9

21 7

Facings P.C. 450s. per M 42 4

27 2

Partitions

Clinker concrete solid partition blocks and setting in cement lime mortar YS

2½-in. 12 4

6 10

3-in. 15 1

8 8

4½-in. 19 1

11 5

Thermalite ditto YS

2½-in. 12 11

8 6

3-in. 15 4

10 3

4-in. 19 6

13 4

Hollow clay ditto YS

2½-in. *11 2

5 8

(6 cavity) 3-in. *13 6

7 2

(ditto) 4-in. *16 8

9 0

Wood wool slabs ditto YS

2-in. 14 4

10 6

2½-in. 16 7

12 2

3-in. 18 10

13 9

DRAINLAYER

Market prices

Salt glazed stoneware pipes and fittings. "Best" quality:

Ordinary pipes FR 4-in. *1 7

6-in. *2 4½

9-in. *4 3½

Bends No. 4-in. *4 9

6-in. *7 1½

9-in. *19 3

Pitch fibre pipe FR 3-in. 1 10½

4-in. 2 6

6-in. 5 0½

Cast iron s. and s. pipe to BS 437 YR

4-in. 29 7

6-in. 43 4

9-in. 81 1

Spun iron s. and s. pipe to BS 1211, Class B YR

4-in. 13 11

6-in. 21 10

9-in. 36 6

Measured rates

Trenches and beds

Excavate trenches by hand in heavy soil, including planking and strutting, part returning, filling and ramming and wheeling and spreading surplus, for pipes 4-in., 6-in. and 9-in. dia. YR

Average depth of trench 3-ft. 18 0

4-ft. 24 0

6-ft. 41 3

Excavate trench as fast but by mechanical trencher YR

Average depth of trench 3-ft. 13 7

4-ft. 18 7

6-ft. 33 8

9-ft. 55 8

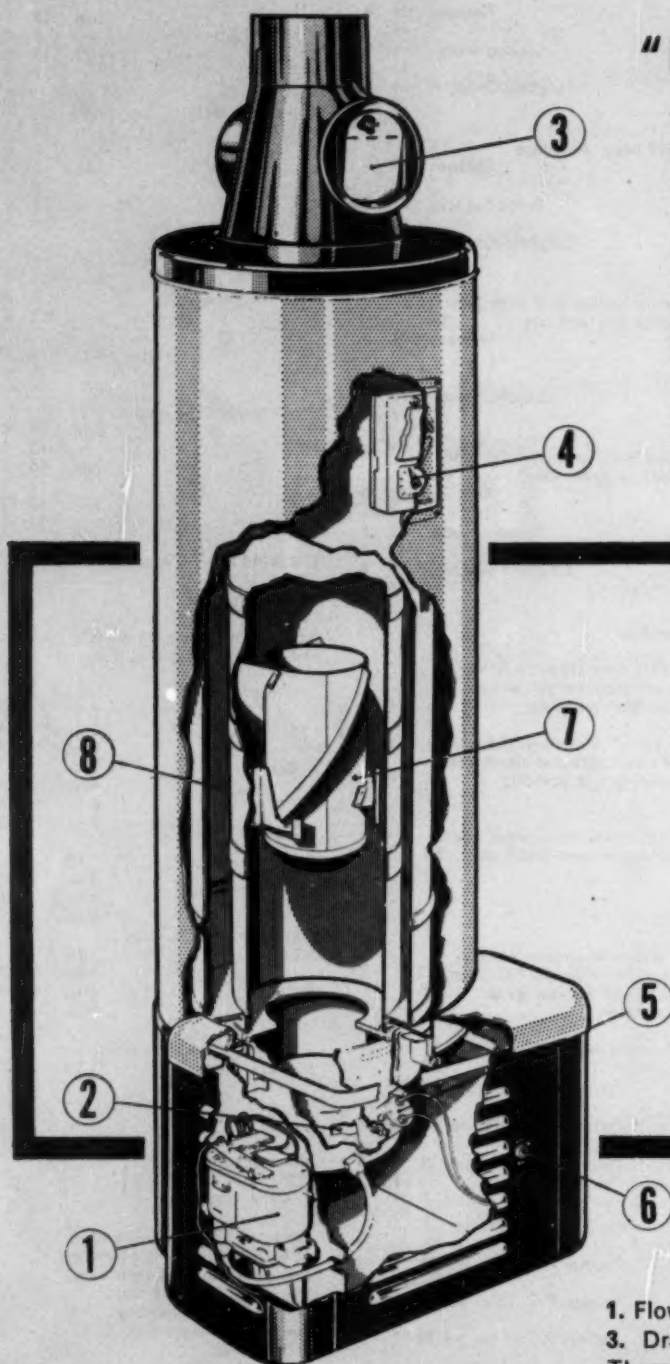
*The fully automatic oil-fired
boiler for the smaller house*

SMITHS

"MODEL 30"

This excellently designed boiler (at the very moderate retail price of £75) brings fully automatic background heating and domestic hot water within reach of the small-home owner. It has a high thermal efficiency, is economical to run, needs servicing only once a year, and (where it will aid economy) can be controlled by a time-switch.

Extensively tested before being put on the market, this boiler has given most satisfactory service in homes all over the country.



SUMMARY OF TECHNICAL DATA

The natural-draught vaporizing burner is fitted with electric ignition, and operates high-fire and off. 200-250 volts AC only.

Nominal output is 30,000 B.Th.U/hr, feeding radiators totalling 160 sq. ft surface area, or 110 sq. ft radiators combined with hot-water supply.

Recommended cylinder capacity 25 to 40 gallons.

Measurements: 56½" high x 20½" wide x 18½" deep.

Weight: 93 lbs.

Flue draught required: .06 w.g.

Fuel: regular grade kerosene.

1. Flow Control Valve
2. Vaporizing Pot Burner
3. Draught Stabilizer
4. Water Temperature Thermostat
5. Igniter
6. On/Off Switch
7. Baffle
8. Heat Exchanger

Enquiries to: S. SMITH & SONS (ENGLAND) LIMITED. WITNEY, OXON. Telephone: WITNEY 678

technical section

Drainlayer continued

6-in. concrete bed and benching for 4-in. pipes	YR	9 9
		5 10
As above, for 6-in. pipes	YR	11 5
		6 10
6-in. concrete bed and surround for 4-in. pipes	YR	15 11
		9 6
As above, for 6-in. pipes	YR	19 2
		11 6

Stoneware drains

"Seconds" quality salt-glazed stoneware drain pipes and laying and jointing in trench

FR	
4-in.	*2 5
	1 8
6-in.	*3 5
	2 5
9-in.	*5 7
	4 5

"Best" quality salt-glazed stoneware drain pipes and laying and jointing in trench

FR	
4-in.	*2 8
	1 11
6-in.	*3 10
	2 10
9-in.	*6 5
	5 2

Extra over "Seconds" quality pipes for:

Bend

No.	
4-in.	*3 9
	3 2
6-in.	*5 5
	4 9
9-in.	*15 8
	14 11

Single junction

No.	
4-in.	*6 5
	4 10
6-in.	*9 3
	7 4
9-in.	*19 9
	17 6

Double junction

No.	
4-in.	*10 9
	8 1
6-in.	*15 5
	12 3
9-in.	*30 1
	26 4

Stoneware gullies

Salt-glazed trapped gully with galvanised grating including setting gully on and surrounding with concrete and jointing to drain

No.	
6 in. x 6 in. grating 4 in. outlet	*26 3
	21 9
9 in. x 9 in. grating 6 in. outlet	*48 3
	42 7

Grease and mud gully 9-in. diameter with 4-in. outlet galvanised bucket and grating and setting gully on and surrounding with concrete and jointing to drain

No.	
	*90 11
	79 3

Road gully with 6-in. outlet including setting on and surrounding with concrete and jointing to drain

No.	
15-in. dia. 30-in. deep	*121 9
	98 0
18-in. dia. 48-in. deep	*244 0
	204 8

Pitch fibre drains

Pitch fibre drain pipes and laying and jointing in trench

FR	
3-in.	2 3
	2 1 1/2
4-in.	2 11 1/4
	2 9 1/4
6-in.	5 10
	5 8

Extra over pitch fibre pipe for 45° sweep bend

No.	
3-in.	10 0
	9 1
4-in.	14 6
	13 7
6-in.	27 8
	26 7

Cast iron drains

Cast iron spigot and socket drain pipes and laying and jointing in trench

FR	
4-in.	13 9
	11 6
6-in.	19 11
	17 0
9-in.	37 11
	31 9

Extra over cast iron pipes for bend

No.	
4-in.	31 7
	24 11
6-in.	73 9
	63 11
9-in.	188 6
	171 7

Spun cast iron spigot and socket drain pipes and laying and jointing in trench

FR	
4-in.	7 8
	5 6
6-in.	11 6
	8 9
9-in.	20 8
	14 9

Cast iron gullies

Cast iron gully trap with high invert and setting on and surrounding with concrete and jointing to drain

No.	
4-in.	44 7
	37 2
6-in.	110 2
	99 7
9-in.	247 7
	232 8

ASPHALTER

Measured rates

Damp proof course and tanking

1/2-in. vertical damp proof course in two thicknesses on brick or concrete	YS	
	BS1097	17 4
	BS1418	21 6

1/2-in. horizontal damp proof course in one thickness on brick or concrete

YS	
BS1097	10 6
BS1418	13 8

Vertical tanking in three thicknesses

YS	
BS1097	24 8
BS1418	29 11

Horizontal tanking in three thicknesses

YS

Roofing

1/2-in. flat laid to falls in two thicknesses on and including felt underlay

YS	
BS988	12 1
BS1162	18 5

6-in. skirting with angle fillet at bottom and rounded edge at top turned into groove

FR	
BS988	2 1
BS1162	2 7

6-in. fascia with solid water check roll at top and undercut drip at bottom

FR	
BS988	4 2
BS1162	4 9

PAVING

Market prices

Granite chippings, 1/2 in. to dust	T	48 7
Red quarry tiles, 6 in. x 6 in. x 1/2 in.	YS	*14 2
2-in. Noelite paving	YS	13 11

Measured rates

Cement and sand floated screed to receive pavings

YS	
1/2-in.	4 3
	2 4
1-in.	5 1
	3 0
1 1/2-in.	5 9
	3 5

Cement and sand paving trowelled hard and smooth

YS	
1/2-in.	4 9
	2 4
1-in.	5 8
	3 0
1 1/2-in.	6 3
	3 6

Granolithic paving laid on concrete

YS	
1-in.	7 6
	5 3
1 1/2-in.	9 7
	6 10

1/2-in. red composition paving laid on prepared screed

YS	16 6
----	------

3/4-in. terrazzo paving laid on prepared screed

YS	38 4
----	------

1/2-in. rubber flooring and laying in rolls

YS	39 5
----	------

1/2-in. rubber flooring and laying in rolls

YS	63 0
----	------

3/4-in. cork tile flooring, 12 in. x 12 in. and fixing with mastic and including polishing

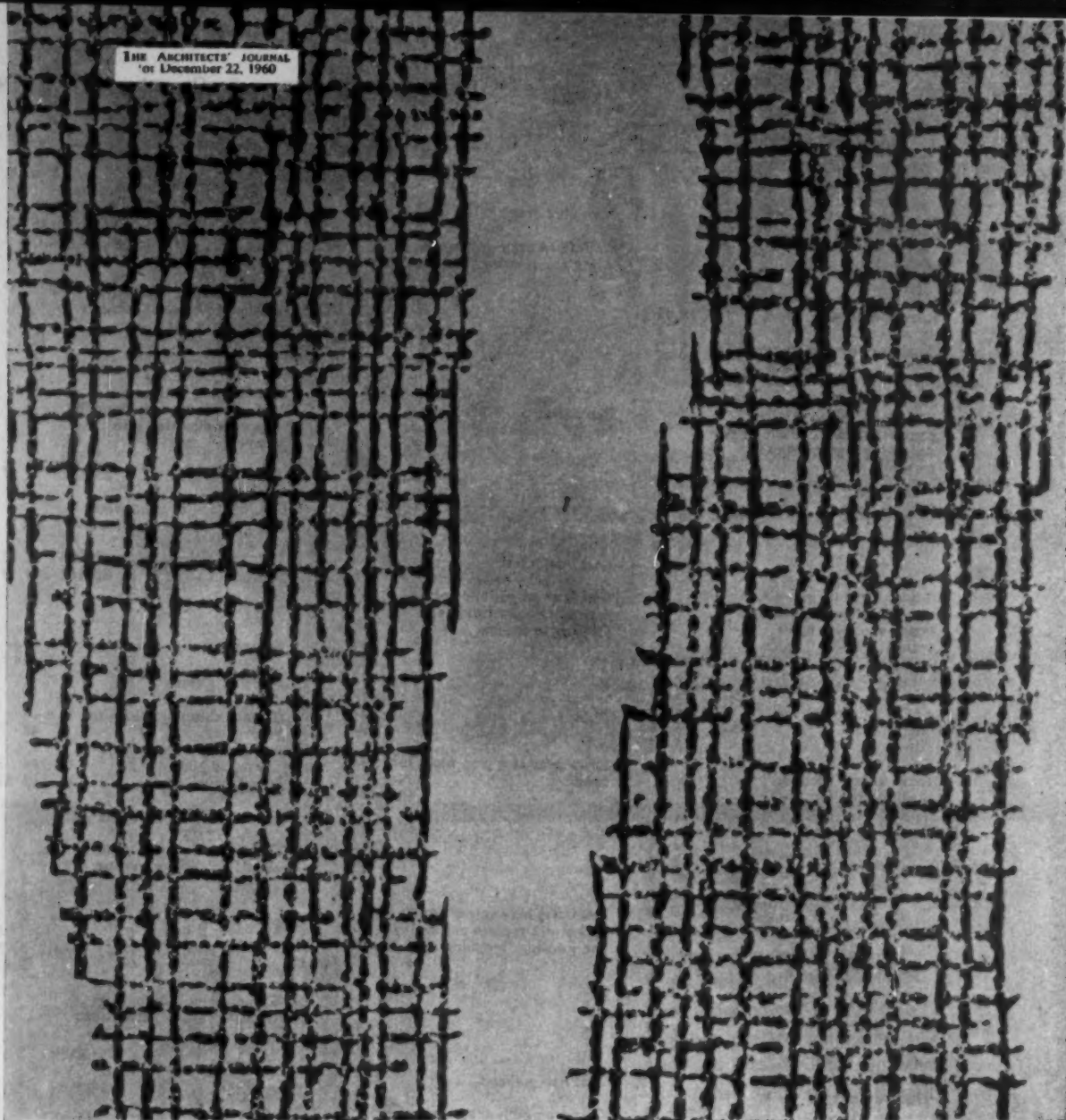
YS	39 5
----	------

1/2-in. thermoplastic tile flooring and laying-on screed

YS	11 3
to	17 3

4.5mm coloured linoleum and fixing with mastic to cement screed or boards

YS	24 9
----	------



"Plaid" designed by Fritz Werthmüller. M1017 reduced in scale.

A new collection of machine printed wallpapers has just been compiled by the London Office of The Wall Paper Manufacturers Limited 19/21 Mortimer Street, W.1. and is now available through wallpaper suppliers. Many prominent designers are associated with this collection among them Lucienne Day, Jacqueline Groag, Terence Conran, Joyce Storey and William Gear.

Modus wallpapers, because machine printed, are moderate in price, and in order to increase their usefulness to Architects and Interior Designers all these papers have been treated with a special protective coating.

**YOU ARE INVITED TO VISIT THE EXHIBITION OF THESE WALLPAPERS AT
MORTIMER STREET (FIRST FLOOR)**



MODUS

19/21 MORTIMER STREET LONDON W1

technical section

Pavior continued s d

3-2 mm. coloured linoleum and fixing with mastic to cement screed or boards YS 19 9

$\frac{3}{4}$ -in. red quarry tiles laid on prepared screed YS *26 2

$\frac{3}{4}$ -in. red quarry tiles laid on prepared screed YS *28 11

2-in. Noelite paving laid on prepared bed, in random sizes and mixed colours YS 20 5
16 1

12 in. x 12 in. anchor steel plates laid complete YS 60 0

MASON

Market prices

Stone in blocks in truckloads at stations in the London area:

Beer FC 10 6

Portland FC 9 10

Woodkirk Blue building quality FC 19 2

Broughton Moor slate in blocks at stations in the London area FC 60 0

Marble in blocks at works: Dove FC 70 0

Romz.1 stone FC 65 0

Measured rates

Stone and all labours in pilasters and quoins FC 55 2
Beer 52 6

Jambs FC 57 9
Beer 55 0

Lintels FC 58 10
Beer 56 0

Arches FC 71 11
Beer 68 6

Ashlar average 7-in. on bed with plain dressed face FS 32 7
Portland Beer 31 0

Extra for each additional 1-in. thickness FS 4 3
Portland Beer 4 1

$4\frac{1}{2}$ in. x 4 in. sill sunk, weathered, throated and grooved for water bar, set and jointed in cement mortar FR 11 9
Portland Beer 11 2
Artificial 5 1

4 in. x 12 in. coping, weathered and twice throated FR 22 7
Portland Beer 21 6
Artificial 12 3

Marble and slate

$\frac{1}{2}$ -in. Dove marble lining and fixing on brick backings FS 37 10

$\frac{3}{4}$ -in. Roman stone lining FS 35 9

$\frac{1}{2}$ -in. Broughton Moor slate lining FS 27 3

SLATER, TILER AND ROOFER

Market prices

Welsh slates, best quality M 16-in. x 10-in. 1042 9
20-in. x 10-in. *2000 0

Best hand made sand faced plain tiles, 10 $\frac{1}{2}$ -in. x 6 $\frac{1}{2}$ -in. M*386 6

Grey corrugated asbestos cement sheets YS 7 0

Measured rates

16-in. x 10-in. best Welsh slates laid 3-in. lap Sq. 293 0

20-in. x 10-in. best Welsh slates, 3-in. lap Sq.*406 0

Westmorland green slates in random sizes laid 3-in. lap Sq.*670 0

Best hand made sand faced plain tiles, 10 $\frac{1}{2}$ in. x 6 $\frac{1}{2}$ in. laid to a 4-in. gauge Sq.*252 0

Best hand made sand faced plain tiles, 10 $\frac{1}{2}$ in. x 6 $\frac{1}{2}$ in. hung vertically to 4 $\frac{1}{2}$ -in. gauge Sq.*268 0

Berkshire hand made sand faced red pantiles, 14 $\frac{1}{2}$ in. x 10 in. laid 2 $\frac{1}{2}$ -in. head and 1 $\frac{1}{2}$ -in. side lap Sq.*212 6

Grey corrugated asbestos cement sheets fixed to wood roofs Sq. 123 0

Grey corrugated asbestos cement sheets fixed vertically Sq. 133 0

Cedarwood shingles laid 5-in. gauge Sq. 245 0

Metal roof decking and fixing with hook bolts, finished with $\frac{1}{2}$ -in. insulation board and three layers self finish felt roofing YS 18 gauge for spans up to 10 ft 60 6
20 gauge for spans up to 8 ft. 6 in. 52 6

Two layer one ply bitumen felt and fixing with bitumen to concrete or boarding YS 9 6

Three layer bitumen felt YS 12 7

Patent ribbed aluminium roofing and fixing to purlins Sq. 297 6

CARPENTER

Market prices

Softwood, carcassing quality Std. 1840 0

Softwood, joinery quality Std. 2300 0

$\frac{1}{2}$ -in. fibre board Sq. 46 6

$\frac{1}{2}$ -in. standard hardboard Sq. 40 0

$\frac{3}{4}$ -in. insulating gypsum wallboard YS *2 11

Measured rates s d

Softwood and fixing in plates, sleeper joists and lintels FC 18 4
13 4

In floor and ceiling joists FC 17 11
13 4

In stud partitions, purlins and struts FC 20 2
13 4

In hip and valley rafters FC 23 0
13 4

Battening and boarding

Slate or tile battens 1 $\frac{1}{2}$ in. x $\frac{3}{4}$ in. and nailing to fixing for Sq.

16-in. x 10-in. slating to 6 $\frac{1}{2}$ -in. gauge *41 9

20-in. x 10-in. slating to 8 $\frac{1}{2}$ -in. gauge *31 0

10 $\frac{1}{2}$ -in. x 6 $\frac{1}{2}$ -in. plain tiling to 4-in. gauge *61 0

14 $\frac{1}{2}$ -in. x 10-in. pantiles to 12-in. gauge *22 0

S.E. boarding in batten widths close jointed and fixing to flat or sloping roofs Sq.

$\frac{3}{4}$ -in. 120 0

85 0

1-in. 147 0

112 0

T. & g. boarding in batten widths close jointed and fixing to flat or sloping roofs Sq.

$\frac{3}{4}$ -in. 140 0

96 0

1-in. 171 0

127 0

$\frac{3}{4}$ -in. wrot and cross tongued eaves soffit FS 2 3
1 0

$\frac{3}{4}$ -in. x 6-in. wrot and grooved eaves fascia p.o. FS 10 6

Wall and ceiling boards fixed to softwood YS

$\frac{1}{2}$ -in. fibre board 6 10
5 0

$\frac{1}{2}$ -in. hardboard 5 10
4 4

$\frac{3}{4}$ -in. insulating gypsum wallboard *5 6
3 8

$\frac{3}{8}$ -in. asbestos cement flat sheeting 8 11
4 11

$\frac{1}{2}$ -in. asbestos cement flat sheeting 10 8
6 8

2-in. Stramit, showerproof quality fixed to joists with butt joints 16 1
11 6

JOINER

Measured rates

Floors and skirtings

Tongued and grooved soft wood flooring and nailing to joists Sq.

$\frac{3}{4}$ -in. 166 0

124 0

1-in. 190 0

149 0

1-in. nominal double grooved t. and g. Swedish softwood

a complete range of 3 LEVER LOCKS

FOR HIGH SECURITY AT LOW COST

Now you can specify higher security... at much lower cost! The new, complete range of Yale 3-lever mortice locks includes both horizontal and upright locks, two deadlocks, and a sliding door locking latch — covering every need for a mortice lock.

- 144 Differs off levers alone (standard)
- 350 Differs off levers (if required)
- 3,500 Differs available off levers and wards
- Follower holes brass bushed
- Forend—armoured brass upper and steel lower
- Deadlocks have bolts reinforced with hardened steel pins

Master Keying

The locks can be master keyed in suites to include sub-masters, sub-grand masters and grand masters.

Contemporary Design

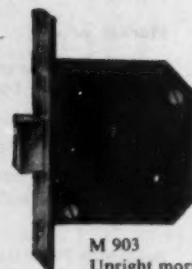
The complete range of Yale 3-lever mortice locks, together with the key, have been accepted by the Council of Industrial Design for 'Design Index'.

The Yale Reversible Rebated Forend Set

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



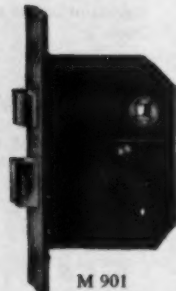
Key—nickel plated, with black nylon covered shank for durability and self-lubrication at point of contact with lock (to BS 2088)



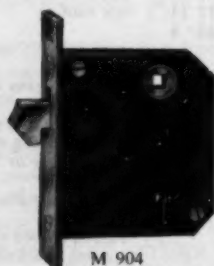
M 903
Upright mortice
(deadlocks) 2½" and 3"



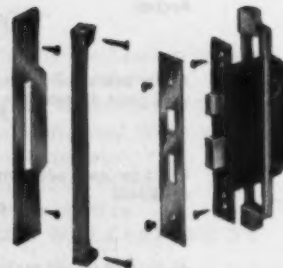
M 902
Horizontal mortice
locks 5" and 6"



M 901
Upright mortice locks
2½" and 3"



M 904
Sliding door locking
latch



The Reversible Rebated
Forend Set

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



The YALE & TOWNE Manufacturing Company · British Lock and Hardware Division · Dept. A II · Willenhall · Staffs

technical section

Joiner continued

	s	d
block flooring set in mastic and polished	YS	30 0
European beech	YS	32 6
African Muhuhu	YS	*37 9
Burma teak	YS	*41 0
Moulded skirtings, 3-in. to 6-in. sectional area planted on (per inch in sectional area)	FR	
	Softwood	3
	Oak	2½ 10 9
Extra for grounds plugged to brickwork	FR	
	Softwood	10 2
Windows		
2-in. rebated and moulded sashes divided into squares	FS	
	Softwood	3 11
	Oak	11 10
Extra for side hanging	Each	
	Softwood	3 0
	Oak	4 6
Doors		
2-in. framed, ledged and braced doors, filled in with 1-in. t. and g. and V jointed boarding and hanging	FS	
	Softwood	6 8 5 10
Four panelled door square both sides and hanging	FS	
	Softwood	7 2 6 5
	Oak	21 2 20 1
1½-in. Standard flush door, hardboard faced size 2 ft. 6 in. × 6 ft. 6 in. and hanging	No.	44 6 32 5
Linings and frames		
Window and door linings, 6-in. to 12-in. sectional area (per inch sectional area)	FR	
	Softwood	4 3
	Oak	10 9
Frames wrot all round and framed (per inch sectional area)	FR	
	Softwood	3½ 10
	Oak	10
Mullions, transoms and sills (per inch sectional area)	FR	
	Softwood	4 10
	Oak	10
Mouldings, architraves, etc. 4-in. to 6-in. sectional area (per inch sectional area)	FR	
	Softwood	4 3
	Oak	11 10
6-in. window boards, 1-in. thick with rounded nosing tongued at back and including bearers	FR	
	Softwood	3 3 1 9

	s	d
Oak	5 10 3 8	
Shelving and fittings		
¾-in. shelving of 2-in. slats spaced 1-in. apart on bearers (measured separately)	FS	
	Softwood	2 8 2 0
¾-in. solid shelving on bearers	FS	
	Softwood	2 5 2 0
	Oak	4 11 4 4
2-in. shelf bearers plugged to wall	FR	
	Softwood	8 5½ 1 4 1 1
	Oak	1 4 1 1
Staircases		
1-in. treads and ¾-in. risers tongued together on and including framed carriages	FS	
	Softwood	5 0 3 10 14 10 13 2
	Oak	
1½-in. × 11-in. wall string plugged to brickwork	FR	
	Softwood	4 10 3 9
	Oak	12 7 11 1
1½-in. × 9-in. outer string	FR	
	Softwood	3 9 3 1
	Oak	8 0 7 2
Ends of treads and risers housed to strings	No.	
	Softwood	1 4½ 7 2
	Oak	
2½-in. × 3-in. moulded handrail	FR	
	Softwood	3 4 2 8
	Oak	7 1 6 2
1½-in. × 1½-in. square balusters	FR	
	Softwood	9 6½ 1 5 1 2
	Oak	
Framed ends to balusters	No.	
	Softwood	7 10
	Oak	

IRONMONGER

Market prices

As prices for ironmongery vary so greatly depending upon the type and quality required, no prices are quoted here

Measured rates

The rates which follow are for fixing only and are inclusive of profit

	s	d
3-in. steel butts	Pr.	
	to softwood	4 10
	to hardwood	6 5
Double action floor springs	No.	
	to softwood	24 2
	to hardwood	32 2
6-in. barrel bolts		
	to softwood	2 2
	to hardwood	2 11
Cupboard locks		
	to softwood	4 6
	to hardwood	6 0
Cylinder night latch		
	to softwood	7 7
	to hardwood	10 1
Mortice latch		
	to softwood	6 0
	to hardwood	8 0
Mortice lock		
	to softwood	7 7
	to hardwood	10 1
Casement fastener		
	to softwood	1 10
	to hardwood	2 5
Casement stays		
	to softwood	1 10
	to hardwood	2 5

STEEL & IRON WORKER

Market prices

Structural steel joist sections, basis sizes, ex mills T 792 6

Extras for other than basis sizes vary between 10s. and 70s. per ton

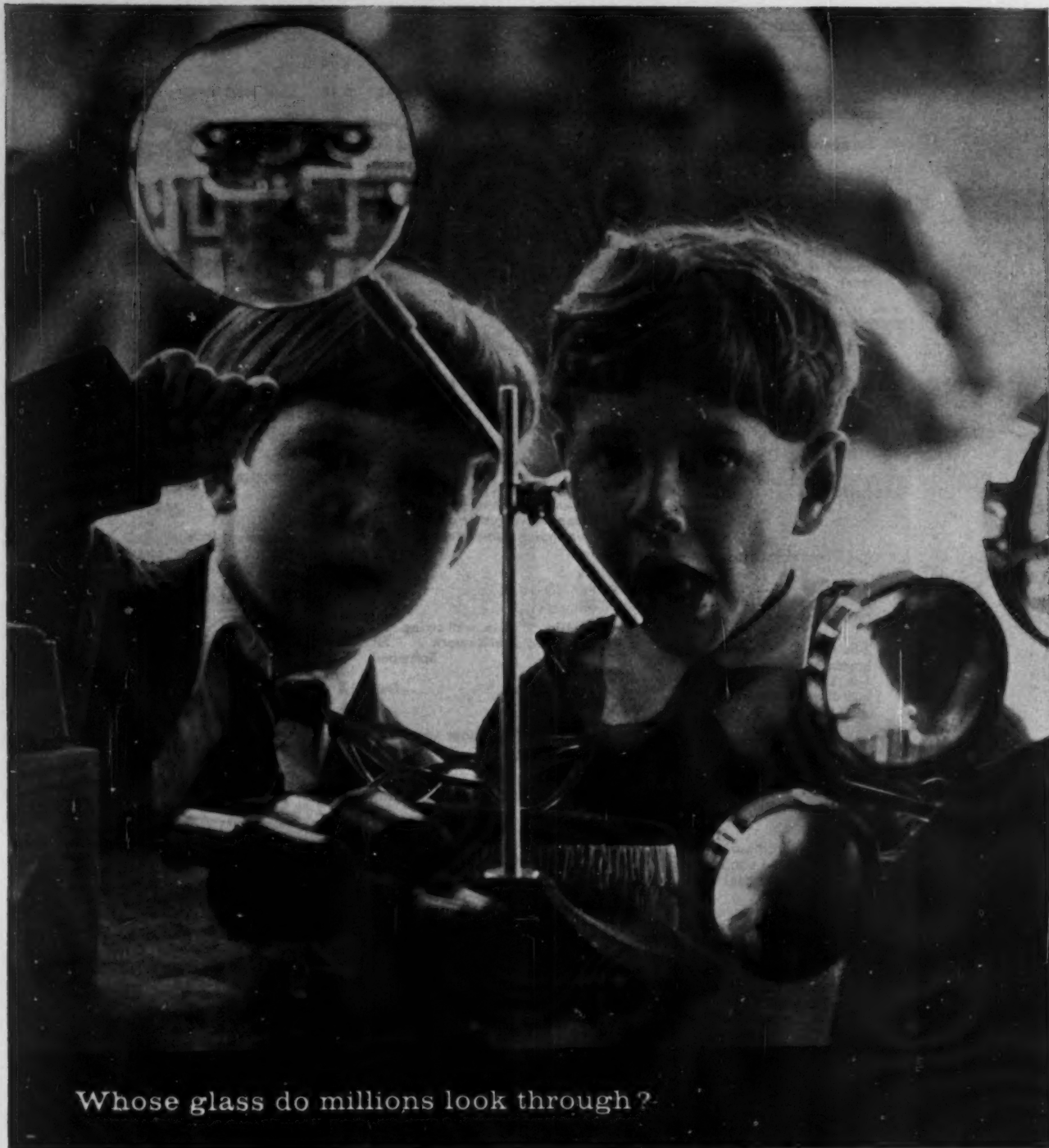
Measured rates

Rsj in steel framed structures hoisted and fixed complete	T 1425 0
Riveted compound girders including plates and rivets	T 1915 0
Rs stanchions including caps, bases, cleats, etc.	T 1885 0
Metal windows including cutting and pinning lugs to brickwork and bedding frames in cement mortar	No.
Domestic type 4 ft. high to BS 990	
Type ND2F 3 ft. 3½ in. wide	95 3
	78 1
Type HD2F 3 ft. 3½ in. wide	106 3
	89 1
Type ND11F 6 ft. 6½ in. wide	162 7
	132 4
"Z" range, 4 ft. high	
Type ZND1 2 ft. 0½ in. wide	63 10
	52 5
Type ZND4F 6 ft. 0½ in. wide	165 2
	134 11

PLASTERER

Market prices

Plastering sand	YC 21
Plaster to BS 1191	



Whose glass do millions look through?

John and Robert Stonehouse have their eyes fixed on a magnifying glass—just the thing for their stamp collection . . . and just one of the millions of pieces of optical glass made in the Chance/Pilkington Optical Works at St. Asaph in North Wales. That's where the glass is made for your spectacle lenses, and for specialised lenses of all kinds . . . snapshot cameras and television cameras . . . microscopes and binoculars . . . glass for all these and many other purposes goes from St. Asaph all round the world. As it does for another specialist use—to make windows through which nuclear scientists can watch their experiments safely protected against radiation. So St. Asaph typifies the whole Pilkington Group—supplying today's needs and serving tomorrow's developments in a way which demands a big company, in every sense.

Pilkingtons the greatest name in the world of glass

THE PILKINGTON GROUP manufacturing Pilkington Glass, Chance Glass, Chance/Pilkington Optical Glass and Fibreglass. Factories in Great Britain, Canada, Australia, New Zealand, South Africa, Argentina and Brazil.

technical section

Plasterer continued

Class B in loads of 2 tons
to 3 tons 19 cwt. T

Browning*171 0
Fibred browning*174 0
Board finish*171 0

$\frac{3}{4}$ in. plaster lath, over
600 yds. YS *2 2 $\frac{1}{2}$

6 in. \times 6 in. \times $\frac{1}{4}$ in. white
glazed wall tiles YS 18 3

Measured rates

Metal lathing

No. 24 gauge expanded metal
lathing and fixing YS

To softwood soffits 6 11
4 3

To metal 7 8
4 3

Lime plaster

Render float and set on brick
walls and partitions YS 7 6
2 3

R.F. and S. on concrete
including hacking YS 9 4
2 3

R.F. and S. on expanded
metal lathing YS 7 8
2 5

Gypsum plaster

Render in cement-lime-sand
(1 : 1 : 6) and set in gypsum
plaster on brick walls and
partitions YS 6 0
1 11

Render in gypsum fibred
browning-sand (1 : 1 $\frac{1}{2}$) and
set in gypsum on concrete
soffits including bonding
coat YS 9 8
3 7

Render and set on expanded
metal lathing including
pricking up coat YS 9 2
3 11

Plaster board

$\frac{3}{4}$ -in. gypsum plaster lath
fixed to softwood soffits
finished to receive plaster YS *4 9
2 9

Gypsum board finish setting
coat on last YS 4 5
1 2

Plain face

$\frac{1}{4}$ -in. Portland cement and
sand (1 : 3) plain face
trowelled smooth on brick
walls YS 6 10
1 10

Tyrolean rendering

Render in cement, lime, sand
(1 : 1 : 6) and finishing with
three coats patent coloured mix
preparations applied with
hand operated machine YS 10 5
2 5

Sprayed "Limpet" asbestos
Approximate prices for sprayed
"Limpet" asbestos on the
following surfaces to the
thickness shown for
quantities of 1,000 yds. super.
Normal pressed finish.
New concrete soffits and
beams

YS
 $\frac{1}{4}$ -in. 14 5
 $\frac{1}{2}$ -in. 19 8
1-in. 21 9

New structural steelwork

YS
 $\frac{1}{4}$ -in. 16 6
 $\frac{1}{2}$ -in. 21 9
1-in. 23 10

Extra over the above prices
for coloured texture finish

YS 3 5

Wall tiling

6 in. \times 6 in. \times $\frac{1}{4}$ in. standard
quality white glazed wall
tiles set and jointed on
prepared screed YS 43 9

Egg shell matt or glossy
glazed enamelled tiles YS 53 9

EXTERNAL PLUMBER

Market prices

Sheet lead, 3 $\frac{1}{2}$ lb. and
upwards, in quantities of
5 cwt. to 1 ton C*108 0

Copper sheeting, 23 gauge,
in 1-ton lots C 330 0

Zinc sheeting, 14 gauge, in
1-ton lots C 130 0

Aluminium sheeting 20 SWG C
Super purity 522 8
Commercial quality 336 0

Cast iron rainwater and
soil goods

Medium weight pipe to
BS 416 and BS 460 in
6 ft. lengths No.
3-in. 21 5 $\frac{1}{2}$
4-in. 27 5

Half round gutter in 6 ft.
lengths No.
4-in. 10 6 $\frac{1}{2}$
6-in. 17 3 $\frac{1}{2}$

The above are Standard-List
prices plus 25%.

Measured rates

Milled sheet lead C
Flat roofs*194 0
Gutters and flashings*194 0

24 SWG copper sheet FS
Flat roofs 5 9
Gutters and flashings 5 9

23 SWG copper sheet FS
Flat roofs 6 6
Gutters and flashings 6 6

14 gauge zinc FS
Flat roofs 3 7
Gutters and flashings 3 7

20 SWG super purity
aluminium FS
Flat roofs 5 4

Gutters and flashings

20 SWG commercial quality
aluminium FS
Flat roofs 4 1
Gutters and flashings 4 1

Rainwater gutters and pipes

$\frac{1}{4}$ -in. cast iron half round eaves
gutter jointed and fixed to
fascia with brackets FR

4-in. 3 7
2 3
6-in. 5 3
3 8

18 gauge pressed steel half
round eaves gutter FR

4-in. 3 2
1 11
6-in. 4 3
2 8

Asbestos cement half round
eaves gutter FR

4-in. 2 11
1 7
6-in. 4 2
2 7

Aluminium half round
eaves gutter FR

4-in. 4 3
2 11

Cast iron medium section
rain water pipes jointed and
fixed to walls with pipe nails

FR
3-in. 6 0
4 6
4-in. 7 6
5 9

Pressed steel

FR
3-in. 4 6
3 0
4-in. 6 5
4 7

Asbestos cement

FR
3-in. 3 10
2 3
4-in. 4 11
3 1

Aluminium

FR
3-in. 5 7
4 0
4-in. 7 6
5 8

Soil and ventilating pipes

Lead soil, waste and ventilat-
ing pipes (15 lb. per yd. for
3-in. and 19 lb. per yd. for
4-in. diameter) fixed to walls
with lead tacks FR

3-in. *11 4
8 2
4-in. *15 10
10 0

Cast iron soil, waste and
ventilating pipes with caulked
joints fixed to walls with pipe
nails FR

3-in. heavy 7 4
5 3
4-in. heavy 8 11
6 7

Asbestos cement soil and
ventilating pipe fixed to walls
with holderbats FR

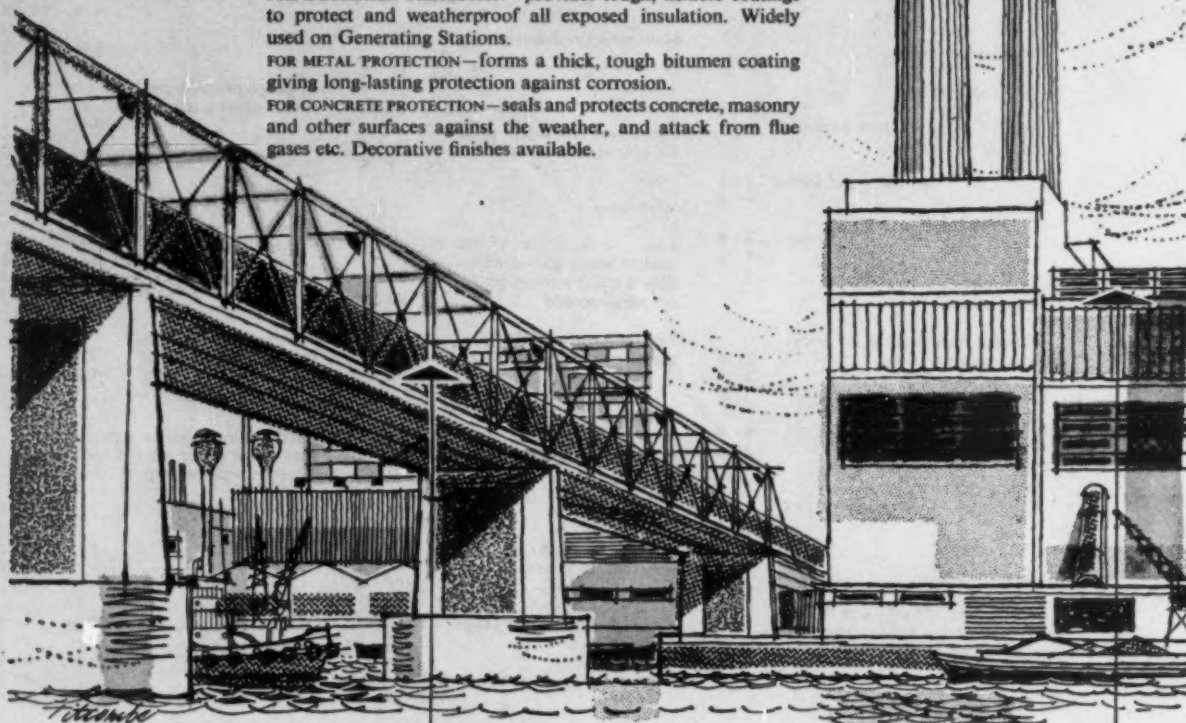
3-in. 3 11
2 4
4-in. 5 0
3 2

FLINTKOTE HERE

FOR INSULATION PROTECTION—provides tough, flexible coatings to protect and weatherproof all exposed insulation. Widely used on Generating Stations.

FOR METAL PROTECTION—forms a thick, tough bitumen coating giving long-lasting protection against corrosion.

FOR CONCRETE PROTECTION—seals and protects concrete, masonry and other surfaces against the weather, and attack from flue gases etc. Decorative finishes available.



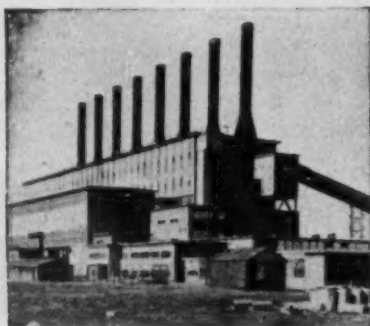
FLINTKOTE THERE

These are but a few of the many uses for various Flintkote Products—we should be pleased to tell you more.

Whatever the country, it is probable that Flintkote Products will be available there from stock and that "on-site" technical advice can be given. The advantages of these facilities will be readily appreciated. Every building needs Flintkote—somewhere.

The Flintkote range includes products for:

Roof Waterproofing · Industrial Floor Surfacing · Metal Protection · General Waterproofing and Damp-proofing · Tanking · Thermal Insulation Protection and other specialised applications.



Chimney Stacks at a Power Station in Holland protected externally with Flintkote Emulsion.

... FLINTKOTE Regd. ALMOST EVERYWHERE



THE FLINTKOTE COMPANY LIMITED

Adam House · One Fitzroy Square · London W.1 Telephone: EUSon 7224

technical section

INTERNAL PLUMBER

Market prices

Lead pipe in quantities of
5 cwt. to 1 tonC
BS 602*110 3
BS 1085*117 3Polythene tubing, heavy
gauge, in quantities of 500
to 999 ft.per 100 ft.
1-in.*108 6
1-in.*149 0
1-in.*189 6

Steel tubes to BS 1387

medium weight galvanised FR

1-in. 0 9
1-in. 1 1
1-in. 1 5
1-in. 1 8The above are Standard List
prices less 37%.

Galvanised malleable fittings.

Bend

No.
1-in. 2 10 1/2
1-in. 4 4
1-in. 6 2

Tee

No.
1-in. 1 0 1/2
1-in. 1 5 1/2
1-in. 2 0 1/2
1-in. 2 10 1/2
1-in. 4 1 1/2The above are Standard List
prices less 21 1/4%, less 6 1/2% plus
40%.

Copper tubes to BS 659

FR
1-in. *11 1/2
1-in. *1 3 1/2
1-in. *2 0 1/2
1-in. *2 5The above are calculated on a
basis price of 2s. 2 1/2d. per lb.
plus C.T.A. extras.

Measured rates

Lead pipe to BS 602

Main supply and laying in
trench (measured separately)
at the following sizes and
weights in lb.FR
1-in. 7 *3 8
1-in. 11 *5 5
1-in. 16 *7 8
1-in. 28 *12 11
1-in. 35 *16 8
1-in. 35 *13 3Main supply fixed to walls
and ceilingsFR
1-in. 7 *4 3
1-in. 11 *6 2
1-in. 16 *8 5
1-in. 28 *13 8
1-in. 35 *18 0
1-in. 35 *13 4Distributing pipes fixed to
walls and ceilingsFR
1-in. 4 3 2
1-in. 5 3 8
1-in. 7 *4 9
1-in. 9 *5 7
1-in. 12 *7 3
1-in. 12 5 0Flushing and warning pipes
fixed to softwoodFR
1-in. 4 3 6
1-in. 5 1 7
1-in. 6 4 5
1-in. 7 1 11
1-in. 8 5 6
1-in. 9 2 5
1-in. 10 6 0
1-in. 11 2 9Waste pipes and fixing to
softwoodFR
1-in. 6 5 7
1-in. 7 2 7
1-in. 8 6 1
1-in. 9 3 0

Joints to fittings

No.
1-in. 6 10
1-in. 7 7
1-in. 8 2
1-in. 9 3 3
1-in. 10 8 8
1-in. 11 3 10
1-in. 12 9 9
1-in. 13 4 9

Extra for:

Bend No.
1-in. 3 0
1-in. 4 3

Branch joints

No.
1-in. 8 9
1-in. 1 11
1-in. 2 7
1-in. 3 3
1-in. 4 4
1-in. 5 5
1-in. 6 6
1-in. 7 7
1-in. 8 8
1-in. 9 9
1-in. 10 10
1-in. 11 11
1-in. 12 12
1-in. 13 13
1-in. 14 14
1-in. 15 15
1-in. 16 16
1-in. 17 17
1-in. 18 18
1-in. 19 19
1-in. 20 20
1-in. 21 21
1-in. 22 22
1-in. 23 23
1-in. 24 24
1-in. 25 25
1-in. 26 26
1-in. 27 27
1-in. 28 28
1-in. 29 29
1-in. 30 30
1-in. 31 31
1-in. 32 32
1-in. 33 33
1-in. 34 34
1-in. 35 35
1-in. 36 36
1-in. 37 37
1-in. 38 38
1-in. 39 39
1-in. 40 40
1-in. 41 41
1-in. 42 42
1-in. 43 43
1-in. 44 44
1-in. 45 45
1-in. 46 46
1-in. 47 47
1-in. 48 48
1-in. 49 49
1-in. 50 50
1-in. 51 51
1-in. 52 52
1-in. 53 53
1-in. 54 54
1-in. 55 55
1-in. 56 56
1-in. 57 57
1-in. 58 58
1-in. 59 59
1-in. 60 60
1-in. 61 61
1-in. 62 62
1-in. 63 63
1-in. 64 64
1-in. 65 65
1-in. 66 66
1-in. 67 67
1-in. 68 68
1-in. 69 69
1-in. 70 70
1-in. 71 71
1-in. 72 72
1-in. 73 73
1-in. 74 74
1-in. 75 75
1-in. 76 76
1-in. 77 77
1-in. 78 78
1-in. 79 79
1-in. 80 80
1-in. 81 81
1-in. 82 82
1-in. 83 83
1-in. 84 84
1-in. 85 85
1-in. 86 86
1-in. 87 87
1-in. 88 88
1-in. 89 89
1-in. 90 90
1-in. 91 91
1-in. 92 92
1-in. 93 93
1-in. 94 94
1-in. 95 95
1-in. 96 96
1-in. 97 97
1-in. 98 98
1-in. 99 99
1-in. 100 100
1-in. 101 101
1-in. 102 102
1-in. 103 103
1-in. 104 104
1-in. 105 105
1-in. 106 106
1-in. 107 107
1-in. 108 108
1-in. 109 109
1-in. 110 110
1-in. 111 111
1-in. 112 112
1-in. 113 113
1-in. 114 114
1-in. 115 115
1-in. 116 116
1-in. 117 117
1-in. 118 118
1-in. 119 119
1-in. 120 120
1-in. 121 121
1-in. 122 122
1-in. 123 123
1-in. 124 124
1-in. 125 125
1-in. 126 126
1-in. 127 127
1-in. 128 128
1-in. 129 129
1-in. 130 130
1-in. 131 131
1-in. 132 132
1-in. 133 133
1-in. 134 134
1-in. 135 135
1-in. 136 136
1-in. 137 137
1-in. 138 138
1-in. 139 139
1-in. 140 140
1-in. 141 141
1-in. 142 142
1-in. 143 143
1-in. 144 144
1-in. 145 145
1-in. 146 146
1-in. 147 147
1-in. 148 148
1-in. 149 149
1-in. 150 150
1-in. 151 151
1-in. 152 152
1-in. 153 153
1-in. 154 154
1-in. 155 155
1-in. 156 156
1-in. 157 157
1-in. 158 158
1-in. 159 159
1-in. 160 160
1-in. 161 161
1-in. 162 162
1-in. 163 163
1-in. 164 164
1-in. 165 165
1-in. 166 166
1-in. 167 167
1-in. 168 168
1-in. 169 169
1-in. 170 170
1-in. 171 171
1-in. 172 172
1-in. 173 173
1-in. 174 174
1-in. 175 175
1-in. 176 176
1-in. 177 177
1-in. 178 178
1-in. 179 179
1-in. 180 180
1-in. 181 181
1-in. 182 182
1-in. 183 183
1-in. 184 184
1-in. 185 185
1-in. 186 186
1-in. 187 187
1-in. 188 188
1-in. 189 189
1-in. 190 190
1-in. 191 191
1-in. 192 192
1-in. 193 193
1-in. 194 194
1-in. 195 195
1-in. 196 196
1-in. 197 197
1-in. 198 198
1-in. 199 199
1-in. 200 200
1-in. 201 201
1-in. 202 202
1-in. 203 203
1-in. 204 204
1-in. 205 205
1-in. 206 206
1-in. 207 207
1-in. 208 208
1-in. 209 209
1-in. 210 210
1-in. 211 211
1-in. 212 212
1-in. 213 213
1-in. 214 214
1-in. 215 215
1-in. 216 216
1-in. 217 217
1-in. 218 218
1-in. 219 219
1-in. 220 220
1-in. 221 221
1-in. 222 222
1-in. 223 223
1-in. 224 224
1-in. 225 225
1-in. 226 226
1-in. 227 227
1-in. 228 228
1-in. 229 229
1-in. 230 230
1-in. 231 231
1-in. 232 232
1-in. 233 233
1-in. 234 234
1-in. 235 235
1-in. 236 236
1-in. 237 237
1-in. 238 238
1-in. 239 239
1-in. 240 240
1-in. 241 241
1-in. 242 242
1-in. 243 243
1-in. 244 244
1-in. 245 245
1-in. 246 246
1-in. 247 247
1-in. 248 248
1-in. 249 249
1-in. 250 250
1-in. 251 251
1-in. 252 252
1-in. 253 253
1-in. 254 254
1-in. 255 255
1-in. 256 256
1-in. 257 257
1-in. 258 258
1-in. 259 259
1-in. 260 260
1-in. 261 261
1-in. 262 262
1-in. 263 263
1-in. 264 264
1-in. 265 265
1-in. 266 266
1-in. 267 267
1-in. 268 268
1-in. 269 269
1-in. 270 270
1-in. 271 271
1-in. 272 272
1-in. 273 273
1-in. 274 274
1-in. 275 275
1-in. 276 276
1-in. 277 277
1-in. 278 278
1-in. 279 279
1-in. 280 280
1-in. 281 281
1-in. 282 282
1-in. 283 283
1-in. 284 284
1-in. 285 285
1-in. 286 286
1-in. 287 287
1-in. 288 288
1-in. 289 289
1-in. 290 290
1-in. 291 291
1-in. 292 292
1-in. 293 293
1-in. 294 294
1-in. 295 295
1-in. 296 296
1-in. 297 297
1-in. 298 298
1-in. 299 299
1-in. 300 300
1-in. 301 301
1-in. 302 302
1-in. 303 303
1-in. 304 304
1-in. 305 305
1-in. 306 306
1-in. 307 307
1-in. 308 308
1-in. 309 309
1-in. 310 310
1-in. 311 311
1-in. 312 312
1-in. 313 313
1-in. 314 314
1-in. 315 315
1-in. 316 316
1-in. 317 317
1-in. 318 318
1-in. 319 319
1-in. 320 320
1-in. 321 321
1-in. 322 322
1-in. 323 323
1-in. 324 324
1-in. 325 325
1-in. 326 326
1-in. 327 327
1-in. 328 328
1-in. 329 329
1-in. 330 330
1-in. 331 331
1-in. 332 332
1-in. 333 333
1-in. 334 334
1-in. 335 335
1-in. 336 336
1-in. 337 337
1-in. 338 338
1-in. 339 339
1-in. 340 340
1-in. 341 341
1-in. 342 342
1-in. 343 343
1-in. 344 344
1-in. 345 345
1-in. 346 346
1-in. 347 347
1-in. 348 348
1-in. 349 349
1-in. 350 350
1-in. 351 351
1-in. 352 352
1-in. 353 353
1-in. 354 354
1-in. 355 355
1-in. 356 356
1-in. 357 357
1-in. 358 358
1-in. 359 359
1-in. 360 360
1-in. 361 361
1-in. 362 362
1-in. 363 363
1-in. 364 364
1-in. 365 365
1-in. 366 366
1-in. 367 367
1-in. 368 368
1-in. 369 369
1-in. 370 370
1-in. 371 371
1-in. 372 372
1-in. 373 373
1-in. 374 374
1-in. 375 375
1-in. 376 376
1-in. 377 377
1-in. 378 378
1-in. 379 379
1-in. 380 380
1-in. 381 381
1-in. 382 382
1-in. 383 383
1-in. 384 384
1-in. 385 385
1-in. 386 386
1-in. 387 387
1-in. 388 388
1-in. 389 389
1-in. 390 390
1-in. 391 391
1-in. 392 392
1-in. 393 393
1-in. 394 394
1-in. 395 395
1-in. 396 396
1-in. 397 397
1-in. 398 398
1-in. 399 399
1-in. 400 400
1-in. 401 401
1-in. 402 402
1-in. 403 403
1-in. 404 404
1-in. 405 405
1-in. 406 406
1-in. 407 407
1-in. 408 408
1-in. 409 409
1-in. 410 410
1-in. 411 411
1-in. 412 412
1-in. 413 413
1-in. 414 414
1-in. 415 415
1-in. 416 416
1-in. 417 417
1-in. 418 418
1-in. 419 419
1-in. 420 420
1-in. 421 421
1-in. 422 422
1-in. 423 423
1-in. 424 424
1-in. 425 425
1-in. 426 426
1-in. 427 427
1-in. 428 428
1-in. 429 429
1-in. 430 430
1-in. 431 431
1-in. 432 432
1-in. 433 433
1-in. 434 434
1-in. 435 435
1-in. 436 436
1-in. 437 437
1-in. 438 438
1-in. 439 439
1-in. 440 440
1-in. 441 441
1-in. 442 442
1-in. 443 443
1-in. 444 444
1-in. 445 445
1-in. 446 446
1-in. 447 447
1-in. 448 448
1-in. 449 449
1-in. 450 450
1-in. 451 451
1-in. 452 452
1-in. 453 453
1-in. 454 454
1-in. 455 455
1-in. 456 456
1-in. 457 457
1-in. 458 458
1-in. 459 459
1-in. 460 460
1-in. 461 461
1-in. 462 462
1-in. 463 463
1-in. 464 464
1-in. 465 465
1-in. 466 466
1-in. 467 467
1-in. 468 468
1-in. 469 469
1-in. 470 470
1-in. 471 471
1-in. 472 472
1-in. 473 473
1-in. 474 474
1-in. 475 475
1-in. 476 476
1-in. 477 477
1-in. 478 478
1-in. 479 479
1-in. 480 480
1-in. 481 481
1-in. 482 482
1-in. 483 483
1-in. 484 484
1-in. 485 485
1-in. 486 486
1-in. 487 487
1-in. 488 488
1-in. 489 489
1-in. 490 490
1-in. 491 491
1-in. 492 492
1-in. 493 493
1-in. 494 494
1-in. 495 495
1-in. 496 496
1-in. 497 497
1-in. 498 498
1-in. 499 499
1-in. 500 500
1-in. 501 501
1-in. 502 502
1-in. 503 503
1-in. 504 504
1-in. 505 505
1-in. 506 506
1-in. 507 507
1-in. 508 508
1-in. 509 509
1-in. 510 510
1-in. 511 511
1-in. 512 512
1-in. 513 513
1-in. 514 514
1-in. 515 515
1-in. 516 516
1-in. 517 517
1-in. 518 518
1-in. 519 519
1-in. 520 520
1-in. 521 521
1-in. 522 522
1-in. 523 523
1-in. 524 524
1-in. 525 525
1-in. 526 526
1-in. 527 527
1-in. 528 528
1-in. 529 529
1-in. 530 530
1-in. 531 531
1-in. 532 532
1-in. 533 533
1-in. 534 534
1-in. 535 535
1-in. 536 536
1-in. 537 537
1-in. 538 538
1-in. 539 539
1-in. 540 540
1-in. 541 541
1-in. 542 542
1-in. 543 543
1-in. 544 544
1-in. 545 545
1-in. 546 546
1-in. 547 547
1-in. 548 548
1-in. 549 549
1-in. 550 550
1-in. 551 551
1-in. 552 552
1-in. 553 553
1-in. 554 554
1-in. 555 555
1-in. 556 556
1-in. 557 557
1-in. 558 558
1-in. 559 559
1-in. 560 560
1-in. 561 561
1-in. 562 562
1-in. 563 563
1-in. 564 564
1-in. 565 565
1-in. 566 566
1-in. 567 567
1-in. 568 568
1-in. 569 569
1-in. 570 570
1-in. 571 571
1-in. 572 572
1-in. 573 573
1-in. 574 574
1-in. 575 575
1-in. 576 576
1-in. 577 577
1-in. 578 578
1-in. 579 579
1-in. 580 580
1-in. 581 581
1-in. 582 582
1-in. 583 583
1-in. 584 584
1-in. 585 585
1-in. 586 586
1-in. 587 587
1-in. 588 588
1-in. 589 589
1-in. 590 590
1-in. 591 591
1-in. 592 592
1-in. 593 593
1-in. 594 594
1-in. 595 595
1-in. 596 596
1-in. 597 597
1-in. 598 598
1-in. 599 599
1-in. 600 600
1-in. 601 601
1-in. 602 602
1-in. 603 603
1-in. 604 604
1-in. 605 605
1-in. 606 606
1-in. 607 607
1-in. 608 608
1-in. 609 609
1-in. 610 610
1-in. 611 611
1-in. 612 612
1-in. 613 613
1-in. 614 614
1-in. 615 615
1-in. 616 616
1-in. 617 617
1-in. 618 618
1-in. 619 619
1-in. 620 620
1-in. 621 621
1-in. 622 622
1-in. 623 623
1-in. 624 624
1-in. 625 625
1-in. 626 626
1-in. 627 627
1-in. 628 628
1-in. 629 629
1-in. 630 630
1-in. 631 631
1-in. 632 632
1-in. 633 633
1-in. 634 634
1-in. 635 635
1-in. 636 636
1-in. 637 637
1-in. 638 638
1-in. 639 639
1-in. 640 640
1-in. 641 641
1-in. 642 642
1-in. 643 643
1-in. 644 644
1-in. 645 645
1-in. 646 646
1-in. 647 647
1-in. 648 648
1-in. 649 649
1-in. 650 650
1-in. 651 651
1-in. 652 652
1-in. 653 653
1-in. 654 654
1-in. 655 655
1-in. 656 656
1-in. 657 657
1-in. 658 658
1-in. 659 659
1-in. 660 660
1-in. 661 661
1-in. 662 662
1-in. 663 663
1-in. 664 664
1-in. 665 665
1-in. 666 666
1-in. 667 667
1-in. 668 668
1-in. 669 669
1-in. 670 670
1-in. 671 671
1-in. 672 672
1-in. 673 673
1-in. 674 674
1-in. 675 675
1-in. 676 676
1-in. 677 677
1-in. 678 678
1-in. 679 679
1-in. 680 680
1-in. 681 681
1-in. 682 682
1-in. 683 683
1-in. 684 684
1-in. 685 685
1-in. 686 686
1-in. 687 687
1-in. 688 688
1-in. 689 689
1-in. 690 690
1-in. 691 691
1-in. 692 692
1-in. 693 693
1-in. 694 694
1-in. 695 695
1-in. 696 696
1-in. 697 697
1-in. 698 698
1-in. 699 699
1-in. 700 700
1-in. 701 701
1-in. 702 702
1-in. 703 703
1-in. 704 704
1-in. 705 705
1-in. 706 706
1-in. 707 707
1-in. 708 708
1-in. 709 709
1-in. 710 710
1-in. 711 711
1-in. 712 712
1-in. 713 713
1-in. 714 714
1-in. 715 715
1-in. 716 716
1-in. 717 717
1-in. 718 718
1-in. 719 719
1-in. 720 720
1-in. 721 721
1-in. 722 722
1-in. 723 723
1-in. 724 724
1-in. 725 725
1-in. 726 726
1-in. 727 727
1-in. 728 728
1-in. 729 729
1-in. 730 730
1-in. 731 731
1-in. 732 732
1-in. 733 733
1-in. 734 734
1-in. 735 735
1-in. 736 736
1-in. 737 737
1-in. 738 738
1-in. 739 739
1-in. 740 740
1-in. 741 741
1-in. 742 742
1-in. 743 743
1-in. 744 744
1-in. 745 745
1-in. 746 746
1-in. 747 747
1-in. 748 748
1-in. 749 749
1-in. 750 750
1-in. 751 751
1-in. 752 752
1-in. 753 753
1-in. 754 754
1-in. 755 755
1-in. 756 756
1-in. 757 757
1-in. 758 758
1-in. 759 759
1-in. 760 760
1-in. 761 761
1-in. 762 762
1-in. 763 763
1-in. 764 764
1-in. 765 765
1-in. 766 766
1-in. 767 767
1-in. 768 768
1-in. 769 769
1-in. 770 770
1-in. 771 771
1-in. 772 772
1-in. 773 773
1-in. 774 774
1-in. 775 775
1-in. 776 776
1-in. 777 777
1-in. 778 778
1-in. 779 779
1-in. 780 780
1-in. 781 781
1-in. 782 782
1-in. 783 783
1-in. 784 784
1-in. 785 785
1-in. 786 786
1-in. 787 787
1-in. 788 788
1-in. 789 789
1-in. 790 790
1-in. 791 791
1-in. 792 792
1-in. 793 793
1-in. 794 794
1-in. 795 795
1-in. 796 796
1-in. 797 797
1-in. 798 798
1-in. 799 799
1-in. 800 800
1-in. 801 801
1-in. 802 802

technical section

Internal plumber continued s d

1-in. *11	11
8	9
1½-in. *14	11
11	1
1½-in. *24	4
19	11
Tee ½-in. *9	9
6	4
¾-in. *11	4
7	4
1-in. *16	7
11	11
1½-in. *22	6
17	3
1½-in. *33	9
27	10

GLAZIER

Market prices

Sheet glass cut to size	FS	
24 oz.	0	11½
32 oz.	1	6½

¾-in. polished plate glass, glazing quality in plates not exceeding:	FS	
2 ft. super	4	1½
5 ft. super	5	0½
45 ft. super	6	1
100 ft. super	6	7½

Rolled plate glass	FS	
¾-in. rolled plate	1	2½
¾-in. Georgian wired	6	2

Attention is drawn to reduction in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of one size and substance delivered to one address at one time

Measured rates

Glazing to wood

Ordinary quality sheet glass and glazing with putty in squares	FS	
24 oz. O.Q.	1	6
32 oz. O.Q.	2	1

¾-in. rolled plate glass	1	8
¾-in. rough cast glass	2	1
Prismatic glass	2	9
¾-in. wired glass	2	5
¾-in. Georgian wired plate glass	8	4
¾-in. polished plate glass (glazing quality) in plates 5 to 45 ft. super	7	11

Glazing to metal

Add to above rates 1d. per ft. super

Sundries

Hacking out broken sheet glass	FS	1	3
Black ribbon velvet and bedding to edge of glass	FR		8

Double glazing
Insulight units of two skins of glass with lead spacers

and glazing with mastic or beads (supplied). In panels 16 to 40 ft. super	FS	
32 oz. sheet	10	11
¾-in. polished plate	22	3

Patent glazing

Patent glazing with rolled steel lead capped bars for 8-ft. spans and glazing with ¾-in. Georgian wired cast	FS	4	9
Aluminium alloy patent glazing	FS	4	8

PAINTER

Market prices

Washable distemper	C	120	0
Emulsion paint	Gal.	45	0
Hard gloss paint:	Gal.		
Undercoat	46	0	
Finishing	46	0	

Measured rates

On walls and ceilings	YS		
Twice whiten plastered ceilings	1	6	3

Two coats distemper on plastered walls or ceilings	2	3	1	0
----------------------------------------------------	---	---	---	---

Two coats distemper on fair-faced brick or concrete walls	2	9	1	3
-----------------------------------------------------------	---	---	---	---

Two coats emulsion paint on walls or ceilings	2	11	1	8
-----------------------------------------------	---	----	---	---

Prepare, prime and apply one coat oil colour on plastered walls	3	8	1	6
Add for each additional coat	1	9	10	

On metal

Prepare, prime and apply one coat oil colour on general surfaces	YS		
Basis price	3	8	1
		6	
Add for each additional coat	1	8	10

On windows in squares	YS		
Basis price	5	2	9
Add for each additional coat	2	2	5

On bars, angles, etc., not exceeding 3-in. girth	YR		
Basis price	6	2	
Add for each additional coat	3	1	

On small pipes	YR		
Basis price	1	0	3
Add for each additional coat	5	2	

On large pipes	YR		
Basis price	2	0	6

Add for each additional coat	10	3
------------------------------	----	---

Prepare, prime and apply one coat heat-resisting paint on heating surfaces of radiators

YS		
Basis price	4	3
Add for each additional coat	1	11
	8	

On wood

Knot, prime, stop and apply one coat oil colour on general surfaces	YS		
Basis price	4	1	8
Add for each additional coat	1	8	10

On work not exceeding 3-in. girth	YR		
Basis price	7	1½	2½
Add for each additional coat		1	

On work 3-in. to 6-in. girth	YR		
Basis price	10	2½	4
Add for each additional coat		1½	

Stain and varnish

Prepare, size, stain and twice varnish on general surfaces of woodwork	YS	4	6
		1	9
On work not exceeding 3-in. girth	YR	7½	1½
On work 3-in. to 6-in. girth	YR	11	2½

Oiling and polishing

Twice oiling general surfaces of hardwood with linseed oil	YS	2	7
		1	1

On work not exceeding 3-in. girth	YR	3	1
-----------------------------------	----	---	---

On work 3-in. to 6-in. girth	YR	4½	1½
------------------------------	----	----	----

Staining and wax polishing general surfaces of hardwood	FS	1	1
---------------------------------------------------------	----	---	---

Staining bodying-in and fully French polishing on general surfaces of hardwood	FS	2	8
--------------------------------------------------------------------------------	----	---	---

Papering

Preparing and sizing walls and hanging plain lining paper	Piece	11	2
		3	3

Hanging wall paper, p.c. 10s. per piece	Piece	21	2
		12	9

Hanging border p.c. 1s. per yd.	YR	1	9
		1	3

ALPHABETICAL INDEX TO DEC. 22, 1960 A-D

The Architects' Journal Library of Information Sheets 797. Editor: Cotterell Butler, A.R.I.B.A.

46. ZI

ABM, see Associated Builders Merchants Ltd.
Accelerators, for small-bore heating systems

29.H7
Accordo Blinds Ltd., pleated blinds .. 42.K2

Acoustele, see Gyproc Products Ltd.
Acousti-Celotex, see Cullum, Horace W., & Co. Ltd.

Acoustics, acoustic panels 27.B9 27.C2 29.H5
 acoustic plaster .. 29.H2
 acoustic tiles 27.B10 27.B14 27.C1 27.C3

29.H6
 wood-wool slabs .. 14.K1

Adamsez Ltd., flushing troughs .. 33.Q4
Adshead, Ratcliffe & Co. Ltd., jointing mastic,

putty .. 26.M3

Aerials, television, communal .. 37.K1

Aga Heat Ltd., see True Flue Ltd.

Alar Ltd., aluminium .. 10.B2

Alcan Industries Ltd., aluminium .. 10.B2

Almin Ltd., aluminium .. 10.B2

Aluminium and Alloys, blinds, Venetian

cladding, wall .. 15.Q1

coatings, metal spraying .. 40.B2

corrugated sheeting .. 16.B1 16.C1

curtain walling .. 21.C5

general data .. 10.B1 10.B2 10.B5

roof decking .. 20.Z1 20.Z5 20.Z7

sections, non-structural .. 10.B3

sections, structural .. 10.B4

surface finishes .. 10.B5 41.B1 41.B2

windows, picture, sliding .. 24.F1

window, sash double-hung .. 24.E1

see also Complete, Framed, Structures; Roof Construction, Composite; Windows

Aluminium Corporation Ltd., aluminium 10.B2

Aluminium Development Association, aluminium and alloys 10.B1 10.B2 10.B3

10.B4 10.B5 16.B1 16.C1 41.B1 41.B2

Aluminium Union Ltd., aluminium .. 10.B2

Aluminium Wire & Cable Co. Ltd., aluminium 10.B2

Analyses, cost .. 1.C1 1.C2 1.C3 1.C4

Ancote, see Anderson, D., & Son Ltd.

Andek, see Anderson, D., & Son Ltd.

Anderson Construction Co. Ltd., Anderson

wedge method, board fixing .. 22.D12

Anderson wedge method, invisible board

fixing .. 22.D13

Anderson, D., & Son Ltd., aluminium roof

decking .. 20.Z5 20.Z7 20.Z9

gypsum concrete roof .. 20.D6

steel roof decking .. 20.Z10 20.Z14

Anemone, see English Rose Kitchens Ltd.

Angle Beads, steel, general data .. 26.J20

Anodising, aluminium and alloys 10.B5 41.B1

41.B2

Anti-Vibration Mountings, rubber .. 27.Z2

Aqualite, see Briggs, William, & Sons Ltd.

Arbolite, Arbomast, see Adshead, Ratcliffe & Co. Ltd.

Arens Controls Ltd., window control systems

24.S1 24.S2

Art Pavements & Decorations Ltd., tile, terrazzo

slab lavatory cubicles .. 43.Z3

Asbestolux, see Cape Building Products Ltd.

Asbestos, Asbestos-Cement, see Fire Protection;

Panels; Roof and Wall Linings; Tiles

Ascot Gas Water Heaters Ltd., Ascot heaters

32.C20 32.C21 32.C22 32.C23 32.C24

32.C25 32.C26 32.C27 32.C28 32.C29

32.C30 32.C31 32.C32 32.C33 32.C34

Bee taps .. 32.C30

Thor washing machine, Parnall wringlet

32.C29

Ashwell & Nesbit Ltd., Iron Fireman mechanical

stokers .. 29.J1 29.J3 29.J4 29.J5

29.J6

Asphalt, applications .. 12.F2

copper vents .. 26.Z1

d.p.c.'s .. 26.A2

flooring .. 19.D1

general data .. 12.F1

tanking .. 26.A3

Associated Builders Merchants Ltd., cistern,

bitumen .. 33.Q6

sink, fireclay .. 33.T1

trap, polythene .. 33.P2

Zonal fire .. 29.B2

Association of Metal Sprayers, metal spraying

46.B2

Atlanta, see Bilston Foundries Ltd.

Austins of East Ham Ltd., doors, timber

23.B1 23.B2

Autogrip, see Invisible Panel Warming Association, The

Automatic Telephone & Electric Co. Ltd.,

private branch exchanges .. 37.H11

B.B. Lathing, see Expanded Metal Co. Ltd.

Barrymount, see Cementation (Muffelite) Ltd.

Baths, cast iron, vitreous-enamelled .. 33.S1

33.S3

overflow, waste fitting .. 33.P3 33.S1

29.B1

Baxi, see Baxendale, Richard, & Sons Ltd.

Bayliss, Jones & Bayliss Ltd., Morliss fencing,

gates .. 26.C1

Beams, calculations 2.B2 2.B3 6.A10 6.A11

steel, lattice .. 20.C10 20.C13

see also Joists

Bee, see Ascot Gas Water Heaters Ltd.

Beckett, Laycock & Watkinson Ltd., adjustable

spring tape sash balance .. 44.J1

Bell & Webster Ltd., concrete fencing 26.C2

Bilston Foundries Ltd., Atlanta bath .. 33.S1

Princess bath .. 33.S3

Birch, J. C., Ltd., floor insulating clips 27.F2

Birmabright Ltd., aluminium .. 10.B2

Birmetals Ltd., aluminium .. 10.B2

Birmid Industries Ltd., aluminium .. 10.B2

Birmingham Aluminium Casting (1903) Co. Ltd., aluminium .. 10.B2

Bison, see Concrete Ltd.

Bitumen, Moulded, w.c. cistern .. 33.Q6

Bitumetal, see Briggs, William, & Sons Ltd.

Blinds, dark, sun, pleated .. 42.K2

Venetian, aluminium .. 42.K3

Blocks, Clay, Hollow, see Floor Construction,

Wall Construction

Concrete, lightweight 6.C1 14.K2 14.K3

see also Chimneys

Stone, reconstructed, wall .. 14.F1

Blue Hawk, see British Plaster Board (Manufacturing) Ltd., The

Blunn, Allan, Ltd., see Durasteel Ltd.

Boards, Asbestos, general data 15.B4 36.A2

see also Fire Protection, Roof and Wall

Linings

Building, ceilings, roof linings 22.D1 22.D2

22.D3 22.D4 22.D5 22.D6 22.D7

general data, jointing .. 15.B1 15.C1

plastering .. 15.C3

Fibreboard, see Ceiling Construction,

Suspended; Roof and Wall Linings

Foamed Polystyrene, fixing system .. 26.J4

general data .. 14.K4

Hardboard, general data .. 15.B1 15.C1

jointing .. 15.C1

moulded .. 15.B5

painting .. 15.C4

Insulating, general data, jointing .. 15.B1

15.C1

painting .. 15.C4

Insulating, general data, jointing .. 15.B1

15.C1

painting .. 15.C4

thermal acoustic .. 27.C2

see also Ceiling Construction, Suspended;

Ceilings, Sound and Thermal Insulation;

Form Lining; Permanent Shuttering;

Roof and Wall Linings; Roofs, Sound

and Thermal Insulation; Wall Con-

struction

Plaster, ceilings .. 22.E1 22.E2

see also Ceilings; Partition Construction,

Fire-Resisting; Roof and Wall Linings

Boilers, see Heating, Boilers

Bolton Gate Co. Ltd., folding shutter doors

23.E1

Booth, James, & Co. Ltd., aluminium 10.B2

Bournbrite, Bourne Glem, Bourne Seal, see

Floor Treatments Ltd.

Bow Slate & Enamel Co. Ltd., copings 5.B1

facing .. 5.B2

flooring and paving .. 18.N1

sills, copings, creasing .. 24.Z1 24.Z3

surrounds, window .. 24.Z2

Bowater Sales Co. Ltd., Building Boards Division, Bowater boards

15.B1 15.C1

15.C2 27.F1 28.D1 28.E10

Bowater boards, fixing systems 22.D1

22.D2 22.D3 22.D4 22.D5 22.D6 22.D7

Bowater boards, painting .. 15.C4

Bowater boards, plastering .. 15.C3

thermal acoustic panels .. 27.C2

Bowaters Irish Wallboard Mills Ltd., see

Bowater Sales Co. Ltd.

Bratt Colbran Ltd., Lutello gas fire .. 29.C10

Bricks, cellular .. 13.F1

sandlime, general data .. 13.H1

standard specials 13.C10 13.C11 13.C12

see also Wall Construction, Brick

Brickwork, designed .. 2.B6

key for plastering, rendering .. 7.Z1

silicone treatments .. 40.C2

Briggs, William, & Sons Ltd., Aqualite bitumen

d.p.c. .. 16.J1

Bitumetal roof deck .. 20.Z1

Challenge bitumen roofing .. 16.J1

British Aluminium Co. Ltd., aluminium 10.B2

cladding, aluminium alloy .. 15.Q1

British Ceramic Tile Council, tile fireplaces,

fixing .. 29.B3

British Challenge Glazing Co., Challenge

glazing bars 24.J1 24.M2 24.N1 24.N2

Challenge lantern lights .. 24.J1

British Insulated Callender's Cables Ltd.,

electric service units, domestic .. 37.C1

British Plaster Board (Manufacturing) Ltd., The,

ceiling panels .. 22.G1

British Wire Process of Metal Spraying, see

Association of Metal Sprayers

Briton, see Newman, William, & Sons Ltd.

Broads Manufacturing Co. Ltd., duct covers,

steel .. 37.Z1

Broughton Moor Green Slate Quarries Ltd., The,

slates, roofing .. 17.J1

Building Science, beam calculations .. 2.B2

2.B3 2.B4

brickwork, designed .. 2.B6

conversion factors .. 2.A1

conversion tables .. 2.A3 2.A4

geometric figures, characteristics 2.H1 2.H2

loads, floor .. 2.B4

mathematical formulae .. 2.A2

plane sections, geometrical properties 2.B1

slide rule .. 2.A2

weights, building materials .. 2.B5

Bulldog, see MacAndrews & Forbes Ltd.

Bus Shelters, steel .. 26.Z3

Cable Strippers Ltd., lighting equipment, sus-

pension for .. 34.K1

technical section

Internal plumber continued s d

1-in. *11	11
8	9
1½-in. *14	11
11	1
1½-in. *24	4
19	11
Tee ½-in. *9	9
6	4
¾-in. *11	4
7	4
1-in. *16	7
11	11
1½-in. *22	6
17	3
1½-in. *33	9
27	10

GLAZIER

Market prices

Sheet glass cut to size	FS	
24 oz.	0	11½
32 oz.	1	6½

¾-in. polished plate glass, glazing quality in plates not exceeding:	FS	
2 ft. super	4	1½
5 ft. super	5	0½
45 ft. super	6	1
100 ft. super	6	7½

Rolled plate glass	FS	
¾-in. rolled plate	1	2½
¾-in. Georgian wired	6	2

Attention is drawn to reduction in certain glass prices offered by manufacturers for acceptance of specified minimum quantities of one size and substance delivered to one address at one time

Measured rates

Glazing to wood

Ordinary quality sheet glass and glazing with putty in squares	FS	
24 oz. O.Q.	1	6
32 oz. O.Q.	2	1

¾-in. rolled plate glass	1	8
¾-in. rough cast glass	2	1
Prismatic glass	2	9
¾-in. wired glass	2	5
¾-in. Georgian wired plate glass	8	4
¾-in. polished plate glass (glazing quality) in plates 5 to 45 ft. super	7	11

Glazing to metal

Add to above rates 1d. per ft. super

Sundries

Hacking out broken sheet glass	FS	1	3
Black ribbon velvet and bedding to edge of glass	FR		8

Double glazing
Insulight units of two skins of glass with lead spacers

and glazing with mastic or beads (supplied). In panels 16 to 40 ft. super	FS	
32 oz. sheet	10	11
¾-in. polished plate	22	3

Patent glazing

Patent glazing with rolled steel lead capped bars for 8-ft. spans and glazing with ¾-in. Georgian wired cast	FS	4	9
--------------------------------------------------------------------------------------------------------------	----	---	---

Aluminium alloy patent glazing	FS	4	8
--------------------------------	----	---	---

PAINTER

Market prices

Washable distemper	C	120	0
Emulsion paint	Gal.	45	0
Hard gloss paint:	Gal.		
Undercoat	46	0	
Finishing	46	0	

Measured rates

On walls and ceilings	YS		
Twice whiten plastered ceilings	1	6	3

Two coats distemper on plastered walls or ceilings	2	3	
	1	0	

Two coats distemper on fair-faced brick or concrete walls	2	9	
	1	3	

Two coats emulsion paint on walls or ceilings	2	11	
	1	8	

Prepare, prime and apply one coat oil colour on plastered walls	3	8	
	1	6	

Add for each additional coat	1	9	
		10	

On metal

Prepare, prime and apply one coat oil colour on general surfaces	YS		
------------------------------------------------------------------	----	--	--

Basis price	3	8	
	1	6	
Add for each additional coat	1	8	
		10	

On windows in squares	YS		
Basis price	5	2	
		9	

Add for each additional coat	2	2	
		5	

On bars, angles, etc., not exceeding 3-in. girth	YR		
Basis price	6		
	2		

Add for each additional coat	3		
	1		

On small pipes	YR		
Basis price	1	0	
	3		

Add for each additional coat	5		
	2		

On large pipes	YR		
Basis price	2	0	
		6	

Add for each additional coat	10		
		3	

Prepare, prime and apply one coat heat-resisting paint on heating surfaces of radiators

YS			
Basis price	4	3	
	1	4	

Add for each additional coat	1	11	
		8	

On wood

Knot, prime, stop and apply one coat oil colour on general surfaces

YS			
Basis price	4	1	
	1	8	

Add for each additional coat	1	8	
		10	

On work not exceeding 3-in. girth	YR		
Basis price	7		
	1½		

Add for each additional coat	2½		
		1	

On work 3-in. to 6-in. girth	YR		
Basis price	10		
	2½		

Add for each additional coat	4		
		1½	

Stain and varnish

Prepare, size, stain and twice varnish on general surfaces of woodwork

YS	4	6	
	1	9	

On work not exceeding 3-in. girth	YR	7½	
		1½	

On work 3-in. to 6-in. girth	YR	11	
		2½	

Oiling and polishing

Twice oiling general surfaces of hardwood with linseed oil

YS	2	7	
	1	1	

On work not exceeding 3-in. girth	YR	3	
		1	

On work 3-in. to 6-in. girth	YR	4½	
		1½	

Staining and wax polishing general surfaces of hardwood

FS	1	1	
----	---	---	--

Staining bodying-in and fully French polishing on general surfaces of hardwood

FS	2	8	
----	---	---	--

Papering

Preparing and sizing walls and hanging plain lining paper

Piece	11	2	
	3	3	

Hanging wall paper, p.c. 10s. per piece

Piece	21	2	
	12	9	

Hanging border p.c. 1s. per yd.

YR	1	9	
	1	3	

ALPHABETICAL INDEX TO DEC. 22, 1960 A-D

The Architects' Journal Library of Information Sheets 797. Editor: Cotterell Butler, A.R.T.B.A.

46. ZI

- ABM**, see Associated Builders Merchants Ltd.
- Accelerators**, for small-bore heating systems 29.H7
- Accordo Blinds Ltd.**, pleated blinds 42.K2
- Acoustele**, see Gyproc Products Ltd.
- Acousti-Celotex**, see Cullum, Horace W., & Co. Ltd.
- Acoustics**, acoustic panels 27.B9 27.C2 29.H5
acoustic plaster 29.H2
acoustic tiles 27.B10 27.B14 27.C1 27.C3 29.H6
wood-wool slabs 14.K1
- Adamses Ltd.**, flushing troughs 33.Q4
- Adshead, Ratcliffe & Co. Ltd.**, jointing mastic, putty 26.M3
- Aerials**, television, communal 37.K1
- Aga Heat Ltd.**, see True Flue Ltd.
- Alar Ltd.**, aluminium 10.B2
- Alcan Industries Ltd.**, aluminium 10.B2
- Almin Ltd.**, aluminium 10.B2
- Aluminium and Alloys**, blinds, Venetian cladding, wall 42.K3
coatings, metal spraying 15.Q1
corrugated sheeting 40.B2
curtain walling 16.B1 16.C1 21.C5
general data 10.B1 10.B2 10.B5 20.Z1 20.Z5 20.Z7
roof decking 10.B3
sections, non-structural 10.B4
sections, structural 10.B5 41.B1 41.B2
surface finishes 24.F1
windows, picture, sliding 24.E1
window, sash double-hung 24.E1
see also Complete, Framed, Structures; Roof Construction, Composite; Windows
- Aluminium Corporation Ltd.**, aluminium 10.B2
- Aluminium Development Association**, aluminium and alloys 10.B1 10.B2 10.B3 10.B4 10.B5 16.B1 16.C1 41.B1 41.B2
- Aluminium Union Ltd.**, aluminium 10.B2
- Aluminium Wire & Cable Co. Ltd.**, aluminium 10.B2
- Analyses**, cost 1.C1 1.C2 1.C3 1.C4
- Ancote**, see Anderson, D., & Son Ltd.
- Andek**, see Anderson, D., & Son Ltd.
- Anderson Construction Co. Ltd.**, Anderson wedge method, board fixing 22.D12
Anderson wedge method, invisible board fixing 22.D13
- Anderson, D., & Son Ltd.**, aluminium roof decking 20.Z5 20.Z7 20.Z9
gypsum concrete roof 20.D6
steel roof decking 20.Z10 20.Z14
- Anemone**, see English Rose Kitchens Ltd.
- Angle Beads**, steel, general data 26.J20
- Anodising**, aluminium and alloys 10.B5 41.B1 41.B2
- Anti-Vibration Mountings**, rubber 27.Z2
- Aqualite**, see Briggs, William, & Sons Ltd.
- Arbolite**, Arbomast, see Adshead, Ratcliffe & Co. Ltd.
- Arens Controls Ltd.**, window control systems 24.S1 24.S2
- Art Pavements & Decorations Ltd.**, tile, terrazzo slab lavatory cubicles 43.Z3
- Asbestolux**, see Cape Building Products Ltd.
- Asbestos**, Asbestos-Cement, see Fire Protection; Panels; Roof and Wall Linings; Tiles
- Ascot Gas Water Heaters Ltd.**, Ascot heaters 32.C20 32.C21 32.C22 32.C23 32.C24 32.C25 32.C26 32.C27 32.C28 32.C29 32.C30 32.C31 32.C32 32.C33 32.C34
- Bee taps** 32.C30
- Thor washing machine**, Parnall wringlet 32.C29
- Ashwell & Nesbit Ltd.**, Iron Fireman mechanical stokers 29.J1 29.J3 29.J4 29.J5 29.J6
- Asphalt**, applications 12.F2
copper vents 26.Z1
- d.p.c.'s** 26.A2
flooring 19.D1
general data 12.F1
tanking 26.A3
- Associated Builders Merchants Ltd.**, cistern, bitumen 33.Q6
sink, fireclay 33.T1
trap, polythene 33.P2
Zonal fire 29.B2
- Association of Metal Sprayers**, metal spraying 40.B2
- Atlanta**, see Bilston Foundries Ltd.
- Austins of East Ham Ltd.**, doors, timber 23.B1 23.B2
- Autogrip**, see Invisible Panel Warming Association, The
- Automatic Telephone & Electric Co. Ltd.**, private branch exchanges 37.H11
- B.B. Lathing**, see Expanded Metal Co. Ltd.
- Barrymount**, see Ceneration (Muffelite) Ltd.
- Baths**, cast iron, vitreous-enamelled 33.S1 33.S3
overflow, waste fitting 33.P3 33.S1
- Baxendale, Richard, & Sons Ltd.**, Baxi fire 29.B1
- Baxi**, see Baxendale, Richard, & Sons Ltd.
- Bayliss, Jones & Bayliss Ltd.**, Morliss fencing, gates 26.C1
- Beams**, calculations 2.B2 2.B3 6.A10 6.A11
steel, lattice 20.C10 20.C13
see also Joists
- Bee**, see Ascot Gas Water Heaters Ltd.
- Beckett, Laycock & Watkinson Ltd.**, adjustable spring tape sash balance 44.J1
- Bell & Webster Ltd.**, concrete fencing 26.C2
- Bilston Foundries Ltd.**, Atlanta bath 33.S1
Princess bath 33.S3
- Birch, J. C., Ltd.**, floor insulating clips 27.F2
- Birmabright Ltd.**, aluminium 10.B2
- Birmetals Ltd.**, aluminium 10.B2
- Birmid Industries Ltd.**, aluminium 10.B2
- Birmingham Aluminium Casting (1903) Co. Ltd.**, aluminium 10.B2
- Bison**, see Concrete Ltd.
- Bitumen**, Moulded, w.c. cistern 33.Q6
- Bitumetal**, see Briggs, William, & Sons Ltd.
- Blinds**, dark, sun, pleated 42.K2
Venetian, aluminium 42.K3
- Blocks**, Clay, Hollow, see Floor Construction, Wall Construction
Concrete, lightweight 6.C1 14.K2 14.K3
see also Chimneys
Stone, reconstructed, wall 14.F1
- Blue Hawk**, see British Plaster Board (Manufacturing) Ltd., The
- Blunn, Allan, Ltd.**, see Durasteel Ltd.
- Boards**, Asbestos, general data 15.B4 36.A2
see also Fire Protection, Roof and Wall Linings
- Building**, ceilings, roof linings 22.D1 22.D2 22.D3 22.D4 22.D5 22.D6 22.D7
general data, jointing 15.B1 15.C1
plastering 15.C3
- Fibreboard**, see Ceiling Construction, Suspended; Roof and Wall Linings
- Foamed Polystyrene**, fixing system 26.J4
general data 14.K4
- Hardboard**, general data 15.B1 15.C1
jointing 15.C1
moulded 15.B5
painting 15.C4
- Insulating**, general data, jointing 15.B1 15.C1
- painting 15.C4
thermal acoustic 27.C2
see also Ceiling Construction, Suspended; Ceilings, Sound and Thermal Insulation; Form Lining; Permanent Shuttering; Roof and Wall Linings; Roofs, Sound and Thermal Insulation; Wall Construction
- Plaster**, ceilings 22.E1 22.E2
see also Ceilings; Partition Construction, Fire-Resisting; Roof and Wall Linings
- Boilers**, see Heating, Boilers
- Bolton Gate Co. Ltd.**, folding shutter doors 23.E1
- Booth, James, & Co. Ltd.**, aluminium 10.B2
- Bournbrite**, Bourne Gleem, Bourne Seal, see Floor Treatments Ltd.
- Bow Slate & Enamel Co. Ltd.**, copings 5.B1
facing 5.B2
flooring and paving 18.N1
sills, copings, creasing 24.Z1 24.Z3
surrounds, window 24.Z2
- Bowater Sales Co. Ltd.**, Building Boards Division, Bowwater boards 15.B1 15.C1 15.C2 27.F1 28.D1 28.E10 28.E11
Bowater boards, fixing systems 22.D1 22.D2 22.D3 22.D4 22.D5 22.D6 22.D7
Bowater boards, painting 15.C4
Bowater boards, plastering 15.C3
thermal acoustic panels 27.C2
- Bowaters Irish Wallboard Mills Ltd.**, see Bowater Sales Co. Ltd.
- Bratt Colbran Ltd.**, Lutello gas fire 29.C10
- Bricks**, cellular 13.F1
sandlime, general data 13.H1
standard specials 13.C10 13.C11 13.C12
see also Wall Construction, Brick
- Brickwork**, designed 2.B6
key for plastering, rendering 7.Z1
silicone treatments 40.C2
- Briggs, William, & Sons Ltd.**, Aqualite bitumen d.p.c. 16.J1
Bitumetal roof deck 20.Z1
Challenge bitumen roofing 16.J1
- British Aluminium Co. Ltd.**, aluminium 10.B2
cladding, aluminium alloy 15.Q1
- British Ceramic Tile Council**, tile fireplaces, fixing 29.B3
- British Challenge Glazing Co.**, Challenge glazing bars 24.J1 24.M2 24.N1 24.N2
Challenge lantern lights 24.J1
- British Insulated Callender's Cables Ltd.**, electric service units, domestic 37.C1
- British Plaster Board (Manufacturing) Ltd.**, The, ceiling panels 22.G1
- British Wire Process of Metal Spraying**, see Association of Metal Sprayers
- Briton**, see Newman, William, & Sons Ltd.
- Broads Manufacturing Co. Ltd.**, duct covers, steel 37.Z1
- Broughton Moor Green Slate Quarries Ltd.**, The, slates, roofing 17.J1
- Building Science**, beam calculations 2.B2 2.B3 2.B4
brickwork, designed 2.B6
conversion factors 2.A1
conversion tables 2.A3 2.A4
geometric figures, characteristics 2.H1 2.H2
loads, floor 2.B4
mathematical formulae 2.A2
plane sections, geometrical properties 2.B1
slide rule 2.A2
weights, building materials 2.B5
- Bulldog**, see MacAndrews & Forbes Ltd.
- Bus Shelters**, steel 26.Z3
- Cable Strippers Ltd.**, lighting equipment, suspension for 34.K1

46.Z1 ALPHABETICAL INDEX TO DEC. 22, 1960 (A-D)

Callow & Keppich Ltd., Stonite wall finishing materials .. 7.C1 7.C2
Cape Building Products Ltd., asbestos board .. 15.B4 36.A2
Carpeting, see Floor Coverings; Stairs
Carter & Co., London, Ltd., see Carter Tiles Ltd.
Carter Tiles Ltd., tile, terrazzo slab, lavatory cubicles .. 43.Z3
Cattle Pens, steel .. 26.Z3
Cavendish, see Shanks & Co. Ltd.
Cavity Walls, see Wall Construction, Cavity
Ceilings, asbestos composition panels, steel-faced .. 15.R1
key for plastering .. 7.Z1
panels, plasterboard/foamed polyurethane .. 22.G1
plaster board .. 22.F1
Heating, panels .. 29.H2 29.H5 29.H6
Suspended, acoustic panels .. 27.B9 27.C2
acoustic tiles .. 27.B10 27.B14 27.C1 27.C3
eggcrate, plastic .. 34.Z1
expanded metal lathing .. 22.F2 22.F3
fixing system .. 26.J4
illuminated .. 22.Z1 34.Z2
insulating board .. 22.D1 22.D2 22.D3 22.D5 22.D6 22.D7 22.D12 22.D13 22.E1 22.E2
invisible fixing .. 22.D3 22.D13 22.F1
plaster board .. 22.E1 22.E2 22.F1
Sound Insulation, glass fibres, general data .. 8.E1
heating acoustic ceilings .. 29.H5 29.H6
insulating board .. 15.B1 22.D1 22.D2 22.D3 22.D5 22.D6 22.D7 27.C2
thermal acoustic panels .. 27.C2
Thermal Insulation, glass fibres .. 8.E1
insulating board .. 15.B1 22.D1 22.D2 22.D3 22.D5 22.D6 22.D7 28.E10
panels, plasterboard/foamed polyurethane .. 22.G1
plaster board, plastered .. 22.E1 22.E2 22.F1
thermal acoustic panels .. 27.C2
Celcon Ltd., cellular concrete .. 6.C1
Celotex Ltd., metal acoustic tiles .. 27.B14
Cementation (Muffelite) Ltd., anti-vibration mountings .. 27.Z2
Cement Marketing Co. Ltd., The, key for plastering, rendering .. 7.Z1
Cement Plaskey, see Cement Marketing Co. Ltd., The
Cemprover, see Cement Marketing Co. Ltd., The
Centrolineads .. 1.B41
Challenge (glazing bars, lantern lights), see British Challenge Glazing Co.
Challenge (roofing), see Briggs, William, & Sons Ltd.
Chemi-Sealed Turquoise, see Eagle Pencil Co.
Chemical Closets .. 33.Q1
Chimneys, lead flashings, for tiled, slated, roofs .. 10.G1 10.G2 10.G4
precast concrete blocks .. 30.B3 30.B4 30.B5 30.C1 30.C2 30.C3 30.C4
see also Flues
Chipboard, resin-bonded .. 11.F1
Chromolith, see Langley London Ltd.
Circuit Breakers, see Power Supply, Electric
Cisterns, flushing, for w.c.'s .. 33.Q6 33.Z1
storage, steel, galvanised .. 42.B2
Clark & Fenn Ltd., see Stramax Ceilings (G.B.) Ltd.
Clark, James, & Eaton Ltd., plate glass .. 8.F1
Classification, Information Sheets .. 1.A1
Clifford Products Ltd., clothes drying cabinets .. 37.D10
Coal Utilisation Council, tile fireplaces, fixing .. 29.B3

Coburn Engineers Ltd., sliding garage doors .. 23.Z1
Cold Stores, insulation, cellular concrete .. 6.C1
Colron, see Ronuk Ltd.
Complete Structures, aluminium .. 25.A1 25.A2 25.A3 25.A4 25.A5 25.A6
concrete .. 25.B1 25.B2 25.B3 25.B4
Concrete, key for plastering, rendering .. 7.Z1
Cellular, precast, in-situ .. 6.C1
Ducts, cellular concrete insulation .. 6.C1
pneumatic tubing .. 6.Z2 6.Z3 6.Z5 6.Z6
Formwork, metal .. 20.D6
Gypsum, in-situ roofs .. 26.E2
Piles, precast .. 20.D2 20.D3
Prestressed, plank floors .. 6.A1 6.B2
principles .. 25.B1 25.B2 25.B3 25.B4
shell roofs .. 25.B1 25.B2 25.B3 25.B4
structural system .. 20.D3 20.Z11 20.Z12 20.Z13
Reinforced, beam and slab design .. 6.A10 6.A20 6.A21
plank floors .. 25.B1 25.B2 25.B3 25.B4
structural system .. 40.C2
Treatments, silicone .. 20.D2 20.D3
Concrete Ltd., prestressed, reinforced, plank floor .. 20.D2 20.D3
Conquest, see Pyrene Co. Ltd.
Contiduct, see Ductube-Udall Ltd.
Controls, for hot water heating systems .. 29.A1
Conversion Factors, miscellaneous .. 2.A1
Conversion Tables, mathematics .. 2.A3 2.A4
Cooking, Electric, cookers .. 43.E15
Gas, cookers .. 31.C2 31.C4 43.E15
Copings, slate .. 5.B1 24.Z1
Copper, rainwater goods .. 33.U1
roofing tiles .. 17.H2
vents, for roof coverings .. 26.Z1
see also Plumbing, Water, Units; Rain-water Goods; Roof Coverings, Sheetting
Copper Development Association, rainwater goods .. 33.U1
Corblanit, see Monsanto Chemicals Ltd.
Cork, see Floor Finishes
Corroglaze Ltd., corrugated glass sheeting .. 24.T1
Corrosion Prevention, aluminium, weathering, maintenance .. 10.B5 41.B1 41.B2
metal spraying .. 40.B2
sherardizing .. 40.B1
Cortex, see London Brick Co. Ltd.
Costs, analyses .. 1.C1 1.C2 1.C3 1.C4
Counters, see Furniture, Counters
Creasing, slate .. 24.Z1
Crittall Manufacturing Co. Ltd., The, glass louvres, ventilating .. 30.D22
window, double-hung sash, aluminium .. 24.E1
Ctesiphon Construction Ltd., shell roofs, corrugated .. 6.B2
Cubicles, curtain track .. 44.D3
see also Showers; W.C.'s, Compartments.
Cullum, Horace W., & Co. Ltd., fixing system for Acousti-Celotex tiles .. 27.B10
Cupboards, see Furniture, Kitchen
Curran, Edward, Engineering Ltd., panels, vitreous-enamelled steel .. 19.H1
Curtain Fittings, rails, runners, tracks .. 44.D1, 44.D2 44.D3 44.D4
Curtain Walls, aluminium alloy .. 21.C5
blocks, lightweight .. 14.K3
panels, vitreous-enamelled steel .. 19.H1
sealer, mastic .. 26.M1 26.M2 26.M3
sealer, synthetic rubber .. 26.M4 26.M5

Cycle racks, steel .. 26.Z3
Cycloramas, theatre planning .. 4.L7
Cylinders, Water, steel, galvanised .. 42.B2
Damp-proof Courses, asphalt .. 12.F1 26.A2
bitumen, parapets .. 16.J1
lead, cavity walls .. 26.A3
lead, chimneys .. 10.G15
Damp-Proofing, concrete floors .. 19.G3
silicone treatments .. 40.C2
stone paints .. 40.C1
tanking, asphalt .. 26.A3
Deathwatch Beetle, treatment for .. 40.A2
Dexter Lock Co., U.S.A., door furniture .. 44.J3
Display, fittings, aluminium .. 43.H1 43.H2
Perspex .. 43.H3
Diving Stages, steel .. 26.Z3
Dock-O-Matic, see Wayne Tank & Pump Co. Ltd.
Domes, see Rooflights
Don, see Small & Parkes Ltd.
Doors, Equipment, locks .. 44.J2 44.J3 44.J4
Flush, framed core, metal-faced .. 15.Z1
plywood core, metal-faced .. 43.Z2
timber core, plywood-faced .. 23.B3
Folding, shutter doors .. 23.E1
Frames, joint sealing .. 26.M1 26.M2 26.M3
steel, external, internal .. 26.J20
Glazed, timber, external, internal .. 23.B1 23.B2
timber core, plywood-faced .. 23.B3
Panelled, timber, external, internal .. 23.B1 23.B2
Rolling Shutters, aluminium alloy .. 23.H7
Sliding, garage .. 23.Z1
overhead .. 23.H7
Douglas, Robert, M. (Contractors) Ltd., piles, precast concrete .. 26.E2
Doulton Sanitary Potteries Ltd., sanitary fittings, vitreous china .. 33.Z1
Drainage, Fittings, see Manholes
Roofs, domestic, general data .. 33.J1
Services, concrete drains, sewers .. 6.Z5
fibre drainpipes .. 33.E1
sewage disposal .. 33.L1 33.L2 33.L3
see also Plumbing, Water
Draughtsmanship, abbreviations .. 1.B3
axonometric projection .. 1.B23 1.B24
drawing office conditions, equipment .. 1.B1
graphic symbols .. 1.B3 1.B4 1.B5 1.B5a
isometric projection .. 1.B23 1.B24
map notations .. 1.B5 1.B5a
pencil grades, papers .. 1.B2
rendering, gouache, water colour .. 1.B48 1.B49
shadow projection .. 1.B55 1.B56 1.B57
shadows cast by sun .. 4.A1 4.A2 4.A3
see also Geometrical Drawing; Lettering; Orthographic Projection; Perspective; Working Drawings
Drawing Office, conditions and equipment .. 1.B1
Dri-sil, see Midland Silicones Ltd.
Dry Rot, treatment for .. 40.A2
Dual-Freeze, see English Rose Kitchens Ltd.
Ducts, covers, steel .. 37.Z1
fibre, underfloor .. 37.C4
insulation, cellular concrete .. 6.C1
tubing, pneumatic rubber .. 6.Z1 6.Z2 6.Z3 6.Z5
Ductube-Udall Ltd., ducts in concrete .. 6.Z1 6.Z2 6.Z3 6.Z5
Duradio, see Walpamur Co. Ltd.
Durasteel Ltd., Durasteel panels, fire-resisting .. 15.R1
Galt-glass dome rooflights .. 24.L3

ALPHABETICAL INDEX TO DEC. 22, 1960 E-L

The Architects' Journal Library of Information Sheets 798. Editor: Cotterell Butler, A.R.I.B.A.

46.ZZ
46.ZZ

- E.C.C. (Moulded Breakers) Ltd.**, circuit breakers .. 37.C5
- Eagle Pencil Co.**, Chemi-Sealed Turquoise pencils, draughtsmanship 1.B1 1.B2 1.B3 1.B4 1.B5 1.B5a 1.B6 1.B7 1.B8 1.B9 1.B10 1.B11 1.B12 1.B13 1.B14 1.B15 1.B16 1.B18 1.B19 1.B20 1.B21 1.B22 1.B23 1.B24 1.B25 1.B26 1.B27 1.B28 1.B29 1.B30 1.B31 1.B32 1.B33 1.B34 1.B35 1.B36 1.B37 1.B38 1.B39 1.B40 1.B41 1.B48 1.B49
- Econa Modern Products Ltd.**, copper plumbing 33.B1 33.B2 33.D1
- Economatic**, see International Boilers and Radiators
- Ediswan**, see Siemens Edison Swan Ltd.
- Electricity**, see Heating, Space; Heating, Water; Power Supply
- Elkol**, see Elsan Manufacturing Co.
- Elsan Manufacturing Co.**, Elsan chemical closets .. 33.Q1
- Elsanol**, see Elsan Manufacturing Co.
- English Rose Kitchens Ltd.**, heat pump kitchen equipment 43.E13 43.E14 43.E15
- Epic**, see Adamsez Ltd.
- Escalators** .. 35.B1 35.B2
- Eso Petroleum Co. Ltd.**, fuel oils, storage of 29.A2
- Evenflow**, see Jones & Attwood Ltd.
- Expanet**, see Expanded Metal Co. Ltd., The
- Expanded Metal Co. Ltd.**, The, expanded metal lathing .. 22.F2
- Expanded Metal**, lathing .. 22.F2 22.F3
- F.R.X.**, see Durasteel Ltd.
- Factories**, anti-vibration mountings .. 27.Z2
- flooring, slate .. 18.N1
- lavatory cubicles, metal-faced plywood 43.Z2
- lavatory cubicles, tile or terrazzo slab 43.Z3
- shelving, timber .. 42.C7
- Fencing**, concrete .. 26.C2
- steel .. 26.C1
- Fenestra**, see Crittall Manufacturing Co. Ltd.
- Ferodo Ltd.**, stair treads, metal, fabric or composition filled .. 19.Z11
- Fibreglass Ltd.**, Fibreglass materials .. 8.E1
- Fire Protection**, extinguishers .. 36.B1 36.B2
- fire resistance, gradings .. 36.A5 36.A6
- hose-reel .. 36.B1
- steelwork, protection of .. 15.B4 36.A1 36.A2
- see also Ceilings; Doors; Partition Construction; Roof Construction
- Fireplaces**, slate .. 29.B4
- tile, fixing .. 29.B3
- Fires**, see Heating
- Firmin & Collins Ltd.**, movable unit partitioning .. 21.E3
- Fixing Systems**, see Ceilings, Suspended; Roof and Wall Linings
- Flashings**, Bitumen, floors, roofs, walls 16.J1
- Lead, chimneys .. 10.G1 10.G2 10.G4 10.G15
- dormer windows, timber framed 10.G21
- glazed panels, steel roofs .. 10.G20
- mansard roofs .. 10.G6
- northlight, steel roofs .. 10.G20
- roofing, asphalt, flat .. 10.G13
- roofing, built-up bituminous, flat 10.G13
- roofing, lead, flat .. 10.G11 10.G14
- skylights, timber framed .. 10.G22
- slates, ridge saddles .. 10.G4
- Zinc**, roofs .. 10.J1 10.J2 10.J3
- Flavel**, see English Rose Kitchens Ltd.
- Fleming, E. and J.**, Dexter locks .. 44.J3
- Fletcher and Dixons Ltd.**, fireplaces, slate 29.B4
- Flexo Plywood Industries Ltd.**, Flexometal lavatory cubicles .. 43.Z2
- Flexometal panels .. 15.Z1 15.Z2
- Floor Construction**, beams, steel lattice 20.C10 20.C13
- clay blocks, hollow .. 14.B4
- concrete, prestressed, reinforced, plank 20.D2 20.D3 20.D4 20.D5
- flooring, beech .. 20.E1
- r.c. planks, hollow blocks 20.Z11 20.Z12 20.Z13
- woodwool insulation .. 14.L13
- Floor Coverings**, carpet fixing .. 26.J10
- cork carpet, details, general data, specification .. 19.G1 19.G2 19.G3
- hardboard, general data .. 15.B1
- linoleum, details, general data, specification 19.G1 19.G2 19.G3
- p.v.c. sheeting .. 19.K1
- Floor Finishes**, Jointless, asphalt 12.F1 19.D1
- linoleum .. 19.G1 19.G2 19.G3
- Slate, non-slip .. 18.N1
- Tiles, cork, details, general data .. 18.F2
- p.v.c. .. 19.K1
- Floor Loads**, superimposed 2.B4 6.A20 6.A21
- Floor Treatments Ltd.**, applied treatments 38.H1
- Floors**, Sound Insulation, cork carpet .. 19.G2 19.G3
- glass fibres, general data .. 8.E1
- insulating boards .. 27.F1
- insulating clips .. 27.F2
- polystyrene boards, foamed .. 14.K4
- Thermal Insulation**, cellular concrete 6.C1
- glass fibres, general data .. 8.E1
- polystyrene boards, foamed .. 14.K4
- U values, typical constructions .. 28.A3
- Treatments** .. 38.H1 38.H2
- Flues**, asbestos-cement .. 32.C28
- blocks, refractory concrete .. 30.B3 30.B4 30.B5 30.C1 30.C2 30.C3 30.C4
- convection and open fire combined 30.C1
- convector stove .. 30.C2
- gas, water circulators .. 32.C4
- gas, water, instantaneous heaters .. 32.C20 32.C21 32.C22 32.C26 32.C27 32.C28
- gas, water, storage heaters .. 32.C3
- nozzles, for gas fires .. 29.C1 29.C2 29.C10
- Flushform**, see Firmin & Collins Ltd.
- Formula**, mathematics .. 2.A2
- Foundations**, piles, concrete .. 26.E2
- Form Lining**, insulating board .. 15.C2
- Formwork**, metal .. 6.Z6
- Framed Structures**, Aluminium, prefab. system details, general data 25.A1 25.A2 25.A3 25.A4 25.A5 25.A6
- typical structures .. 10.B4
- Concrete**, complete system .. 25.B1 25.B2 25.B3 25.B4 20.C10 20.C13
- Steel**, high-tensile .. 20.C10
- Framework**, see Jones T. C., & Co. Ltd.
- French, Thomas, & Sons Ltd.**, Rufflette curtain fittings 44.D1 44.D2 44.D3 44.D4
- Fuel Oils**, storage of .. 29.A2
- Furniture**, Cabinets, clothes drying .. 37.D10
- Counters, tops, linoleum finish .. 19.G4
- tops, plywood, metal-faced .. 15.Z2
- Desks, tops, linoleum finish .. 19.G4
- Display**, fittings 43.H1 43.H2 43.H3
- Kitchen**, cooking, refrigerators .. 31.C2 31.C4 43.E15
- cupboards, aluminium .. 43.E14
- cupboards, steel .. 43.E13
- sink units, aluminium .. 43.E14
- sink units, steel .. 43.E13
- Lockers**, steel, for clothes .. 42.E1
- Schools** .. 4.A13
- Shelving**, aluminium .. 43.H1 43.H2
- chipboard .. 11.F1
- steel, adjustable, fixed .. 42.C1 42.C2
- timber, industrial .. 42.C7
- timber, library .. 42.C6
- Storage Bins**, steel, adjustable, fixed 42.C1 42.C2
- Storage Racks**, steel, for bars, tyres 42.C4
- steel tubular .. 42.Z2
- Tables**, tops, linoleum finish .. 19.G4
- Galt-Glass Laminates Ltd.**, dome rooflights 24.L3
- See also Durasteel Ltd.
- Games**, see Recreation, Games
- Garages**, cars, private, dimensions, turning circles .. 4.E1
- commercial vehicles, dimensions, turning circles .. 4.E2
- sliding doors .. 23.H7 23.Z1
- doors, timber, panelled .. 23.B1 23.B2
- Gas**, see Cooking; Heating, Space; Heating, Water; Plumbing; Power Supply
- Gascoigne, Geo. H., Co. Ltd.**, fittings for tubular steel assemblies .. 26.Z2 26.Z3 42.Z1 42.Z2
- Gates**, steel .. 26.C1
- posts, concrete, steel .. 26.C1
- Geometrical Drawing**, circles .. 1.B12
- curved surfaces, interpenetration .. 1.B16
- curves, special .. 1.B14
- dihedral angle .. 1.B11
- domical surfaces .. 1.B15
- ellipses .. 1.B13
- hyperbolas .. 1.B14
- parabolas .. 1.B14
- plane figures .. 1.B11
- Geometry**, circles, areas .. 2.H1
- common figures, characteristics 2.H1
- plane sections, properties .. 2.B1
- rectangles, areas .. 2.H2
- Gesco**, see Stephenson, G., & Co. Ltd.
- Gilbert-Ash Ltd.**, Intergrid concrete construction .. 25.B1 25.B2
- Glass**, corrugated sheeting .. 24.T1
- fibres, general data .. 8.E1
- louvre, ventilating .. 30.D22
- plate glass, finishes, worked .. 8.F1
- Glazing Bars**, see Roof Lights
- Golmet Ltd.**, doors, rolling, sliding .. 23.H7
- Grecon Systems Ltd.**, fixing system .. 26.J4
- Grilles**, window .. 26.D6
- Gripperege**, see Smoothedge Ltd.
- Guardrailing**, pedestrian .. 26.Z2
- Gutters**, see Rainwater Goods; Roof Construction, Gutters
- Gypklith**, see Gyproc Products Ltd.
- Gyproc Products Ltd.**, Acoustele ceiling 27.B9
- Gypklith woodwool slabs .. 14.K1 14.L12 14.L13 14.L14 14.L15 27.B9
- Gyproc plasters .. 22.F1
- Gypstele ceilings .. 22.E1 22.E2
- Gypunit partition .. 21.G2
- Plaxstele ceiling .. 22.F1
- Gypstele**, **Gypunit**, see Gyproc Products Ltd.
- Halcrete Panels Ltd.**, dome rooflights 24.L2
- Hall, J. & E., Ltd.**, escalators 35.B1 35.B2
- Hardboard**, see Boards
- Harris and Sheldon (Display) Ltd.**, fittings, display .. 43.H3

46.Z2 ALPHABETICAL INDEX TO DEC. 22, 1960 (E-L)

- Harris & Sheldon (Electrical) Ltd.*, plastic eggcrate ceiling .. 34.Z1
 fluorescent fittings .. 34.K2
 plastic illuminated ceiling .. 34.Z2
Harvey, G. A., & Co. (London) Ltd., cisterns, cylinders, tanks .. 42.B2
 copper roofing .. 10.E1
 extract ventilators .. 30.D1
 gutters, heavy pressed steel .. 33.U5
 Metalace, woven wirework .. 26.D2
 perforated metals .. 26.D1
 r.w. goods, light pressed steel .. 33.U4
 steel bins, racks, shelving .. 42.C1 42.C2 42.C4
- Heat Control**, hot-water heating systems 29.A1
 29.H7
Heat Pump, electric .. 32.Z1
Heating, Boilers, gas-fired .. 29.C5
 oil-fired .. 32.E1
 oil-fired, fuel storage .. 29.A2
 stokers, mechanical, details, general data 29.J1 29.J3 29.J4 29.J5 29.J6
Space, Convection, ceiling panels .. 29.H2 29.H5 29.H6
 concealed panels .. 29.H2
 convector stove .. 30.C1
 open fire .. 29.B1 30.C2
Electric, floor heating .. 29.G2
 heat pump .. 32.Z1
 tubular heaters .. 29.G1
Gas, clothes-drying cabinets .. 37.D10
 fires, built-in .. 29.C1 29.C2 29.C10
Solid Fuel, convector stove .. 30.C1
 open fire .. 29.B1 29.B2 30.C2
 slate fireplaces .. 29.B4
 tile fireplaces, fixing .. 29.B3
Water, Gas, circulators .. 32.C4
 boilers .. 29.C5
 heaters, balanced flue 32.C31 32.C32
 heaters, instantaneous .. 32.C20
 32.C21 32.C22 32.C26 32.C27 32.C28
 32.C29 32.C30 32.C31 32.C32 32.C33 32.C34
 storage heaters .. 32.C3
 systems, domestic .. 32.C22 32.C23 32.C24 32.C25
- Heywood, W. H., & Co. Ltd.*, glazed panels, aluminium .. 24.M3
 lantern lights .. 24.J2 24.J3
 northlights, steel .. 24.N3
 rooflights, double-glazed .. 24.M4 24.N4
 under-purlin insulation .. 22.D16
Heywood-Helliwell Ltd., glazed panels, steel 24.N5
- Hickson's Timber Impregnation Co. (G.B.) Ltd.*, timber, preservation, protection .. 40.A2
High Duty Alloys Ltd., aluminium .. 10.B2
Hills (West Bromwich) Ltd., shutters, ventilating .. 30.D21
Hoganas, see Langley London Ltd.
Hospitals, cubicle curtain track .. 44.D3
Hot Water Supply, see Heating, Water
Hydralime Plaskey, see Cement Marketing Co., Ltd., The
- Illumination**, fluorescent, fittings .. 34.K2
 lighting calculations, lumen method 34.B1
 34.B2 34.B3
 lighting equipment, suspension for .. 34.K1
 lighting equipment, theatres 4.L6 4.L7
 plastic eggcrate ceiling .. 34.Z1
 illuminated ceiling .. 22.Z1 34.Z2
Imperial Aluminium Co. Ltd., aluminium, general data .. 10.B2
Incinerators, gas-fired .. 33.K1
Insulation, Sound, *see* Ceilings; Floors; Partitions; Roofs; Wall Construction; Sound Insulation
 Thermal, general data 28.A1 28.A2 28.A3
see also Boards; Ceilings; Partitions; Roofs; Wall Construction; Wall Linings
Intergrid, see Gilbert-Ash Ltd.
International Boilers and Radiators, gas-fired boilers .. 29.C5
Intervent, see Econa Modern Products Ltd.
Invisible Panel Warming Association, The, concealed panels .. 29.H2 29.H6
Iron Fireman, see Ashwell & Nesbit Ltd.
Ironstone, see George Woolliscroft & Son Ltd.
Isocolor, see Monsanto Chemicals Ltd.
Isora, see S.F.I.M. (G.B.) Ltd.
- Jenkins, Robert, & Co. Ltd.*, manhole covers 33.P1
Joints, building boards .. 15.B1 15.C1
 lead pipes, water .. 33.C4 33.C5 33.C6
 plywood panels, metal-faced .. 15.Z2
 p.v.c. flooring, welded .. 19.K1
 sealing compounds 26.M1 26.M2 26.M3 26.M4 26.M5
 sealing strip .. 26.M5
 straw slabs .. 14.L4
Jones, T. C., & Co. Ltd., steel reinforcement 9.C1
Jones & Attwood Ltd., sewage disposal units 33.L1
Junckers, see Webster, James, & Bro. Ltd.
- Kaye, E. & E. Ltd.*, aluminium .. 10.B2
Kee Klamp, see Gascoigne, Geo. H., Co. Ltd.
Key Engineering Co. Ltd., drain pipes, fibre ducts, fibre .. 37.C4
Keylock, see Packaged Buildings (Robert Building Inventions Ltd.)
Kitchens, partition blocks, glazed ceramic 14.B5
Kitchen Fittings, see Furniture, Kitchen
- L.W., see* Olsson, Martin, & Sons Ltd.
Laboratories, benches, lead lining .. 33.C11
 sinks, lead plumbing .. 33.C11
- Laing, John, & Son Ltd.*, Laingspan concrete construction .. 25.B3 25.B4
Laingspan, see Laing, John, & Son Ltd.
Langley London Ltd., blocks, glazed ceramic 14.B5
 wall facings, ceramic .. 18.E2 18.E3
Lanterns, see Rooflights, Lanterns
Lavatories, see Lavatory Basins; Plumbing; Schools; Tiles; W.C's
Lavatory Basins, multi-branch fittings 33.D1
 ranges, plumbing, copper .. 33.B1 33.B2
 ranges, plumbing, lead .. 33.C1
 vitreous china .. 33.S2 33.Z1
Lead, general data .. 10.F1
see also D.P.C's; Flashings; Laboratories; Lead-burning; Metal Spraying; Plumbing; Gas, Water; Roof Coverings; Sheet- ing; Weatherings
Lead Development Association, d.p.c's, chimneys .. 10.G15
 d.p.c's, cloaks .. 26.A1
 flashings 10.G1 10.G2 10.G4 10.G6 10.G13 10.G20 10.G22
 general data .. 10.F1
 gutters, lead-lined .. 10.G14
 pipes, details, general data 10.F1 33.C4 33.C5 33.C6 33.C7 33.C10
 plumbing .. 33.C1 33.C2 33.C3 33.C8 33.C9 33.C11
 roof construction .. 10.G3 10.G5 10.G11 10.G12 10.G21
 traps .. 33.C12
 weatherings .. 10.G10
Leadburning, general data .. 33.C6
Leaderflush (Doors) Ltd., doors, flush 23.B3
Lettering, freehand, stencilled .. 1.B10
 light sans serif .. 1.B7 1.B8
 type-face letter forms .. 1.B6 1.B9
Libraries, shelving, timber .. 42.C6
Lighting, see Illumination
Lightweight Construction, see Slabs; Wall Construction; Wall Linings
Lignacite Group of Companies, The, blocks, lightweight concrete .. 14.K2
Linoleum, see Floor Coverings, Floor Finishes; Furniture, Counters, Desks, Tables
Linoleum Manufacturers' Association, linoleum 19.G1 19.G2 19.G3 19.G4
L.M.F.A. Development Ltd., aluminium 10.B2
Loading Ramp, automatic .. 35.Z1
Locks, see Doors
Lockers, see Furniture, Lockers
London Brick Co. Ltd., blocks, hollow clay 14.B1 14.B2 14.B3 14.B4
 bricks, cellular .. 13.F1
 bricks, standard specials 13.C10 13.C11 13.C12
Lumen Method, lighting calculations .. 34.B1 34.B2 34.B3
- Lundia, see* Rempoy Ltd.
Lutello, see Bratt Colbran Ltd.
Luveline, Luve-Tile, see Harris & Sheldon (Electrical) Ltd.

working detail

WALLS AND PARTITIONS: 103

GLAZED WALL: SHOWROOMS IN LONDON, W.1

Slater and Uren, architects



This aluminium version of the curtain wall is supported by the reinforced concrete frame at every other floor. The back-up wall at intermediate floors is treated as a balcony balustrade; being well back from the glass, it helps to give a sense of depth.

46.Z2 ALPHABETICAL INDEX TO DEC. 22, 1960 (E-L)

- Harris & Sheldon (Electrical) Ltd.**, plastic eggcrate ceiling .. 34.Z1 fluorescent fittings .. 34.K2 plastic illuminated ceiling .. 34.Z2
- Harvey, G. A., & Co. (London) Ltd.**, cisterns, cylinders, tanks .. 42.B2 copper roofing .. 10.E1 extract ventilators .. 30.D1 gutters, heavy pressed steel .. 33.U5 Metalace, woven wirework .. 26.D2 perforated metals .. 26.D1 r.w. goods, light pressed steel .. 33.U4 steel bins, racks, shelving .. 42.C1 42.C2 42.C4
- Heat Control**, hot-water heating systems 29.A1 29.H7
- Heat Pump**, electric .. 32.Z1
- Heating, Boilers**, gas-fired .. 29.C5 oil-fired .. 32.E1 oil-fired, fuel storage .. 29.A2 stokers, mechanical, details, general data 29.J1 29.J3 29.J4 29.J5 29.J6
- Space, Convection**, ceiling panels .. 29.H2 29.H5 29.H6 concealed panels .. 29.H2 convector stove .. 30.C1 open fire .. 29.B1 30.C2
- Electric, floor heating** .. 29.G2 heat pump .. 32.Z1 tubular heaters .. 29.G1
- Gas, clothes-drying cabinets** .. 37.D10 fires, built-in .. 29.C1 29.C2 29.C10
- Solid Fuel**, convector stove .. 30.C1 open fire .. 29.B1 29.B2 30.C2 slate fireplaces .. 29.B4 tile fireplaces, fixing .. 29.B3
- Water, Gas, circulators** .. 32.C4 boilers .. 29.C5 heaters, balanced flue 32.C31 32.C32 heaters, instantaneous .. 32.C20 32.C21 32.C22 32.C26 32.C27 32.C28 32.C29 32.C30 32.C31 32.C32 32.C33 32.C34 storage heaters .. 32.C3 systems, domestic .. 32.C22 32.C23 32.C24 32.C25
- Heywood, W. H., & Co. Ltd.**, glazed panels, aluminium .. 24.M3 lantern lights .. 24.J2 24.J3 northlights, steel .. 24.N3 rooflights, double-glazed .. 24.M4 24.N4 under-purlin insulation .. 22.D16
- Heywood-Helliwell Ltd.**, glazed panels, steel 24.N5
- Hickson's Timber Impregnation Co. (G.B.) Ltd.**, timber, preservation, protection .. 40.A2
- High Duty Alloys Ltd.**, aluminium .. 10.B2
- Hills (West Bromwich) Ltd.**, shutters, ventilating .. 30.D21
- Hoganas**, see Langley London Ltd.
- Hospitals**, cubicle curtain track .. 44.D3
- Hot Water Supply**, see Heating, Water
- Hydralime Plaskey**, see Cement Marketing Co., Ltd., The
- Illumination**, fluorescent, fittings .. 34.K2 lighting calculations, lumen method 34.B1 34.B2 34.B3 lighting equipment, suspension for .. 34.K1 lighting equipment, theatres 4.L6 4.L7 plastic eggcrate ceiling .. 34.Z1 illuminated ceiling .. 22.Z1 34.Z2
- Imperial Aluminium Co. Ltd.**, aluminium, general data .. 10.B2
- Incinerators**, gas-fired .. 33.K1
- Insulation, Sound**, see Ceilings; Floors; Partitions; Roofs; Wall Construction; Sound Insulation
- Thermal**, general data 28.A1 28.A2 28.A3 see also Boards; Ceilings; Partitions; Roofs; Wall Construction; Wall Linings
- Intergrid**, see Gilbert-Ash Ltd.
- International Boilers and Radiators**, gas-fired boilers .. 29.C5
- Intervent**, see Econa Modern Products Ltd.
- Invisible Panel Warming Association, The**, concealed panels .. 29.H2 29.H6
- Iron Fireman**, see Ashwell & Nesbit Ltd.
- Ironstone**, see George Woolliscroft & Son Ltd.
- Isocolor**, see Monsanto Chemicals Ltd.
- Isora**, see S.F.I.M. (G.B.) Ltd.
- Jenkins, Robert, & Co. Ltd.**, manhole covers 33.P1
- Joints**, building boards .. 15.B1 15.C1 lead pipes, water .. 33.C4 33.C5 33.C6 plywood panels, metal-faced .. 15.Z2 p.v.c. flooring, welded .. 19.K1 sealing compounds 26.M1 26.M2 26.M3 26.M4 26.M5 sealing strip .. 26.M5 straw slabs .. 14.L4
- Jones, T. C., & Co. Ltd.**, steel reinforcement 9.C1
- Jones & Attwood Ltd.**, sewage disposal units 33.L1
- Junckers**, see Webster, James, & Bro. Ltd.
- Kaye, E. & E. Ltd.**, aluminium .. 10.B2
- Kee Klamp**, see Gascoigne, Geo. H., Co. Ltd.
- Key Engineering Co. Ltd.**, drain pipes, fibre 33.E1 ducts, fibre .. 37.C4
- Keylock**, see Packaged Buildings (Robert Building Inventions Ltd.)
- Kitchens**, partition blocks, glazed ceramic 14.B5
- Kitchen Fittings**, see Furniture, Kitchen
- L.W.**, see Olsson, Martin, & Sons Ltd.
- Laboratories**, benches, lead lining .. 33.C11 sinks, lead plumbing .. 33.C11
- Laing, John, & Son Ltd.**, Laingspan concrete construction .. 25.B3 25.B4
- Laingspan**, see Laing, John, & Son Ltd.
- Langley London Ltd.**, blocks, glazed ceramic 14.B5 wall facings, ceramic .. 18.E2 18.E3
- Lanterns**, see Rooflights, Lanterns
- Lavatories**, see Lavatory Basins; Plumbing; Schools; Tiles; W.C's
- Lavatory Basins**, multi-branch fittings 33.D1 ranges, plumbing, copper .. 33.B1 33.B2 ranges, plumbing, lead .. 33.C1 vitreous china .. 33.S2 33.Z1
- Lead**, general data .. 10.F1 see also D.P.C's; Flashings; Laboratories; Lead-burning; Metal Spraying; Plumbing; Gas, Water; Roof Coverings; Sheet- ing; Weatherings
- Lead Development Association**, d.p.c's, chimneys .. 10.G15 d.p.c's, cloaks .. 26.A1 flashings 10.G1 10.G2 10.G4 10.G6 10.G13 10.G20 10.G22 general data .. 10.F1 gutters, lead-lined .. 10.G14 pipes, details, general data 10.F1 33.C4 33.C5 33.C6 33.C7 33.C10 plumbing .. 33.C1 33.C2 33.C3 33.C8 33.C9 33.C11 roof construction .. 10.G3 10.G5 10.G11 10.G12 10.G21 traps .. 33.C12 weatherings .. 10.G10
- Leadburning**, general data .. 33.C6
- Leaderflush (Doors) Ltd.**, doors, flush 23.B3
- Lettering**, freehand, stencilled .. 1.B10 light sans serif .. 1.B7 1.B8 type-face letter forms .. 1.B6 1.B9
- Libraries**, shelving, timber .. 42.C6
- Lighting**, see Illumination
- Lightweight Construction**, see Slabs; Wall Construction; Wall Linings
- Lignacite Group of Companies, The**, blocks, lightweight concrete .. 14.K2
- Linoleum**, see Floor Coverings, Floor Finishes; Furniture, Counters, Desks, Tables
- Linoleum Manufacturers' Association**, linoleum 19.G1 19.G2 19.G3 19.G4
- L.M.F.A. Development Ltd.**, aluminium 10.B2
- Loading Ramp**, automatic .. 35.Z1
- Locks**, see Doors
- Lockers**, see Furniture, Lockers
- London Brick Co. Ltd.**, blocks, hollow clay 14.B1 14.B2 14.B3 14.B4 bricks, cellular .. 13.F1 bricks, standard specials 13.C10 13.C11 13.C12
- Lumen Method**, lighting calculations .. 34.B1 34.B2 34.B3
- Lundia**, see Rempoy Ltd.
- Lutello**, see Bratt Colbran Ltd.
- Luveline, Luv-Tile**, see Harris & Sheldon (Electrical) Ltd.

working detail

WALLS AND PARTITIONS: 103

GLAZED WALL: SHOWROOMS IN LONDON, W.1

Slater and Uren, architects



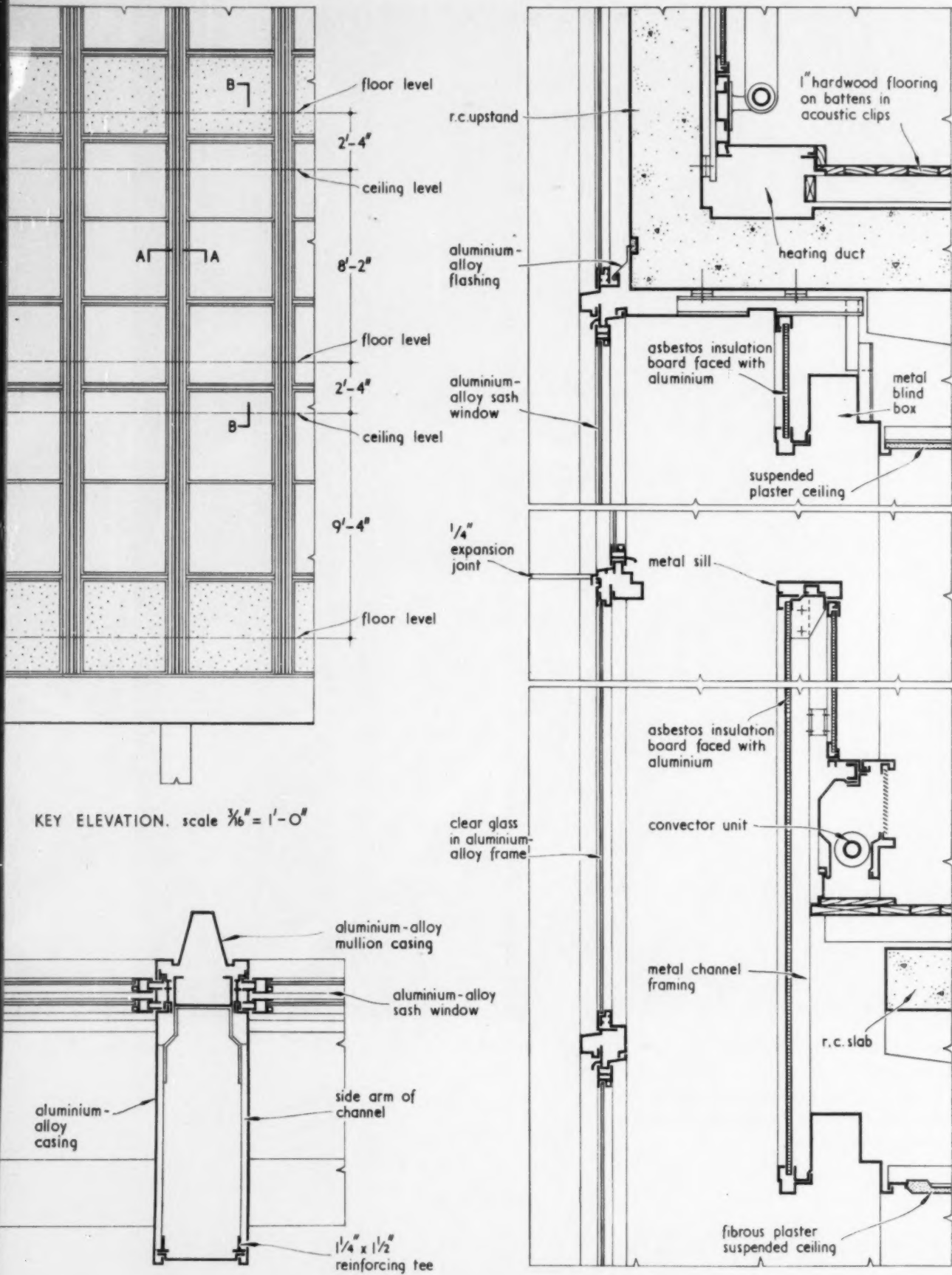
This aluminium version of the curtain wall is supported by the reinforced concrete frame at every other floor. The back-up wall at intermediate floors is treated as a balcony balustrade: being well back from the glass, it helps to give a sense of depth.

working detail

WALLS AND PARTITIONS: 103

GLAZED WALL: SHOWROOMS IN LONDON, W.1

Slater and Uren, architects



above all...

PERMANITE

the first name one thinks of for ...

roofing

Consult Permanite Limited
at the planning stage for
Asphalt and Built-up Felt
Roofing systems.

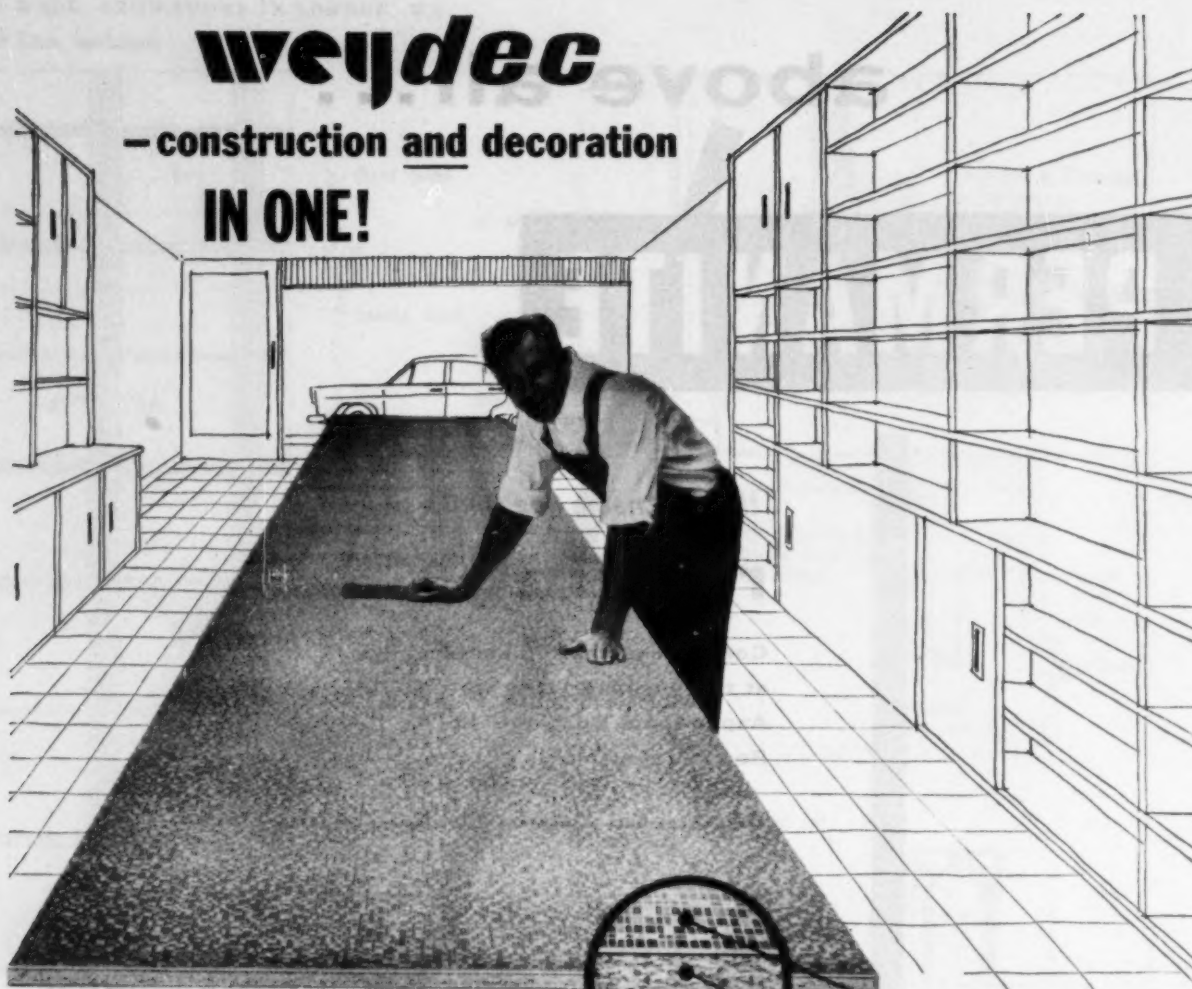
Also specialists in Asphalt Flooring and Tanking.



permanite limited, based on london, birmingham, manchester and portsmouth.

weydec

— construction and decoration
IN ONE!



This design is one of the Weydec surfaces.

The Weyroc core ($\frac{1}{2}$ " or $\frac{3}{4}$ " nominal).

Non-decorative plastic balancer on reverse face.

No wonder Architects, Shop-Fitters and Builders are so enthusiastic about using WEYDEC. These cost-cutting boards—with their colourful plastic surface *factory-bonded* to a core of famous Weyroc wood chipboard—are *constructional and decorative at one and the same time!* A ready-bonded plastic-surfaced material like this costs less than buying the board and surface separately, so WEYDEC saves money. And, by doing away with complicated gluing, WEYDEC saves on time and labour, too. Whatever plastic-surfaced unit you want to specify or make in hard-wearing WEYDEC, you'll find the choice of colours and patterns can be considerably varied outside the standard range. Ask your WEYDEC Distributor for full details—*today!*

CUT COSTS WITH

weydec

MELAMINE SURFACED WEYROC

Write for free sample to: THE AIRSCREW COMPANY & JICWOOD LTD · DEPT. A.J.20 · WEYBRIDGE · SURREY
W.P.S.89

Dome at Cambridge



Those who cannot wait to see more research done in schools of architecture will be glad to hear that the Cambridge School have completed at least the shell of their artificial sky. This shell is in the form of a Bucky Fuller dome, 30 ft. in diameter, 18 ft. high and made of a hundred 12 gauge aluminium triangles each with sides rather more than 6 ft. long. The designer, David Croghan, says that it is not quite the same as Bucky's domes, but is based on a modified Archimedean polyhedron. The RAF were to have lowered it by helicopter, but they got cold feet at the last moment. Instead, it came to the site conventionally, in segments, and was put together by students in 12 hours. The low-level entrance can be seen in the foreground. The artificial sky is financed partly by industry and partly by that universal fairy godmother, the Nuffield Foundation. Its object is to study the design and spacing of buildings in cities.



for further information, samples and prices

CELCON LTD.

UNIVERSAL HOUSE,
60 BUCKINGHAM PALACE ROAD,
LONDON, S.W.1. Tel. SLOane 0324/7

BUILD WITHOUT BRICKS

**In
LIGHTWEIGHT
LOADBEARING
CELLULAR
CONCRETE
BUILDING
BLOCKS**

Density—50 lbs./cu. ft.

Crushing Strength—
600/800 lbs./sq. in

Thermal Conductivity
'K'—1.2 BTU/sq.
ft./hr./°F./inch

Moisture Movement—.05%

Drying Shrinkage—.05%

Fire Resistance—Satisfies
B.S.476; Part 1 for 4 hours.

Announcements

PROFESSIONAL

Ronald Ward & Partners, architects and engineers, of 29, Chesham Place, Belgrave Square, S.W.1, are opening an office at 4, Friars' Court, Devonshire Street, Carlisle, on January 1, 1961. They would be pleased to receive trade catalogues at that address.

Robert Potter and Richard Hare, F./A.R.I.B.A., have opened an office at 62, The Avenue, Southampton, where they will be pleased to receive trade literature and samples.

The South Eastern Society of Architects is holding an architectural exhibition, showing photographs, models and drawings of the work of local architects, at Bentall's store in Kingston, from January 9 to 14.

A short course of six lectures on small bore central heating is being held at the Hertfordshire College of Building, St. Albans (telephone St. Albans 50118), commencing on January 18.

G. I. Phedonos of the Planning and Housing Department, Nicosia, Cyprus, would be interested to receive catalogues and price lists from firms who manufacture rails and guides and mechanisms which are used for top hung sliding or folding doors.

The partnership between J. F. Munce and G. R. Smail practising as Munce & Kennedy, Architects and Consulting Engineers, of 133 University Street, Belfast, has been dissolved as from October 31, 1960. The practice is continuing at London and Belfast under the same title and J. F. Munce has taken into partnership L. A. Roche, B.A. (Arch.), A.R.I.B.A., W. J. McDowell, B.Sc., A.M.I.C.E., and J. F. Sheldon, A.R.I.B.A., R. Simpson, A.R.I.B.A., and F. H. Lewis, B.Sc., A.M.I.C.E., join the firm as associate partners. J. F. Sheldon is in charge of the London office which has now moved to 10-11, Bulstrode Place, London, W.1.

TRADE

Relay Exchanges Ltd. has bought the assets and goodwill of Monk Metal Window Co. Ltd. as a going concern. All outstanding orders will be completed as quickly as possible, and a new policy of expansion and development will be pursued. The business will be carried on by a subsidiary company of Relay Exchanges Ltd., probably named "Monk Metal Windows (1960) Ltd." and continue under the management of Mr. Langston with the existing staff unchanged.

The Allied Ironfounders News and Information Service is now being operated by Greenlys Public Relations Ltd., at Commonwealth House, 1-19, New Oxford Street, W.C.1 (telephone Chancery 7176).

Howard Farrow Ltd. and Holland & Hannan and Cubitts Ltd. have formed a new company in Nigeria called Farrow-Cubitts & Associates (Nigeria) Ltd. This company is linking up with the firm of Dijs-Trocca-Valsesia & Co. Ltd., of Lagos.

Atlas Lighting Ltd. have moved their London Area Order Office to Angel Works, Angel Road, Edmonton, London, N.18 (telephone Edmonton 3050).

E. W. Tyler & Co. Ltd., have opened a Northern sales office at 5, Queen Street, Manchester 2 (telephone Blackfriars 0680).

Pyrotenax Ltd. have opened a new sales office at 69, Loughborough Road, West Bridgford, Nottingham (telephone 83805). J. Wallen will be in charge of the office.

To improve their service Bellrock Gypsum Industries Ltd. have reorganised their territories and increased their representation as follows: A. V. Johns will cover Middlesex and London; H. Williams will operate in Berkshire, Bedfordshire, Cambridgeshire, Herts and Hunts; D. Gardner will take over Oxfordshire and Bucks, and L. R. W. Lee will cover Hampshire, Sussex, Surrey and Dorset.

R. B. Beeson, B.Sc., A.M.I.C.E., has been appointed Director of Civil Engineering at Marshall-Andrew & Co. Ltd.

when the decision is taken to install the

GARADOR

ALUMINIUM
COUNTERBALANCED
GARAGE DOOR



the ARCHITECT
is happy

for he knows the Garador's clean simple lines will blend equally well with contemporary or period designing. Its price will be right combining high quality with low cost.



the BUILDER
is happy

for he knows the Garador, complete with fittings, will arrive on time at the site and that its installation will take only a matter of minutes, for there are no sidewall or roof fixings.



the CLIENT
is happy

for he knows the Garador operates at the touch of a finger, being counterbalanced throughout the whole of its movement. Its aluminium construction offering a lifetime of maintenance-free service.



Full details are available on request.

WESTLAND ENGINEERS LTD YEovil ENGLAND
DESIGNERS AND MANUFACTURERS OF THE WIDEST RANGE OF OVERHEAD COUNTERBALANCED DOORS IN GREAT BRITAIN.

FOR
GREATER STRENGTH
AND
LONGER LIFE
SPECIFY

NORVIC

**PLASTIC COVERED
CHAIN LINK
FENCING**

● **OUTLASTS GALVANIZED
FENCING**

Norvic Plastic Covering
protects from rust and
corrosion.

● **RETAINS ITS GOOD
LOOKS FOR YEARS**

Norvic Plastic Covering
keeps its colour long
after other fences have
yielded to the atmos-
phere.

● **COSTS LESS IN THE
LONG RUN**

The slight increase in
initial cost is more than
offset by longer life.



SPECIFICATION :

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

BARNARDS

LIMITED

NORWICH Tel: 47321

London:
Mansion House 8597

Birmingham:
Midland 3555



yesterday's craft
tomorrow's design

SCULPTURA

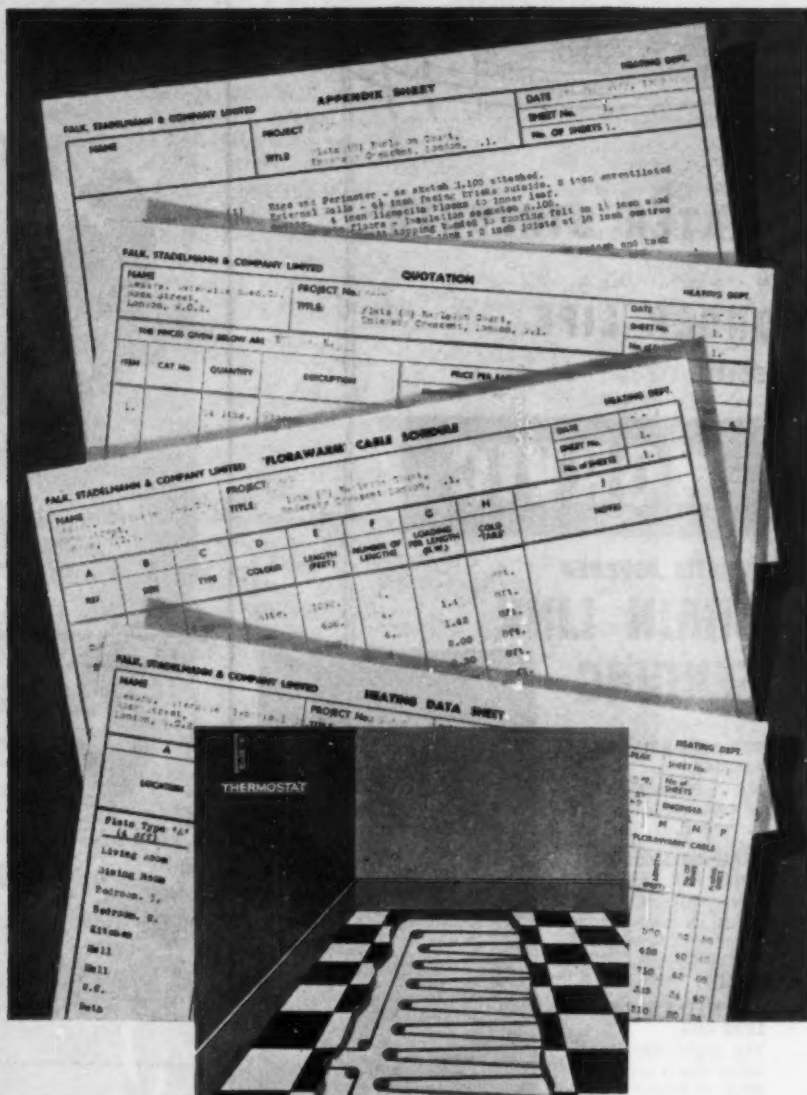
THE LILLESHELL COMPANY · OAKENGATES
SHROPSHIRE
121 VICTORIA STREET · VICTORIA 0002

Lavatory basin and pedestal
Marquess of Queensberry MSIA c 1959
Fontana dell'Annunziata Florence c 1559

FALKS OFFER ALL-OVER SERVICE on UNDER- FLOOR HEATING

f

FALKS
FALK, STADELMANN & CO. LTD.



FALKS HEATING DESIGN SERVICE is freely available for the complete design and recommendation for an individual FLORAWARM FLOOR-WARMING SYSTEM from your scale plans and sections.

The illustrated documents—covering part of a FALKS FLORAWARM specification for a typical block of flats—demonstrate the comprehensive nature of this service.

lorawarm

Patent application No. 807/57

(REGD.)

Developed by
Wandleside Cable Works Ltd.
One of the FALKS Group.

For further information on the FLORAWARM SYSTEM and the FALKS SERVICE please apply to your nearest FALKS branch for leaflets P.2733 and P.2785.

Monitor sets for use during laying and screeding are available for purchase or hire.

HEAD OFFICE: 91 FARRINGDON ROAD • LONDON • E.C.1

BRANCHES: BELFAST • BIRMINGHAM • BRADFORD • BRIGHTON • BRISTOL • CARDIFF
DUBLIN • EDINBURGH • GLASGOW • LEEDS • LIVERPOOL • MANCHESTER • NEWCASTLE
UNDER LYME • NEWCASTLE UPON TYNE • NOTTINGHAM • SOUTHAMPTON • SWANSEA

AP156

**"Ain't there
enough to
see inside
the park?"**

"Oh, yes mister. But what I'm
looking at's important!"

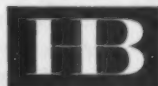
"Can't be any more important
than my trees."

"But it's 'Boots'. They're
building our new school. It's
going to be smashing —
'specially the gym! My teacher
says we're lucky to have
Boots building it because
they're so ex—expeer—because
they're so good at it.
He says Boots build all sorts
of other things too, like
roads and houses and factories."

"They can't build
trees! Come on down before
you break a branch."



HENRY BOOT



HOUSING ESTATES • RAILWAYS • WATER DISTRIBUTION SCHEMES
ROADS • SOIL STABILISATION • BUILDING PROJECTS OF EVERY DESCRIPTION

HENRY BOOT & SONS LTD., BANNER CROSS HALL, SHEFFIELD 11. Tel 54331
Offices also at: Birmingham, Glasgow, Liverpool, London and Manchester

OA/ESM

Behind every Brookes
folding shutter door
are delivery and
after-sales services
as efficient and
smooth-running
as the door itself.

FOR ALL APPLICATIONS

Lift entrances, bus garages, works entrances, internal partitions—all can have the smooth-running security of a Brookes folding shutter door.

SMOOTH OPERATION

Hand operation is smooth and easy up to surprisingly large sizes; push-button electrical operation is, of course, readily available.

LONG DURABILITY

All leaves are of heavily galvanised sheet steel ensuring long life without rusting in the dampest conditions.

LARGE OR SMALL

From 3ft. high by 3ft. wide to 30ft. high by 50ft. wide—there's practically no size limit.

PRECISION BUILT

Sheet steel leaves, and framing, jig built; each suspension hanger runs in precision-ground ball race rollers on special steel top track.

BROOKES DOORS



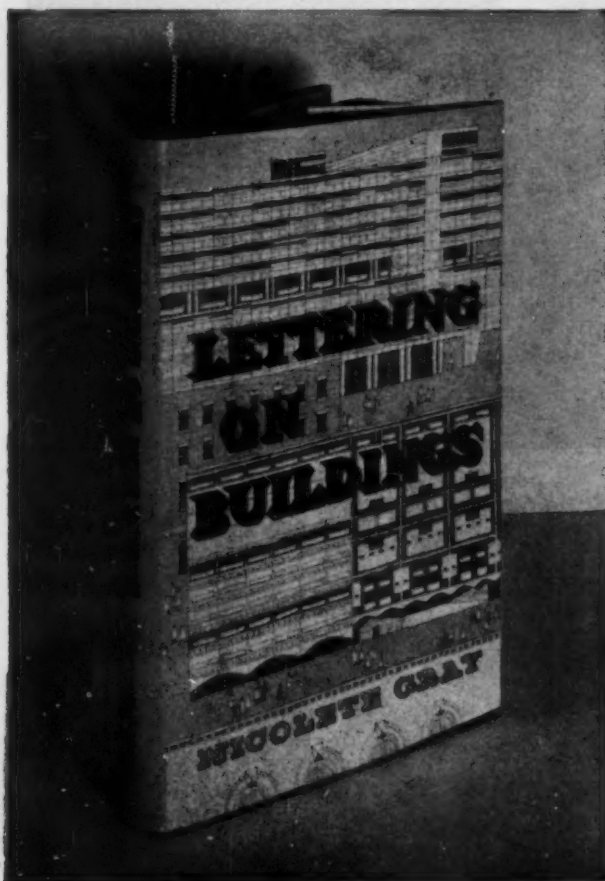
Photograph of the doors at the
DISTRIBUTING DEPOT FOR UNITED
CO-OPERATIVE DAIRIES LTD., URMSTON.

For information, literature and service, write to Dept. B6

BROOKES & CO. (1925) LTD. PRINCESS ART METALWORKS

129 STOCKPORT ROAD • MANCHESTER 12 • TELEPHONE: ARDWICK 1522

Brookes also make : Balustrades • Lift enclosures • Canopies • Metal partitions
Gates and railings • Wire guards • Cloakroom fittings • Floor ducting



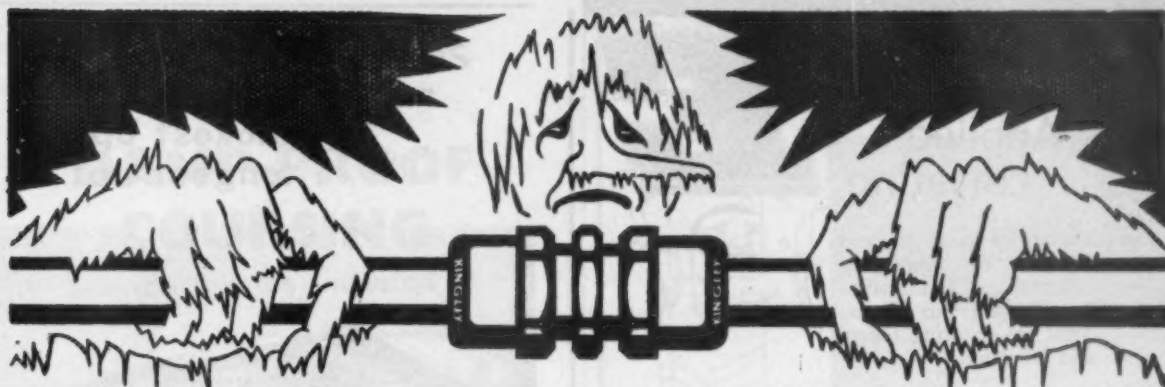
Nicolette Gray

LETTERING ON BUILDINGS

THIS IS THE FIRST BOOK to deal with lettering as applied to all kinds of buildings. The author, an internationally acknowledged authority on the history of letter forms, breaks new ground in this study of the relationship between lettering and architecture itself: her aim is no less than to create a new approach to the subject, to get away from doctrinaire ideas. She first examines and illustrates the history and development of letter forms from Roman times to our own day. This examination leads her to outline a comprehensive theory of lettering which may serve as a starting point, a new way of looking at problems and possibilities for the present and the future. Her theoretical approach is illustrated by, and throws light on, many existing nineteenth- and twentieth-century examples of all kinds of lettering *in situ*; and she thus demonstrates how present-day architects and designers can successfully tackle the task of integrating lettering on and in all kinds of buildings. 'My hope for this book', says the author, 'is that it may help to bring lettering back into the full life of the modern movement. . . .'

Size of book 9 x 5½ in. 192 pages with 270 halftone and line illustrations 25s. net, postage 1s. 2d.

The Architectural Press, 9-13 Queen Anne's Gate, S.W.



DEFEAT JACK FROST WITH KINGLEY

Look at the cross-section of a Kingley Joint—quite impossible for frost or heat to pull off—the stronger the pull, the firmer the grip on the swaged pipes!



British Patent No. 396678

This is the MOST EFFICIENT metal to metal joint. Made in less than half a minute—DOUBLE GRIP CANNOT SLIP. Smaller, neater and far less expensive than alternative methods of jointing, will undo and remake. Be safe, use Kingley. Above Ground with B.S.S. 659 Copper Tube and Below Ground with B.S.S. 1386 Copper Tube. Polythene: Normal Gauge Polythene Tube to B.S.S. 1972. Prompt Delivery.

Universally approved by Government Departments, Water Works and Local Authorities etc.

For full details and illustrated catalogue write to:

KINGS LANGLEY ENGINEERING CO. LTD., Kings Langley, Herts.

Telephone: Kings Langley 4022.

Telegrams: Champion, Kings Langley.



**Cannot
pull off
in frost**

Well worth considering

- STAIN PROOFING AND PRESERVING STONE MASONRY FACINGS
- CEMENT ADDITIVE FOR BONDING
- METAL PRIMING AND COLOUR COATING FOR IRON AND STEELWORK
- PRESERVING ASBESTOS-CEMENT
- BONDING AND HARDENING CONCRETE FLOORS
- DAMP PROOF MEMBRANES
- ROOF WATERPROOFING
- REMEDYING DAMP WALLS
- WATER STORAGE TANKS

WITH

Calcium plumbate; zinc chromate-iron oxide; asbestos-cement primers. High gloss non-bituminous protective coloured coatings (alkyd resin media). Bituminous black and coloured coatings. Mastic and semi-mastic sealing compounds. Silicone water repellents.

RITO, RITOLASTIC & ROMANITE *Products*

Send for descriptive Literature

Manufacturers **ANDREW MAXWELL DIVISION** (The Liverpool Borax Co. Ltd.)
Maxwell House, St. Paul's Square, Liverpool 3.

Applied Lettering

Variety of alphabets and materials for internal or external use, Illuminated Letters and Box Signs. Send for lettering sheets and brochures.

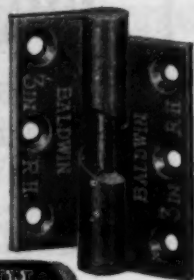
WARD & CO. (Letters) LTD.,
6-12 WILDER ST., BRISTOL 2 TEL. 21536



For Smooth Entrances...

... If all "exits and entrances" were made through doors hung on Baldwin Cast Iron Hinges the world would be a quieter place.

BALDWIN BUTT HINGES are smoother in action and last longer, because the solid drilled knuckles give larger bearing surfaces and can never unwrap.



See the name BALDWIN on every hinge. Illustrated list of full series on request from Sole Makers.

BALDWIN
CAST IRON BUTT HINGES

ARCHIBALD KENRICK & SONS, LTD., WEST BROMWICH, STAFFS.

PEEL'S

sectional buildings
quickest up!
longest up!



PEEL'S
Sectional BUILDINGS

- * Extensive range of standard designs
- * Individually designed if required
- * Free delivery within 200 miles radius

- * Easy to erect
- * New timber throughout

Send for PEEL'S comprehensive catalogue and price list, or ask for representative to call.

H. PEEL LTD.

(Dept. A.J.), Mearclough Works, Wakefield Road,
Sowerby Bridge, Yorkshire. Tel.: Halifax 81211

structural steelwork

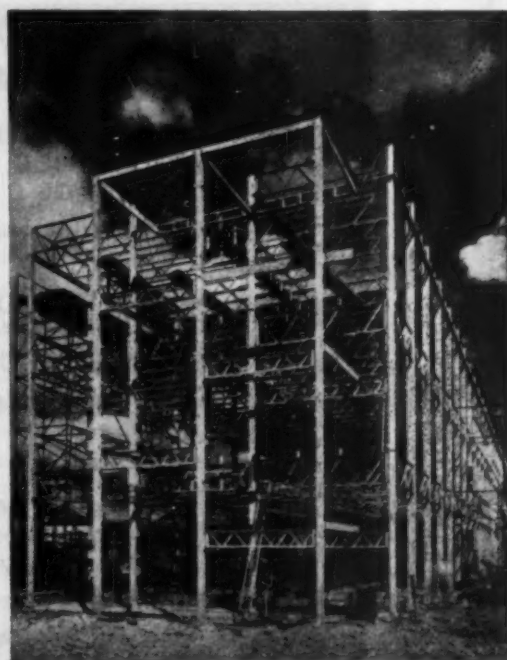
● DESIGN ● FABRICATION ● ERECTION

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



New Air Terminus buildings in Kensington for B.E.A. Photograph taken 16 days after commencement of steel deliveries. Main Contractors: Messrs. Richard Costain Limited.

The Architects for the Bowater Paper Corporation Limited's new Office Blocks at both Northfleet and Mersey required Lattice Steelwork on a 3ft. 4in. module. This allowed complete flexibility of internal arrangements and all service lines are easily run between floor and ceiling.



Part of a new Office Block for The Bowater Paper Corporation Limited. Architects: Messrs. Farmer and Dark.

Sommerfelds
LTD.

Head Office WELLINGTON SHROPSHIRE Tel: 1000
LONDON Office 167 VICTORIA ST. S.W.1. Tel: 8843 and 1000

British Standards

B.S. 1097 1418

DAMP-PROOF COURSING

provide for the inclusion of

Trinidad

LAKE ASPHALT

A valuable component of good mastic, on account of its remarkable consistency.

Further particulars on request from

PREVITÉ

& CO. LTD.

CAPEL HOUSE, 54 NEWBROAD ST., LONDON, E.C.2

Telephone: LONDON Wall 4313



For good looks
For hard wear
For every stair *

Specify

Don

Stairtreads

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

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

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

Name _____

Address _____

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

Seven symbols of progress



R.S.P.

Architects know that there is a mathematical relationship between span and effective depth of roof decking, and that there is an optimum "Natural Span" of the material. Any increase beyond this demands greater thickness, deadweight, cost of laying and, in many cases, expensive deflection-limiting devices. Thermacoust Roofing Slabs are produced in lengths not greater than the Natural Span, which is 7'0" in all cases except the lightest, where the limit is 8'0".

This orthodox approach has the sanction of experience. But what if the grid spacing is greater than the Natural Span?

The symbol R.S.P. indicates a simple answer to this problem: the new and exclusive range of Thermacoust Steel Purlins with span ranges of 8'0" to 11'0", 11'0" to 13'0" and 13'0" to 15'0".

Thermacoust roofing systems, the most sophisticated in the world, are firmly based on well tried orthodox practice.

Please write for full particulars.

For purposes of illustration, the Thermacoust slabs shown in the picture have been cut down from standard slabs, and only one end of a purlin is shown.

THERMACOUST LTD

ROOFING SLABS

20 ALBERT EMBANKMENT LONDON SE11

Telephone Enquiries (Southern)—London: ELMbridge 5775/4/5

Telephone Enquiries (Northern)—Doncaster 54138 Ex. 25

When supported on inverted "T" or Thermacoust purlins no special fixing arrangements are required.

Flat-top purlins or R.S.J.'s call for Type 1 site fixing clips.

Slabs may also be provided with any of the exclusive range of Thermacoust Pre-Clips for fixing copper, SNAPRIB aluminium, slates or tiles.



A member of the Cementation Group of Companies

ARCHITECTURAL ASSISTANTS

are urgently required by the
Technical Division of a well-known firm of

MANAGEMENT AND INDUSTRIAL CONSULTANTS

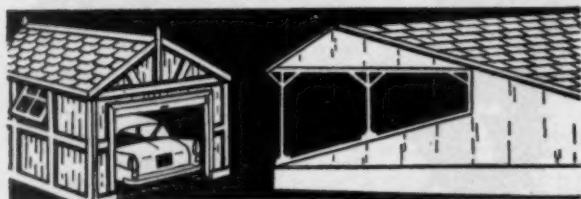
They will be given the full range of architectural duties from inception to final account. The work involves a wide range of industrial projects at home and abroad and will involve liaison with other professional specialists of the project team. The Drawing Office is at Egham, Surrey.

Salary £1,000—£1,500. Non-contributory pension scheme.

Apply in writing to:

**The Architect,
PRODUCTION-ENGINEERING LIMITED,
Park House, Wick Road,
Egham, Surrey.**

GARAGES OR GRANDSTANDS



BUNGALOWS OR BOATSHEDS



Specify

"CHALLENGE" STRIP SLATES

"Challenge" Strip Slates provide the architect with an attractive, colourful, permanent roof covering for most types of buildings, at economical cost. Available in either Octagonal or Square Butt shapes, and in natural colours of red, green and gray. Send for Descriptive Literature and Samples:

**WILLIAM BRIGGS & SONS LIMITED
DUNDEE**

MONK METAL WINDOW COMPANY LIMITED

*

Relay Exchanges Limited, the well-known Public Company, has bought the assets and goodwill of Monk Metal Window Company Limited as a going concern. All outstanding orders will be completed as quickly as possible and a new and vigorous policy of expansion and development will be pursued. The business will be carried on by a subsidiary Company of Relay Exchanges Limited, probably named 'Monk Metal Windows (1960) Limited' and will continue under the management of Mr. Langston with the existing staff unchanged.

*

**Universal Works, Commercial Street,
Birmingham, 15**

Telephone: Midland 1796-7

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 5, 11 and 13, Queen Anne's Gate, Westminster, S.W.1. Normal printing arrangements have been altered to allow for the Christmas holiday. The latest date for receiving advertisements for the last issue in December is as follows:—

December 29 issue—Tuesday, December 30.

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

AIR-MAIL SERVICE available on request. In response to requests from a number of Overseas subscribers for air-mail delivery of Public Appointments Vacant, we have been pleased to arrange that cuttings of all such classified and Official Appointment details and other advertisements appearing in the A.J. shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayments should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

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

BOROUGH OF BASINGSTOKE

BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the post of ARCHITECTURAL ASSISTANT in the Architect's Department, where there is a variety of interesting work. Preference will be given to an Associate R.I.B.A. who should have good housing experience.

Salary within range £960—£1,140 according to experience. N.J.C. Conditions. Post pensionable. Medical examination. Casual user car allowance. Housing available in due course. Assistance with removal expenses. Five-day week.

Details giving qualifications, age, training, experience, etc., and names and addresses of two referees to be sent to the Borough Architect, Eric Almond, Dipl. Arch., A.R.I.B.A., Municipal Buildings, Basingstoke, Hants., by 30th December, 1960.

L. WOMERSLEY
Town Clerk.
4746

UNIVERSITY OF OXFORD

Applications are invited for a new post in the architectural section of the University Surveyor's office for an ASSISTANT ARCHITECT. He will be employed on new work and extensions, laboratories, and other university buildings. Applicants must be qualified with several years' experience, and should be keenly interested in progressive design.

The salary will be in the range £1,300 to £1,500 per annum, and in addition the successful applicant will be entitled to membership of the Federated Superannuation System for Universities and to a family allowance at the rate of £50 per annum for each child.

Write for further particulars and form of application to the Surveyor to the University, The Malthouse, Tidmarsh Lane, Oxford. 4790

BIRMINGHAM REGIONAL HOSPITAL

BOARD

APPOINTMENT OF ARCHITECTURAL STAFF
SENIOR ASSISTANT ARCHITECTS. Salary scale £1,300 to £1,500. Qualifications: Registered architect by examination.

These posts are not necessarily restricted to those with previous hospital experience. They offer opportunities for gaining knowledge and experience of the whole field of hospital architecture ranging from adaptation schemes to comprehensive new hospital projects. Superannuable. Five-day week. Applications (quoting Arch. 12) stating qualifications, age, experience, present position and salary and naming two referees to Secretary, 10 Augustus Road, Birmingham, 15, by 6th January. Closing date. 4838

BOROUGH OF UXBRIDGE

ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment on the staff of the Borough Surveyor and Architect at a salary within A.P.T. Grade III £960—£1,140 per annum plus London weighting up to £45 per annum according to qualifications and experience.

Applicants should have had a good architectural training and experience and preference will be given to those with a professional qualification. The provisions of the Local Government Superannuation Acts apply to this post, and the successful candidate will be required to pass a medical examination. The conditions of service are those contained in the National Scheme of Conditions of Service.

Apply giving full personal details, present and past appointments, qualifications and experience with names and addresses of two referees to Harold E. G. Stripp, F.R.I.C.S., M.Inst.B.A., Borough Surveyor and Architect, 263 High Street, Uxbridge, by 9 a.m. on the 2nd January, 1961.

R. RONALD WEST
Town Clerk.
4793

BOROUGH OF ENFIELD
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

(Non-County Borough in the County of Middlesex. Population 109,700. Area 12,400 acres.)

Applications are invited, from suitably qualified persons, for the following permanent appointment:—

JUNIOR ARCHITECTURAL ASSISTANT.
A.P.T. I. £645—£815 per annum plus London weighting.

The commencing salary will be fixed at points within the scale commensurate with qualifications and experience.

There is a large varied programme of work, including the redevelopment of Clearance Areas and other areas scheduled for Comprehensive Development.

Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advances to successful applicants for house purchase within the Borough.

Saturday mornings are normally free from duty.

Application forms, obtainable from H. D. Peske, M.Sc.(Eng.), M.I.C.E., Borough Engineer & Surveyor, 7 Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned as soon as possible.

CYRIL E. C. H. PLATTEN,
Town Clerk.

Public Offices,
Enfield, Middx. 4842

EAST KILBRIDE DEVELOPMENT

CORPORATION

ARCHITECTS AND ARCHITECT/PLANNERS

The following staff are required for the rapidly expanding programme of industrial and commercial development in East Kilbride New Town. Work on the new Town Centre in process of re-planning as a pedestrian precinct includes the design of shops, offices and other Town Centre buildings. Extensive industrial projects involve the design of factories of all types and sizes. Neighbourhood development includes engineering, planning and architectural work and housing and shopping centres. The appointments offer excellent prospects for persons with the necessary enthusiasm and imaginative ability to plan and carry out the extensive programme.

1. ARCHITECTS AND ARCHITECT/PLANNERS

£1,140 to £1,480 per annum. Applicants should be A.R.I.B.A. For the Architect/Planner posts applicants should in addition be A.M.T.P.I., in which case a higher placing on the scale may be given.

2. ARCHITECTURAL ASSISTANTS.
Scale rising to £960 per annum. Applicants should preferably have passed the Intermediate examination of the R.I.B.A.

3. JUNIOR ARCHITECTURAL ASSISTANTS.
Scale rising to £815 per annum. Applicants should have completed a five-year apprenticeship and be probationer members of the R.I.B.A.

Commencing salaries commensurate with qualifications and experience will be paid, and appointments are subject to the Corporation's Conditions of Service and Superannuation Agreement. Five-day week. A house or flat will be made available if required. Selected candidates will be required to pass a medical examination. Application forms may be obtained from the General Manager, East Kilbride Development Corporation, Torrance House, East Kilbride, for return not later than 16th January, 1961. 4846

METROPOLITAN BOROUGH OF ISLINGTON
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT

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

(a) TWO SENIOR ARCHITECTURAL ASSISTANTS, Grade A.P.T. V (£1,310—£1,480 p.a.).

(b) TWO ARCHITECTURAL ASSISTANTS, Grade A.P.T. III (£960—£1,140 p.a.).

All plus appropriate London weighting.

Applicants for:—

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

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

Application forms, returnable by first post on Monday the 16th January, 1961 obtainable from the Borough Engineer and Surveyor, Town Hall, Upper Street, N.1.

H. DIXON CLARK,
Town Clerk.
4829

COUNTY BOROUGH OF SOUTH SHIELDS

ASSISTANT ARCHITECTS

Applications are invited for the above appointments in the Borough Engineer's Department. Applicants must be suitably qualified and the salary paid will be within the range of £1,140 to £1,480 per annum according to qualifications and experience.

Housing accommodation will be made available to successful applicants if necessary and they will be required to pass a medical examination for Superannuation purposes.

Application forms are obtainable from the Borough Engineer, Town Hall, South Shields, and should be returned to him not later than 10 a.m., Monday, 23rd January, 1961.

R. S. YOUNG,
Town Clerk.
4870

URBAN DISTRICT OF EBBW VALE

ARCHITECT'S DEPARTMENT
APPOINTMENT OF RESIDENT
ENGINEER/CLERK OF WORKS

Applications are invited from suitably qualified persons for the temporary appointment of a Resident Engineer/Clerk of Works to supervise the construction of a Covered Swimming Bath, shortly to be commenced on the Clive Centre Site, Ebbw Vale.

Applicants should have had good experience in the supervision of Reinforced Concrete Work, including heavy piling.

The duration of the work is likely to be approximately two years but the erection of a new R.C. frame building to house new Municipal Offices and Council Chamber on the same site will commence in 1961 and may be expected to provide continuation of employment for a further period.

The salary offered is £1,200 per annum.

Consideration may be given to the provision of housing accommodation for married candidates if required.

Applications, stating age, qualifications, present and previous positions and experience, together with the names of two referees to be delivered to the undersigned not later than Saturday, 31st December, 1960.

HOWARD J. WILLIAMS,
Clerk of the Council.

District Council Offices,
The Walk,
Ebbw Vale, Mon. 4881

COUNTY BOROUGH OF DEWSBURY

BOROUGH ARCHITECT AND BUILDINGS
SURVEYOR'S DEPARTMENT

Applications are invited for the appointment of DEPUTY BOROUGH ARCHITECT AND BUILDINGS SURVEYOR at a salary within the scope of the scale of £1,350 rising by annual increments of £50 to a maximum of £1,550 per annum.

Applicants must be A.R.I.B.A., preferably with Town Planning experience.

Housing accommodation will be made available if required.

The appointment will be subject to two months' notice on either side and to the provisions of the Local Government Superannuation Act.

Applications stating age, education, qualifications, full particulars of training and experience, together with copies of two recent testimonials, should be sent to the undersigned not later than Wednesday, 4th January, 1961, in envelopes endorsed "Appointment of Deputy Borough Architect."

A. NORMAN JAMES,
Town Clerk.

Town Hall, Dewsbury.
6th December, 1960. 4889

CITY OF LEEDS

CITY ARCHITECT'S DEPARTMENT

Applications are invited for the following appointments:—

Post No. 1. SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. V, Salary scale £1,310—£1,480.

Post No. 2. SENIOR ASSISTANT ARCHITECTS, Grade A.P.T. IV, Salary scale £1,140—£1,310.

Applicants should be suitably qualified and have had a wide experience in either housing, education or other types of large public building work and will be required to design and work on these projects to completion. Applicants will be considered on their capability for design, experience, contemporary outlook and suitability. The appointments are superannuable—medical examination.

Assistance will be given in providing housing accommodation in approved cases, if required.

Application forms may be obtained from the undersigned.

The closing date for receipt of applications is the 9th January, 1961, and these are to be sent to the City Architect, Priestley House, Quarry Hill, Leeds, 9.

Canvassing disqualifies.
J. R. SHERIDAN-SHEDDEN,
City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.

5th December, 1960. 4813

BOROUGH OF WALLSEND

Applications are invited for the following appointments in the staff of the Borough Surveyor.

(a) CHIEF ENGINEERING ASSISTANT

Salary within grade A.P.T. IV according to qualifications and experience.

Candidates should be A.M.I.C.E. or A.M.I.M.E. with wide and varied experience in municipal engineering together with associated administrative experience.

(b) ENGINEERING AND ARCHITECTURAL ASSISTANTS.

Salary will be within grade A.P.T. III according to qualifications and experience.

Candidates should have received appropriate training and have at least five years' experience.

The Council are prepared to assist with housing accommodation for married applicants and removal expenses will be paid.

Applications giving details of experience and qualifications together with the names and addresses of two referees should be forwarded to me by 7th January, 1961.

JOHN STOKER,
Town Clerk.

Town Hall,
WallSEND. 4790

NORTH KESTVEN RURAL DISTRICT COUNCIL

APPOINTMENT OF DRAUGHTSMAN

The above Council invite applications from suitable persons for the above appointment in the Department of the Surveyor to the Council. The successful candidate should be capable of assisting with the preparation of plans for housing schemes including site layouts and should preferably have some knowledge of building construction and be capable of dealing with matters relating to Byelaws as to new streets and buildings and will be required to perform such other duties as may be delegated to him by the Surveyor, from time to time.

The salary offered is subject to the present scale A.P.T. Grade I of the salaries fixed by the National Joint Council (£645-£235 (4)-£615), the commencing salary to be fixed according to the qualifications and experience of the person appointed.

The appointment will be subject to the provisions of the Local Government Superannuation Acts, and the successful candidate will be required to furnish a medical certificate of fitness. Candidates should state whether they wish to be offered housing accommodation.

Applications in writing, stating age, qualifications and experience, with the names of two persons to whom reference may be made, should be sent to the undersigned not later than first post on Saturday, 31st December, 1960.

F. FOSTER,
Clerk of the Council.

Council Offices,
St. Olavegate,
Lincoln,
5th December, 1960.

4771

BOROUGH OF WEYMOUTH & MELCOMBE REGIS

APPOINTMENT OF SENIOR ASSISTANT ARCHITECT

Applications are invited for the above appointment in the Borough Engineer and Surveyor's Department, from professionally qualified and suitably experienced architects on A.P.T. Special Grade (£840-£1,145).

Applications, with the names and addresses of three referees, should be delivered to the Town Clerk not later than Monday, 2nd January, 1961. Housing accommodation will be available if necessary.

The appointment will be in accordance with the National Scheme of Conditions.

E. J. JONES,
Town Clerk.

Municipal Offices,
Weymouth.

4891

BOROUGH OF EDMONTON

BOROUGH ARCHITECT'S DEPARTMENT
Applications are invited for the following appointments. Appointments 1 & 2 are in connection with the Council's Capital Building Programme, including multi-storey housing and public buildings, maintenance and improvement works. Applicants should be appropriately qualified.

1. ASSISTANT QUANTITY SURVEYORS—Salary within Grade A.P.T. II, £815-£950, plus London weighting.

2. ASSISTANT ARCHITECT—Salary within Grade A.P.T. I, £645-£815, plus London weighting.

3. TOWN PLANNING ASSISTANT—Salary Grade A.P.T. III, £960-£1,140, plus London weighting, commencing salary will be on the appropriate position of the Grade according to experience/qualifications.

Applications on the forms obtainable from the Town Clerk, Town Hall, Edmonton, N.9, must be delivered by 6th January, 1961.

4894

CITY OF BIRMINGHAM PARKS DEPARTMENT

APPOINTMENT OF TECHNICAL OFFICER
Applications are invited for the above appointment from persons holding a qualification in Surveying, Architecture or Engineering. The post is graded in accordance with A.P.T. Division Grade V (£1,310-£1,490 per annum).

The appointment will be subject to the provisions of the National Scheme of Conditions of Service as adopted by the City Council and varied from time to time, the Local Government Superannuation Acts, 1937-53, and will be terminable by one month's notice. The successful candidate will be required to pass a medical examination.

The person appointed will be required to assist and deputise for, when necessary, the Officer-in-Charge of the Sites and Buildings Section of the Department in connection with all appropriate professional and technical matters arising out of the supervision of all sites under the control of the Parks Committee and the maintenance of ancillary buildings connected therewith. Experience in landscaping will be taken into consideration.

A knowledge of Local Government procedure and organisation is an advantage.

Applications, together with the names of two referees, should be addressed to the General Manager, Parks Department, Civic Centre, Birmingham, 1, to reach him not later than 12 noon on Monday, 2nd January, 1961.

4873

BOROUGH OF SOLIHULL
APPOINTMENT OF ASSISTANT QUANTITY SURVEYORS

Applications are invited from Quantity Surveyors with suitable qualifications and experience for appointment as Assistant Quantity Surveyors in the Architect's Section of the Borough Surveyor's Department at a salary in accordance with A.P.T. Grade IV (£1,140-£1,310 per annum) commencing according to experience.

The Borough, which has a population of approximately 90,000 and which is still expanding rapidly, is an Excepted District for education and in April, 1961, is assuming delegated powers for health and welfare services. It has also been recommended for County Borough status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

Each appointment will be subject to a satisfactory medical report, the Local Government Superannuation Acts, the National Scheme of Conditions of Service and to one month's notice, in writing, on either side.

In appropriate cases the Council will assist in the provision of housing accommodation and half the removal expenses will be paid.

Applications, giving full particulars as to age, qualifications, and past and present experience, together with the names and addresses of three referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than Friday, 6th January, 1961.

W. MAURICE MELL,
Town Clerk.

The Council House,
Solihull,
12th December, 1960.

4911

ARCHITECTS

required by LONDON TRANSPORT for the following posts:—

ASSISTANT ARCHITECTS: Salary range £1,140 p.a.—£1,320 p.a.

Applicants must be fully qualified and capable of supervising staff. (Reference 117/A/1.)

ARCHITECTURAL ASSISTANTS: Salary ranges £1,060 p.a.—£1,140 p.a.

Applicants should be qualified to R.I.B.A. Intermediate standard with previous office experience. (Reference 117/B/1.)

Free travel; five-day week; medical examination; contributory superannuation after probation.

Applications, quoting reference number of post applied for and stating age, qualifications and full details of experience, to Staff and Welfare Officer, London Transport, 55, Broadway, S.W.1.

4688

COUNTY BOROUGH OF EAST HAM

ARCHITECTS

Applications are invited for the following temporary appointments:—

Senior Assistant Architects
Salary £1330 - £1500

Salaries in excess of the minimum may be paid according to qualifications and experience. The appointments are for work on a new Technical College costing more than £700,000 and are expected to be for a period of not less than two years.

Further details and application forms returnable by 27th December 1960 from the Town Clerk, Town Hall, East Ham, E.6.

ARCHITECTS
FOR
CORBY NEW TOWN

For young, keen architects, a few vacancies exist in the Chief Architect's department which will offer unique experience of absorbing work in a rapidly developing New Town.

Commencing salaries are as high as £1,140 per annum.

The appointments carry generous increments and emoluments; work will be available for years ahead and there are excellent prospects of promotion.

Good housing is available in pleasant surroundings, removal expenses are paid, and there is a superannuation scheme under Local Government conditions.

Write at once for an interview, stating age, present appointment and salary, details of qualifications and experience, and the names of two referees.

R. F. Brooks Grundy,
General Manager,

CORBY DEVELOPMENT CORPORATION,
Spencer House,
Corby, Northants.

EAST RIDING OF YORKSHIRE COUNTY COUNCIL

Applications are invited for the following permanent appointments on the staff of the County Architect.

- (a) ARCHITECTURAL ASSISTANT, A.P.T. II (£215-£260 per annum).
- (b) JUNIOR LAND SURVEYING ASSISTANT, General Division (£200-£230 per annum).

Applicants for post (a) should have passed the R.I.B.A. Intermediate Examination. Particulars of qualifications, age, experience, past and present appointments with salaries, together with the names of three referees, should be sent to the County Architect, County Hall, Beverley, not later than Friday, 30th December, 1960.

Assistance towards removal, lodging and travelling expenses may be granted.

THOMAS STEPHENSON,
Clerk of the Council.

4905

NEWCASTLE REGIONAL HOSPITAL BOARD REGIONAL ARCHITECTS DEPARTMENT

Applications are invited for the following permanent (superannuable) posts on the staff of the Regional Architect.

In addition to its normal building programme the Department is concerned with the planning and execution of a number of major hospital projects and the posts offer ample opportunity for gaining all-round general as well as hospital experience, and for doing good-class work in an expanding department.

SENIOR ASSISTANT ARCHITECT (£1,300 x £50 (5)-£1,600).

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

SURVEYING ASSISTANT (Lands and Buildings) (£525 x £30 (3)-£55 (1)-£590).

Applicants should have passed the Intermediate Examination of the Royal Institution of Chartered Surveyors, or an examination recognised by the Institution as equivalent, and should be experienced in surveying sites and buildings. The commencing salary within the grade will depend upon the applicant's age and the amount of practical experience.

Applications should give details of professional training, qualifications, experience and posts held, present salary and any other relevant information, should be accompanied by the names of three architectural referees, and should reach the Secretary to the Board, Benfield Road, Newcastle upon Tyne, 6, not later than 30th December, 1960. Canvassing will disqualify.

4910

ASSISTANT ARCHITECTS

Vacancies exist on the staff of the Architect, N.E. Region, British Railways, for the following:-

LEADING ASSISTANT ARCHITECT

Salary Scale £1,330/£1,350.

ASSISTANT ARCHITECT

Salary Scale £925/£1,000.

The posts provide experience on a wide variety of building types, located in diverse areas of North East England, giving scope for innovation and original development.

The first post provides opportunity to control staff and for this post applicants must possess a Degree or Diploma in Architecture and be Associates of the R.I.B.A.

Applicants for the second post must have passed the Intermediate Examination of the R.I.B.A. and be studying for the Final Examination.

Further particulars may be obtained from the Regional Architect, c/o the Chief Civil Engineer, British Railways, York, to whom applications should be addressed by Saturday, 31st December, 1960.

4999

LONDON COUNTY COUNCIL

ARCHITECT/PLANNER DEPARTMENT

ARCHITECT/PLANNER required in Principal Assistant (Professional) grade (£1,700-£1,950) in one of the four area groups for London to take charge of section of architect/planners dealing with civic design aspects.

Requirements-Leadership, drive, enthusiasm, initiative and experience of handling urban civic design problems.

Application form and particulars, returnable by 16th January, 1961, from Hubert Bennett, F.R.I.B.A., Architect to the Council (M.K.A./3222/12), the County Hall, S.E.1.

4908

NOTTINGHAM: The following additional staff are

urgently required for Commercial, Educational, War Department, Hospital and Industrial contracts:-

Three SENIOR ARCHITECTS,

Salary £1,050 x £100 to £1,500

Two ARCHITECTS, Salary £800

x £50 to £1,050

Three ARCHITECTURAL ASSIS-

TANTS, salary up to £800 depend-

ing on experience. Increments

of £50 per annum.

Staff pension scheme, Life Assur-

ance scheme, 5 day week. Apply

Bartlett & Gray, 16 Bridgford

Road, West Bridgford, Notting-

ham, Telephone No. Nottingham

58711/2/3.

4917

COUNTY BOROUGH OF DERBY

BOROUGH ARCHITECTS DEPARTMENT

(a) SENIOR ASSISTANT ARCHITECT, A.P.T. Grade IV (£1,140-£1,310 per annum).

Qualifications: A.R.I.B.A.

(b) ASSISTANT ARCHITECT, A.P.T. Grade II (£815-£960 per annum). Qualifications: Intermediate R.I.B.A.

(c) ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade II (£815-£960 per annum).

Qualifications: Intermediate R.I.C.S. with good experience in working up Bills of Quantities and Final Accounts, Measuring on site and taking-off for small works.

Commencing salary according to qualifications and experience. Permanent superannuable appointments, subject to one month's notice and to medical examination. National Conditions of Service.

Forms of application obtainable from and to be returned to the Borough Architect, The Council House, Corporation Street, Derby, not later than Monday, 9th January, 1961.

N. S. FISHER,

Town Clerk.

8th December, 1960. 4886

CITY OF NOTTINGHAM EDUCATION COMMITTEE

COLLEGE OF ART AND CRAFTS

Principal: ROBERT LLOYD, D.A.(GLAS.), F.R.S.A.

Head of School of Architecture: D. W. NOTLEY, B.A.RCH.(HONS.), L'POOL, A.R.I.B.A.

Applications are invited for the posts of TWO STUDIO MASTERS in the School of Architecture of this College. Duties to commence as soon as possible. Candidates should be Architects holding the degree or diploma of a recognised School, and should have had a minimum of three years' practical architectural experience after registration.

Salary to be in accordance with the Burnham Report 1959 for Lecturers, i.e. £1,370 x £35-£1,550 (Men) and £1,100 x £28-£1,240 (with equal pay increments) (Women).

Application forms and further particulars from the Principal, College of Arts and Crafts, Waverley Street, Nottingham, to whom the forms should be returned within 10 days of the publication of this advertisement.

W. G. JACKSON,

Director of Education.

Education Office, Exchange Buildings, Smithy Row, Nottingham. 4883

CITY OF BIRMINGHAM PARKS DEPARTMENT

APPOINTMENT OF SENIOR TECHNICAL OFFICER

Applications are invited for the above appointment from persons holding a qualification in Surveying, Architecture or Engineering. The post is graded in accordance with Grade "C" (£1,560-£1,825 per annum).

The appointment will be subject to the provisions of the National Scheme of Conditions of Service as adopted by the City Council and varied from time to time, the Local Government Superannuation Acts, 1937-53, and will be terminable by one month's notice. The successful candidate will be required to pass a medical examination.

The person appointed will be required to take charge of the Sites and Building Section of the Department and will be directly responsible to the General Manager for all appropriate professional and technical matters arising out of the control of the Parks Committee's 5,000 acres of public open space, including the City Cemeteries and Municipal Golf Courses, and the maintenance of ancillary buildings of all types connected therewith. He will be expected to be competent in preparing and supervising schemes of layout, including the preparation of specifications for contract work and the supervision of direct labour projects involving both site and building construction and maintenance. Experience in landscaping will be taken into consideration.

A knowledge of Local Government procedure and organisation is an advantage.

Applications, together with the names of two referees, should be addressed to the General Manager, Parks Department, Civic Centre, Birmingham, 1, to reach him not later than 13 noon on Monday, 2nd January, 1961.

4872

BOROUGH OF OLDBURY

Applications are invited for the following appointments on the staff of the Borough Surveyor's Department.

ARCHITECTURAL ASSISTANTS, Salary

A.P.T. II (£815-£960 per annum).

Candidates should be well trained and experi-

enced in the design and preparation of schemes

and supervising contracts in connection with

public buildings, school buildings, and minor

improvements and maintenance works.

The appointments will be superannuable sub-

ject to the National Conditions of Service and to

the selected candidates passing a medical

examination.

Applications, giving particulars of age, quali-

fications, experience, and the names of two

referees, should be delivered to the undersigned

not later than the 31st December, 1960.

KENNETH PEARCE,

Town Clerk.

Municipal Buildings, Oldbury, 4968

December, 1960.

THE GOVERNMENT OF

NORTHERN NIGERIA

require ARCHITECTS on favourable contract terms.

QUALIFICATIONS.

Candidates should preferably be Members of the Royal Institute of British Architects with a wide general experience, but candidates who propose to complete their Final Examinations for A.R.I.B.A. will be accepted if they have sufficient experience.

DUTIES.

To prepare sketch plans, working drawings and detailed specifications for various types of buildings and carry out the work of a very busy architectural office preparing designs for large buildings varying from £20,000 to £500,000.

EMOLUMENTS.

1. The salary scale will depend on qualifications and experience in the range of £1,440-£3,202 per annum.

2. Children's Allowance-£120 in respect of one dependent child, £216 in respect of two, and £288 in respect of three children eligible.

3. Outfit allowance of £45 on first appointment.

4. Resettlement Gratuity of £37 10s. for every three months of service inclusive of earned leave, paid on satisfactory completion of contract.

5. Free Tourist Class passages for officer and wife on appointment and on leave, and assistance towards children's passages.

LEAVE.

Generous home leave on full pay.

Applicants should write to:-

The Recruitment Secretary,

Northern Region Recruiting Agency,

Nigeria House,

9, Northumberland Avenue,

LONDON, W.C.2.

or Telephone TRAFalgar 1244 Ext. 146. 4906

BOROUGH OF ENFIELD

BOROUGH ENGINEER & SURVEYOR'S DEPARTMENT

(Non-County Borough in the County of Middle-

sex-Population 109,700; area 12,400 acres.)

Applications are invited, from suitably qualified persons, for the following permanent appoint-

ments:-

1. ASSISTANT ARCHITECT-A.P.T. IV, £1,140-

£1,310 plus London weighting.

2. ARCHITECTURAL ASSISTANTS, A.P.T. III,

£960-£1,140 plus London weighting.

The commencing salary will be fixed at points within the Scale commensurate with qualifications and experience.

The successful applicants will be engaged, inter alia, on the preparation of three-dimensional schemes for the redevelopment of the Town Centre as a pedestrian shopping precinct, the design of multi-storey point blocks of flats, and the redevelopment of clearance areas.

Housing accommodation may be made available in appropriate cases. The Council is also prepared to consider 100 per cent. advances to successful applicants for house purchase within the Borough.

Saturday mornings are normally free from duty.

Application forms, obtainable from H. D. Peake, M.Sc.(Eng.), Borough Engineer & Surveyor, 7, Little Park Gardens, Enfield, Middlesex, must be delivered to the undersigned as soon as possible.

CYRIL E. C. E. PLATTEN,

Town Clerk.

Public Offices, Gentlemen's Row, Enfield, Middlesex. 4903

NORTHERN IRELAND HOUSING TRUST

QUANTITY SURVEYORS AND ARCHITECTS

The Trust has vacancies for (a) ASSISTANT QUANTITY SURVEYORS and (b) ASSISTANT ARCHITECTS on the salary scales £950-£1,300.

(a) Candidates must be Associates of The Royal Institution of Chartered Surveyors.

(b) Candidates must be qualified Architects.

Placing will be according to experience.

The persons appointed will be required to contribute to a superannuation scheme which allows for the transfer of benefits in local government schemes in suitable cases.

Housing accommodation may be arranged for married candidates.

Please apply not later than 31st December, 1960, giving full details of age, education, qualifications and experience, including present post and salary, to the General Manager, Northern Ireland Housing Trust, 12, Hope Street, Belfast, 12.

Please mark envelope (a) 35/76.

(b) 33/89. 4963

ARCHITECTURAL ASSISTANT LEADING

wanted for original schemes and detailed working drawings for development and modifications to laboratories and other buildings. Intermediate R.I.B.A. or R.I.C.S. (Building Division) with three years' experience of similar work.

Experience in a Municipal Engineer's office would be an advantage. Post permanent and superannuable. Salary according to age and experience in range £1,020-£1,190. P.C. for application forms from Recruitment Officer, National Institute for Research in Nuclear Science, Harwell, Berkshire. Quote Ref. VN19/119. 4887

THE RURAL DISTRICT COUNCIL OF GODSTONE
ARCHITECTURAL ASSISTANT

Applications are invited for the above appointment in the Engineer and Surveyor's Department at a salary in accordance with Grade A.P.T. III (£696-£1,140). A car allowance on the essential user basis is payable for a car not exceeding 1,199 c.c.

Candidates should have passed the Intermediate R.I.B.A. Examination.

Assistance will be given in the provision of housing accommodation, if required.

Applications, stating age, qualifications, present and previous appointments, and experience, together with the names and addresses of two referees, should reach the undersigned not later than 6th January, 1961.

M. HAWORTH,

Clerk of the Council.

Council Office,
Oxted, Surrey.

4897

CITY OF LEEDS

CITY ARCHITECT'S DEPARTMENT

The following senior vacancies occur in the Quantity Surveying Section which deals with all aspects of a large and varied building programme including schools, hostels, multi-storey flats and other similar schemes.

1. SENIOR ASSISTANT QUANTITY SURVEYOR, Grade "B." Salary Scale: £1,505 to £1,670.

Applicants should have wide experience in the preparation of Bills of Quantities for major works including schools and large public buildings. The successful applicant will be engaged in the preparation of Bills of Quantities.

2. SENIOR ASSISTANT QUANTITY SURVEYOR, Grade "A." Salary Scale: £1,455 to £1,565.

Applicants should have wide experience in all aspects of a Quantity Surveyor's duties. Applicants for both posts must be suitably qualified.

The appointments are superannuable—medical examination.

Assistance will be given in providing housing accommodation in approved cases, if required.

Application forms may be obtained from the undersigned.

The closing date for receipt of applications is the 9th January, 1961, and these are to be sent to the City Architect, Priestley House, Quarry Hill, Leeds, 9.

Canvassing disqualifies.

J. R. SHERIDAN-SHEDDEN,

City Architect.

Priestley House,
Quarry Hill,
Leeds, 9.

4896

BRITISH BROADCASTING CORPORATION

Applications are invited from British subjects for the following permanent and pensionable London-based posts in the

BUILDING DEPARTMENT

ARCHITECTURAL ASSISTANTS are required for interesting and varied work on new designs for and alterations to transmitting stations, studio premises and office blocks. An interest in contemporary design and a sound knowledge of construction are required. The salary offered to recently qualified applicants (Final R.I.B.A.) is £936 p.a., and to professionally qualified Architects £1,096 p.a. Qualified applicants with some experience may be offered an appointment with an intermediate starting salary. The appointments will be made into a grade in which the salary rises by annual increments to a maximum of £1,370 p.a. Applicants who have not yet qualified will be offered a starting salary of £900 p.a. There are good promotion prospects.

Requests for application forms should be addressed to Engineering Recruitment Officer, British Broadcasting Corporation, Broadcasting House, London, W.1, quoting ref. 60.E.173.A.J.

4876

BOROUGH OF SOLIHULL
APPOINTMENT OF CHIEF ASSISTANT ARCHITECT

Applications are invited from qualified Architects with initiative and drive and with a background of good experience in local authority offices for appointment as Chief Assistant Architect at a salary in accordance with Scale "B" (£1,585 x £55 (3) to £1,670 per annum) at a commencing salary to be settled according to experience. An essential user car allowance will also be payable in respect of this appointment.

The successful applicant will be responsible to the Deputy Borough Architect for the work of the Architect's Section of the Department, the establishment of which numbers 29 assistants.

The Borough, which has a population of approximately 90,000 and which is still expanding rapidly, is an Excepted District for education and in April, 1961, is assuming delegated powers for health and welfare services. It has also been recommended for County Borough status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

The appointment will be subject to a satisfactory medical report, the Local Government Superannuation Acts, the National Scheme of Conditions of Service and to one month's notice, in writing, on either side.

In an appropriate case the Council will assist in the provision of housing accommodation and half removal expenses will be paid.

Application, giving full particulars as to age, qualifications and past and present experience, together with the names and addresses of three referees should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than Friday, 6th January, 1961.

W. MAURICE MELL,

Town Clerk.

The Council House,
Solihull.

12th December, 1960.

4913

AIR MINISTRY Works Designs Branch requires in LONDON and PROVINCES, ARCHITECTURAL ASSISTANTS with adequate training and drawing office exp. O.N.C. (Building) an advantage. Work includes site layouts, sketch plans, working drawings and details for variety of technical and domestic buildings in permanent and semi-permanent construction. Financial assistance and time off given for recognised courses of study. Promotion and pension prospects. Five-day week with 18 days' paid leave per year initially. Overseas tours for which special allowances granted.

Salary: in LONDON ranges from £885 (age 25) to £980 p.a., somewhat lower in PROVINCES. Commencing salary dependent on age, quals and exp. Applicants, who must be natural born British subjects, should write (quoting Order No. Kings Cross 897) to Air Ministry, W.G.D., Ligon House, Theobalds Road, London, W.C.1, or to any Employment Exchange giving age, details of training, quals., full particulars of former posts held and copies of any testimonials. Candidates selected will normally be interviewed in London and certain expenses reimbursed. 3508

CITY OF MANCHESTER

CHIEF ASSISTANT PLANNING OFFICERS

required in the City Surveyor's Department. Salary J.N.C. Scale "D" (£1,710-£1,975 per annum).

Two appointments are vacant, one of which is for an Architect/Planner to control the Comprehensive Development Sub-Section of the Planning Section of the Department.

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

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

Applications stating age, education, qualifications and experience, together with the names of three referees to the Town Clerk, Town Hall, Manchester, 2, not later than 5th January, 1961.

4915

BOROUGH OF SOLIHULL
APPOINTMENT OF PRINCIPAL ASSISTANT ARCHITECT AND ASSISTANT ARCHITECTS

Applications are invited from Architects with suitable qualifications and experience for the under-mentioned appointments:—

(a) Principal Assistant Architect, Scale "A" (£1,408 x £55 (3) to £1,565 per annum).

(b) Assistant Architect, A.P.T. Grade III-IV (£950 to £1,310 per annum).

(c) Assistant Architect, A.P.T. Grade I-II (£645 to £960 per annum).

In each case the commencing salary will be fixed according to experience of the successful applicants.

Applicants for post (a) will be in charge of the Housing and General Section of the office, the work of which includes a new covered swimming bath and possibly some eight-storey flats.

The Borough which has a population of approximately 90,000 and which is still expanding rapidly, is an Excepted District for education and in April 1961, is assuming delegated powers for health and welfare services. It has also been recommended for County Borough status by the Local Government Commission for England. There is a considerable programme of varied capital work on hand and to be undertaken in the future.

Each appointment will be subject to a satisfactory medical report, the Local Government Superannuation Acts, the National Scheme of Conditions of Service and to one month's notice in writing on either side.

In appropriate cases the Council will assist in the provision of housing accommodation and half the removal expenses will be paid.

Applications, giving full particulars as to age, qualifications and past and present experience, together with the names and addresses of three referees, should be submitted to the Borough Surveyor, 90, Station Road, Solihull, not later than Friday, 6th January, 1961.

W. MAURICE MELL,

Town Clerk.

The Council House,
Solihull.

12th December, 1960.

4912

EXMOUTH URBAN DISTRICT COUNCIL
APPOINTMENT OF ARCHITECTURAL ASSISTANT (CAPITAL WORKS)

Applications are invited from experienced persons for the appointment of Architectural Assistant (Capital Works) in the Department of the Engineer and Surveyor at a salary in accordance with Grade A.P.T. II of the National Scale of Salaries, at present £815 per annum rising by annual increments to £960 per annum.

The appointment will be for a temporary period not exceeding two years and may be determined by one month's notice on either side. The successful applicant will be employed on the preparation of schemes for an interesting programme of Capital Projects, for which a very high standard of design will be required.

Any further details of the appointment may be obtained from the Engineer and Surveyor.

Applications, giving age, particulars of training, present and past appointments and accompanied by copies of three recent testimonials, must be delivered to the undersigned by not later than 29th December, 1960.

R. B. BAGSHAW,

Clerk and Solicitor.

4877

CITY OF MANCHESTER

HOUSING COMMITTEE

Applications invited from suitably qualified persons for the following appointments.

SENIOR ASSISTANT ARCHITECT A.P.T. IV. £1,140-£1,310 per annum.

SENIOR ASSISTANT QUANTITY SURVEYOR A.P.T. IV. £1,140-£1,310 per annum.

Applications giving full particulars of age, qualifications and experience to the Director of Housing, Town Hall, Manchester, 2, by 13th January, 1961.

4914



BATLEY MULTIPLE CONCRETE GARAGES

NOW AVAILABLE WITH
Wooden Roller Shutter Doors!

- Any number in one block.
- Extensive free delivery area.
- Choice of hinged or "Up and Over" Doors.
- Erection service available.
- Purchased by over 300 Councils.
- Three years' Guarantee.
- Attractive Deferred Terms.
- Free Advisory Service.

Batley Multiple Garages provide an unequalled investment—ideal for Housing Estates, Public Utilities, Hotels, Private lock-ups, etc. Send for fully descriptive Brochure.

ERNEST BATLEY LIMITED

63 Colledge Rd., Holbrooks, Coventry. Tel.: 89245
63 New Islington, Manchester 4. Collyhurst 2887
123 Shepperton Rd., London, N.1. Canonbury 8793

MODELS FOR EVERY SITE



For sloping sites garages can be stepped



Back to back in one block



Roof slopes to front or rear

CITY OF PLYMOUTH EDUCATION COMMITTEE

PLYMOUTH COLLEGE OF ARTS AND CRAFTS

Principal: ALFRED FORREST, A.R.C.A., A.T.D., D.A. Required by 2nd January, or as soon as possible thereafter, **LECTURER IN ARCHITECTURE** to act as Studio Master and Lecturer in Building Construction and Science subjects. Candidates should possess A.R.I.B.A. degree or diploma, and have at least three years' professional experience. Salary—Burnham Technical Report £1,370 x £35 to £1,550. Forms and particulars (a.s.e.) obtainable from Clerk to the Governors, Education Offices, Cobourg Street, Plymouth, to whom the forms should be returned as soon as possible. 4874

ARCHITECTS required by the National Coal Board in Edinburgh. Salary within the scale £900 to £1,250 per annum. Applicants must be Associate Members of the R.I.B.A. (or, if not yet qualified, may be appointed in the first place as Architectural Assistants in a salary scale £655 to £863, or if exceptionally experienced to £1,100). Applications, stating age, education, qualifications, experience, present post and salary, to Staff Department, National Coal Board, 3, Reginton Crescent, Edinburgh, 12. 4875

BOROUGH OF SCUNTHORPE TENDERS FOR THE ERECTION OF ONE 14-STORY BLOCK OF 79 FLATS ON THE WESTCLIFF ESTATE, SCUNTHORPE

Applications are invited for the temporary appointment of **CLERK OF WORKS** for the above scheme. It is expected that the building operation will commence towards the end of 1960 with an anticipated contract period of 18 months.

Applicants must have appropriate experience including reinforced concrete frame construction. The salary will be at the rate of £20 per week. Applications with full details of qualifications, past experience and age, together with the names and addresses of two referees, must reach the Town Clerk, Municipal Offices, 34, High Street, Scunthorpe, not later than Wednesday, 28th December, 1960. 4862

Architectural Appointments Vacant

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

RONALD WARD AND PARTNERS invite applications from **ARCHITECTS**, Senior and Junior. Long-term prospects. Scope for initiative and responsibility in interesting commercial, industrial and civic projects in British Isles, West Africa and Australia. Salaries commensurate with ability. Non-contributory Pension and Life Insurance schemes. Five-day week. Pleasant offices. Apply 29, Chesham Place, Belgrave Square, London, S.W.1. Tel.: BELGRAVIA 3361. 3060

ARCHITECTURAL ASSISTANT required in busy City office. Assistant should be capable of carrying through schemes from sketch stage to final construction. Mainly office and residential buildings in London area. Varied and interesting projects. Long term engagement to right person. £1,500 per annum plus luncheon vouchers. Five-day week. Applicants must be capable of producing sketch schemes on contemporary buildings and preparing working drawings. Box 4228.

BASIL SPENCE & PARTNERS require qualified and experienced **ARCHITECTS** to fill positions of responsibility on a major building programme. Write to 1, Fitzroy Square, W.1, stating experience and salary required. 3084

WEST END OFFICE requires **ASSISTANT ARCHITECTS** of Final and Intermediate standards for interesting industrial projects in Home Counties. Good salaries offered to men with initiative and ability. Bonus Scheme, five-day week, holiday arrangements honoured. Box 3039.

ELIN MAYORCAS requires **ARCHITECTURAL ASSISTANTS** with a minimum of three years' office experience in this country. Write, giving brief particulars of architectural education and experience, and salary required, to 13, David Mews, Baker Street, W.1. 3062

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

ARCHITECTURAL ASSISTANT required for City Office. Qualifications unnecessary, but experience in the preparation of working drawings essential. Salary £1,000 per annum plus luncheon vouchers. Five-day week. Box 4229.

ARCHITECTURAL ASSISTANT required, with at least two years' office experience. Apply in writing to Thomas Mitchell & Partners, 28, Bedford Square, London, W.C.1. 7282

MONROE AND PARTNERS require **ARCHITECTURAL ASSISTANTS** of Intermediate or Final R.I.B.A. standard in their London, Watford, and Glasgow Offices for work on interesting industrial and commercial projects. Salary range £600—£1,000 p.a. Non-contributory Pension Scheme. Five-day week. Apply in writing to 31, Clarendon Road, Watford. 3069

SIR JOHN BURNETT, TAIT & PARTNERS have vacancies for **ARCHITECTURAL ASSISTANTS** of all grades. Salaries ranging from £1,000 to £1,500 per annum. Luncheon vouchers. Pension and Medical schemes (non-contributory). Telephone LAngham 3066 for appointment. 9113

SENIOR ASSISTANTS required immediately. Salary by arrangement. Theo. H. Birks, 38, Portland Place, London, W.1. LAN 7236. 1486

ASSISTANT ARCHITECTS required for staffing a new office opening in Southampton for work on interesting projects including University, War Department and Ecclesiastical programmes. Juniors also required. Apply stating age, qualifications, experience and salary required to Robert Potter, F.R.I.B.A., & Richard Hare, B.Arch., A.R.I.B.A., De Vaux House, Salisbury. 3167

WILLIAM H. ROBBINS, A.R.I.B.A., requires **ARCHITECTURAL ASSISTANTS** of Final and Intermediate standard for interesting work in expanding office. Applicants should be experienced in design and construction and taking responsibility. Excellent opportunity of advancement. Salary range from £750 to £1,400 per annum according to experience. Five-day week. Apply to 77, Wigmore Street, London, W.1. WELbeck 0274/5. 3041

HOWARD V. LOBB & PARTNERS require **ASSISTANT ARCHITECTS**. Salaries would be between £750 and £1,250 per year. Please write to 29 Gower Street, London, W.C.1. 3640

BOOTH, LEEBOER AND PINCKHEARD require **ASSISTANTS** in the salary range £750—£1,250. Apply 17-20, Mason's Yard, Duke Street, St. James's, S.W.1. Tel.: TRAFALGAR 1666. 3119

INTERMEDIATE to Final **ASSISTANTS** required immediately. Salary according to ability and experience. Theo. H. Birks, 38, Portland Place, London, W.1. LAN. 7236. 9739

WALLIS GILBERT AND PARTNERS ALSO NEED STAFF URGENTLY. 5, Cromwell Road, S.W.7. KENington 1450. 3814

A VACANCY occurs in the West End Branch of large provincial Architectural Practice, for an **ASSISTANT** at intermediate standard. The post offers considerable scope on varied projects. Five-day week. Luncheon Vouchers. Write giving particulars of age, experience and salary required to Box 4126.

SENIOR ASSISTANT ARCHITECTS required immediately for a wide variety of interesting work. Applicants should be experienced in all aspects of modern building design and construction. Attractive remuneration to right men capable of working on own initiative under ideal conditions for self expression. Preference given to men over 45 years of age although all applications will be considered on merit irrespective of age. Applications should be made in writing, to Kenneth F. Mason, Esq., A.R.I.B.A., Chief Architect, S.C.W.S. Ltd., Architectural Division, 76 Morrison Street, Glasgow, C.5. 4128

EXPERIENCED ARCHITECTURAL ASSISTANT required for busy West End office. General practice but mainly office and commercial projects. Bernard Gold & Partners, 4/6, Savile Row, W.1. REGent 7651. 3742

A QUALIFIED ARCHITECTURAL ASSISTANT required immediately in Home Counties office. Successful applicant will have the opportunity of working on widely varying industrial, commercial and housing schemes. Five-day week. Write full particulars to Box 4135.

C. H. ELSON & PARTNERS need experienced **ARCHITECTS** for a wide range of public and commercial projects. VICTORIA 4304. 18, Lower Grosvenor Place, W.1. 4871

BRIGHTON & HOVE, Experienced **ASSISTANTS** in all grades required. Details please to: H. Hubbard Ford & Associates, 67, Church Road, Hove, 3. SUMmer. 4338

ASSISTANT with several years' office experience and accustomed to preparing working drawings from sketches, required immediately by West End Architects. Should be interested in supervising the work and have a sound knowledge of construction. Write for interview to Box 3557.

TWO first class **ARCHITECTURAL ASSISTANTS** required. Salary range £1,250—£1,750 p.a. depending upon experience. Write with fullest details of experience. Box 4227.

OSCAR GARRY AND PARTNERS require one or two **SENIOR ASSISTANTS** to work on large projects at present at early design stage. Minimum five years' experience essential. Salaries not less than £1,100. Luncheon Vouchers. Apply 56 Gloucester Place, London, W.1, or phone WELbeck 2509. 4330

WATKINS, GRAY & PARTNERS, 57, Catherine Place, S.W.1, require **ASSISTANTS** of Intermediate and Final standards for work on large hospital projects. Excellent opportunities for those seeking first hand experience in this most interesting and rapidly developing field. Luncheon vouchers and pension scheme in operation. Write giving full particulars. 4233

INTERMEDIATE to FINAL STANDARD. Expanding practice engaged large scale commercial projects requires **ARCHITECTURAL ASSISTANTS** with design and supervision initiative. Good salaries according capabilities. Five-day week. L.V. Raymond Spratley & Partners, 9, Hertford Street, Park Lane, W.1. GRO 1632. 4306

£700—£1,300 P.A. WILL BE PAID ACCORDING TO EXPERIENCE AND ABILITY TO ARCHITECTS AND ARCHITECTURAL ASSISTANTS WORKING ON VARIED AND INTERESTING PROJECTS AT HOME AND ABROAD. FIVE-DAY WEEK, NON-CONTRIBUTORY AND CONTRIBUTORY PENSION SCHEME. SALARIES REVIEWED ANNUALLY. PLEASE APPLY: E. J. D. MANSFIELD, A.R.I.B.A., SIR WILLIAM HALCROW & PARTNERS, STANHOPE HOUSE, 47, PARK LANE, LONDON, W.1. 4373

ARCHITECTS, ASSISTANT ARCHITECTS, DRAUGHTSMEN required in expanding contemporary office. Experience and ability well rewarded. Pension scheme in operation. Assistance with housing and removal considered. Shepherd, Fowler & Marshall, L.A.R.I.B.A., 15 St. James' Row, Sheffield, 1. 28854. 4331

TRIPS & WAKEHAM, Chartered Architects, require **ASSISTANTS** in all grades to work in their London office on interesting projects both in this country and abroad. Salary by arrangement. Telephone WELbeck 7744 or write to 18, Fitzhardinge Street, London, W.1, for an appointment. 4650

SENIOR AND JUNIOR ASSISTANTS required for small Office with interesting and varied work. Green, Lloyd & Son, 5, Pickering Place, St. James's Street, S.W.1. Telephone WHITEhall 9936. 4000

QUALIFIED ARCHITECTS looking for some really interesting new work should apply to George, Trew and Dunn at their new offices, 58, Eastbourne Terrace, W.2. 4596

ARCHITECTURAL ASSISTANTS who are looking for some really interesting work where wide experience can be gained, should apply to George, Trew and Dunn at their new offices, 58, Eastbourne Terrace, W.2. 4699

SENIOR AND JUNIOR ASSISTANTS and DRAUGHTSMEN required by Multiple Shop Company's Architecture Department. Five-day week, excellent salaries, staff canteen, etc. Work consists of detail working drawings both 1/4" and 3/4" in, together with travelling throughout the country. Please reply, stating age, salary required and past experience to Box 4534.

£1,000—£1,500. ASSISTANT ARCHITECTS required in the Dundee and Edinburgh offices of Robert Matthew and Johnson-Marshall for work on major hospital projects. Apply to 31, Regent Terrace, Edinburgh, 7. 4449

CHIEF ARCHITECT of Expanding Architects Department of established Building & Development Company requires

SENIOR ARCHITECTURAL ASSISTANTS at new Headquarters Building in Woking, for work on Industrial and Commercial Projects. Keenness and experience essential. Good salaries paid. Five-day week. Luncheon vouchers. Pension scheme available. Please state age, experience and salary required to Box 4697.

ARCHITECTURAL ASSISTANT required by Multiple Shoe Company for the design of building and shop fitting work. Must be capable of taking surveys, preparing drawings and prospective sketches for numerous interesting projects. Pension Scheme, salary according to experience. Applications giving full details to R. C. Lansdown, Property Department, Lilley & Skinner Ltd., King's Cross, London, N.1, marked Confidential. 4697

LOUIS DE SOISSONS, PEACOCK, HODGINS, ROBERTSON & FRASER require competent **ARCHITECTURAL ASSISTANTS** in their Exeter office; good salaries will be offered to suitable applicants. Details of training, experience and age should be sent with an indication of salary required, to 13 Baring Crescent, Exeter. 4698

ASSISTANTS of Intermediate standard required in busy provincial office. Contemporary outlook welcomed. Opportunity given to handle contracts from inception to completion. Facilities given for study at London Schools one day per week if required—fare and fees paid. Salary £750—£900 according to ability. Hare & Pert, A/R.I.B.A., 29 Elm Street, Ipswich 4716

SIDNEY KAYE of Lewis Solomon, Kaye & Partners requires ARCHITECTS and ASSISTANTS—all grades—for important comprehensive redevelopment scheme in Central London. The development will consist of shopping forum, multi-storey offices and flats, school and ancillary buildings. The development is to commence shortly and will take approximately four years to complete. Architects and Assistants employed on this project will be required to work as a team under the direction of a Partner. Good salaries and conditions offered to men with initiative and good practical design. Apply in writing to: Thavies Inn House, 6 Holborn Circus, E.C.1. 4647

FARMER AND DARK require ASSISTANT ARCHITECTS with some office experience, initiative and ability. Varied work. Apply Romney House, Taiton Street, S.W.1. Tel.: ABBEY 6311. 4648

ASSISTANT required, Final standard, for varied practice in office of Barber, Bundy & Greenfield, F/A/A.B.I.B.A. Salary by arrangement. Reply to 5 Apple Market, Kingston-upon-Thames. 4645

STOP THAT COMMUTING! TO ARCHITECTS in West Sussex we offer work on a wide variety of West African projects, prospects of service abroad, and £1,000 per annum. Apply in writing to Tecnic, Architects and Town Planners, 38 Sudley Road, Bognor Regis. 4698

EDINBURGH. ARCHITECTURAL ASSISTANTS required immediately for expanding practice. Please write giving details of age, experience and salary required to Law and Dunbar-Nasmith, 54 Frederick Street, Edinburgh. 4795

ARCHITECTS in London offer up to £1,500 a year, plus various benefits, to capable SENIOR ASSISTANTS. Lower salaries offered to more junior men. Reply giving brief particulars, age, and experience, and qualifications to Box 4713.

ASSISTANT ARCHITECT required primarily to supervise Flats now under construction. Good knowledge of building construction and site supervision essential. Single man preferred as accommodation difficult. Good salary and prospects after completion of Flats. Apply in writing, giving details of qualifications and experience, to Box 4677.

W. PATON ORR AND PARTNER require JUNIOR and SENIOR ASSISTANTS, up to the age of 25, whose ambition is sustained by ability. 40 Goodge Street, W.1. Telephone: LANGHAM 6169. 4723

ROBERT MATTHEW & JOHNSON-MARSHALL have vacancies in their London office for ARCHITECTS at all levels of experience for a variety of interesting jobs. Apply to Robert Matthew & Johnson-Marshall, 24 Park Square East, N.W.1. 4734

IMMEDIATE vacancies available in medium sized offices in Southampton and Salisbury for qualified ARCHITECTS for work at all stages on contracts up to £250,000 in value forming part of a varied building programme. Apply in writing giving details of experience and salary required to: Robert Potter & Richard Hare, F/A.B.I.B.A., De Vaux House, Salisbury. 4754

ASSISTANTS of Final and post Intermediate standard required immediately to fill responsible positions in expanding practice. Applicants must be competent draughtsmen with sound knowledge of construction and detailing, with keen interest in good design. Details of experience and ability, and salary required, to: Felix Walter, F.R.I.B.A., 4 Raymond Buildings, Gray's Inn, London, W.C.1, or telephone HOLBORN 0535. 4761

ASSOCIATESHIP STATUS for selected applicants in expanding office with profit sharing scheme. Minimum salary £1,250. Housing accommodation or car provided. Sheffield. Box 4880.

OPPORTUNITY for Intermediate standard ASSISTANT to work exclusively with principals in very attractive offices Hampton-on-Thames. Excellent prospects and very interesting varied work. Apply in writing to Box 4835 or telephone MIDDLESEX 3090.

SENIOR ASSISTANT required by Architects in West End to deal with the administration of building contracts. Salary £26-£25 per week. Reply Box 4785.

VERNER REES, LAURENCE & MITCHELL require an ASSISTANT for work on University projects. Please telephone PAK 3900 for interview, or write 38, Holland Villas Road, W.14. 4797

GOLLINS, MELVIN, WARD & PARTNERS require a JUNIOR ARCHITECTURAL ASSISTANT for their Sheffield Office to work on interesting University projects. Five-day week with pension scheme. Write: 261, Glossop Road, Sheffield, 10, or telephone Sheffield 29923, for an appointment. 4808

INTERMEDIATE standard, office-trained ASSISTANT required immediately for small expanding office. Very varied programme of work and congenial atmosphere. Ability to work on own initiative essential. Salary by arrangement. Apply: RAYMOND J. CECIL, Dip. Arch., A.B.I.B.A., 3, Mill Street, Hanover Square, W.1. MAYfair 6574. 4803

SENIOR ARCHITECT

DENYS LASDUN & PARTNERS require a SENIOR ARCHITECT to take charge of a major and unique University project, starting in the New Year. Good salary and prospects for right man with experience and a high standard of design. Write 3, Albany Terrace, N.W.1. 4819

BOURNEMOUTH-Jackson & Greenen, F/A.B.I.B.A. Minton Buildings, have immediate vacancies for SENIOR ASSISTANTS. Large programme including Schools, Offices, Flats, Bank and Hospital work. Staff pension scheme. 4816

BREWERY COMPANY with Head Office in Manchester area requires capable and imaginative SENIOR ASSISTANT to join small but progressive and well set up Architects Department. Preferably under 35 years and at or approaching Final R.I.B.A. standard but other qualifications and experience will be considered. Qualifications, experience and salary required, to "The Secretary," Box 4811.

ARCHITECTURAL ASSISTANT of Intermediate standard required for medium sized office engaged on Churches, Industrial Buildings, Housing, etc. Good prospects and a salary according to ability and experience. Opportunity offered for further studies. Write or telephone for an interview to McKewan & McKewan, 318, Hamstead Road, Handsworth, Birmingham, 20. NORTHERN 8281-2. 4768

ARCHITECTS in Private Practice in the Home Counties will pay £1,000 to £1,500 per annum to competent ARCHITECTURAL ASSISTANTS. Varied and interesting work in hand. Write stating age, experience and salary required to Box 4767.

ESTABLISHED Architect in Worcester has vacancy for a young ARCHITECT as salaried partner subject to 12 months' probation. Varied practice. Full particulars of education, training, experience, religion and salary required, in confidence to Box 4772.

CHIEF ARCHITECTS required for South Coast head office of an established and progressive firm. Responsible posts requiring initiative, drive and qualities of leadership. R.I.B.A. Final qualification essential. Salaries commensurate with ability. Five-day week. Write giving full particulars to Box 4783.

CAMBRIDGE Office requires ASSISTANTS to work on University and College projects. Salary from £1,000 per annum. Apply to David Roberts, 33a, Bridge Street, Cambridge. Tel. 5019. 4773

We have just a few places left to fill in our new office for Senior and Intermediate ASSISTANTS. We are looking for one or two more really good people—at really good salaries. Our staff share the responsibility and profits of an enormous range of interesting work.

Write ref. KAM or 'phone HUN. 1711 for an appointment to see the office and meet people and for details of current work and our Associateship and Pension Schemes. Beard, Bennett, Wilkins & Partners, 101, Baker Street, London, W.1. 4776

ARCHITECTS' CO-PARTNERSHIP requires a qualified ASSISTANT with experience for interesting and varied work. Write 44, Charlotte Street, W.1, or phone LANGHAM 5791. 4779

ARCHITECTURAL ASSISTANTS required in busy office with varied practice. Good salary and prospects for suitable applicants. Five-day week. Write giving particulars of age, qualifications and experience, etc., to Thomas, Jolly, Grant and Kelsey, 26, Kent Road, Southsea, Hants. 4784

TWO ASSISTANT ARCHITECTS with four years' office experience wanted by medium size progressive London firm on University, School, Industrial and other work. Good salary, bonus and non-contributory pension scheme. Telephone CHANCERY 3526. 4851

FULLY Qualified ARCHITECT required by rapidly expanding building company in Somerset, to replace architect recently deceased. Excellent prospects. Good salary. Architectural assistant employed. Must have high standard of design and detailing ability, particularly in Factory and Housing work. Box 4845.

J. M. AUSTIN-SMITH AND PARTNERS require

A **FULLY QUALIFIED ASSISTANT** WITH minimum of four years' experience to personally assist a partner in charge of a team. To run major contracts on own initiative, to commence in the New Year. Apply giving all relevant information either by telephone or writing for an immediate interview. 29, Sackville Street, W.1. REGent 6183. 4836

ARCHITECTS AND ARCHITECTURAL ASSISTANTS required for private practice in Liverpool. Men of first rate ability can expect very good salaries and the opportunity to use their full initiative and design skill. Write to Herbert J. Rowse, F.R.I.B.A., Martins Bank Building, Water Street, Liverpool, 2, or telephone Central 2428. 4871

ARCHITECTURAL ASSISTANT of Intermediate standard required for progressive and expanding practice. Scope for person wishing to work on own initiative. A car mileage allowance is payable and salary will be commensurate with ability. Please reply to Piper, Whalley & Partners, 5 Bath Road, Melksham, Wilts, or telephone Melksham 3010 for an appointment. 4878

ARCHITECTURAL ASSISTANTS, Intermediate and Final R.I.B.A., are required in the Glasgow and Stirling offices of Honeyman, Jack & Robertson. The positions are permanent and progressive with three weeks' annual vacation, five-day week and R.I.A.S. Pension Scheme. Applicants should write to Honeyman, Jack & Robertson, Chartered Architects, 196 Bath Street, Glasgow, C.2, stating age, qualifications, experience and salary required. 4879

ARCHITECTURAL ASSISTANTS required for busy London practice with interesting and varied work such as Power Stations, Schools, Offices, Churches, etc. Salary from £700-£1,100, depending on qualifications and experience, plus luncheon vouchers. Please write, giving full details, to Box 4864.



PAVE THE WAY FOR HARDER WEAR

For factory and other floors exposed to heavy traffic impact and corrosion. Accrington 'Nori' Paving Bricks may be specified with the utmost confidence. Made from the same material as the famous Accrington Engineering Bricks. Samples on request.

THE ACCRINGTON BRICK & TILE CO. LTD., ACCRINGTON
Telephone: Accrington 2684

ACCRINGTON 'NORI' PAVING BRICKS

ARCHITECTURAL ASSISTANTS required. Recently qualified, intermediate or equivalent standard for large projects of contemporary character. Excellent salaries offered. Pension and Life Assurance Schemes in operation. Five-day week. Please write giving full particulars of experience to Johns, Slater & Haward, F.A.R.I.B.A., 32, Foundation Street, Ipswich, 4860

RICHARD FINCH requires personal **ARCHITECTURAL ASSISTANT**. Please telephone WELbeck 4713 or 4215 or write to 71, Blandford Street, London, W.1. 4806

£1,200 PLUS profit sharing, plus pension scheme, plus housing accommodation or car, plus hard work in expanding office, South Yorkshire, for keen and energetic young Architect with good personality. Box 4881.

SENIOR ASSISTANT required immediately for responsible and varied work in busy practice; there is also a vacancy for a **JUNIOR ASSISTANT**. Antony Lamb, A.R.I.B.A., A.M.T.P.L., Ottery St. Mary, Devon. 4882

CROYDON. Varied and interesting experience offered in progressive and growing practice to experienced **ASSISTANT** and **JUNIOR**. Five-day week. Please write or telephone: L. A. Macintosh & Haines, A.R.I.B.A., 33-35 High Street, Croydon. CRO 5780/9992. 4884

ARCHITECTS AND ARCHITECTURAL ASSISTANTS are urgently required to take charge of important interesting projects. Qualified Architects and Assistants of intermediate standard may apply. Full consideration will be given to experience. Permanent positions and opportunities for advancement are offered. Commencing salaries between £800 and £1,600 according to ability and experience. Five-day week. Bonus Scheme, modern drawing office.

Apply in confidence to:—
Quiggin & Gee, F.F.R.I.B.A.,
Refuge Assurance House,
Lord Street, Liverpool. 4869
(Royal 4083).

ASSISTANT ARCHITECTS (intermediate standard). Applications are invited to fill positions at London office. Salary according to age, qualifications and experience. The posts are superannuable, subject to medical examination. Applications, stating age, experience, qualifications and salary required to: R. C. Steel, A.R.I.B.A., Chief Architect, C.W.S. Ltd., 99 Leman Street, London, E.1. 4867

FREDERICK GIBBERD's London office require bright **ASSISTANTS** to gain first class experience on interesting projects. Salary according to ability. Five-day week. Luncheon vouchers. Phone for interview, LANGham 6385. 4888

FRY, DREW & PARTNERS require qualified **ASSISTANTS** for interesting and important work in England. Salary range £850-£1,000. Apply 63, Gloucester Place, W.1. WEL 3518. 4858

PLAYNE & LACEY require experienced and enthusiastic **ARCHITECTURAL ASSISTANTS**. Salary range £900-£1,050. Write 19 Queen Anne's Gate, Westminster, S.W.1. or ring WHI 2552 for interview. 4859

SENIOR ASSISTANT ARCHITECT required on the permanent staff of a rapidly expanding organisation in the East Midlands. The successful applicant will be responsible to the Staff Architect for the design of all types of Industrial Building. The appointment offers considerable scope for rapid advancement to a man with initiative, drive and ability. A.R.I.B.A. required, although applicants close to Associate-ship with the ability and necessary experience will be considered. Send full particulars of training, experience, and present salary to Box 4892.

BIRMINGHAM.—Clifford Tee & Gale, F.F.R.I.B.A., require experienced **SENIOR ASSISTANTS** and **INTERMEDIATE STANDARD ASSISTANTS** for interesting industrial and commercial work in a congenial atmosphere. There are also vacancies for **ASSISTANTS** who are particularly interested in Service installations for these types of buildings.

Five-day week. Three weeks' holiday after qualifying period. Profit-sharing scheme. Pension scheme.

Please apply to Mr. R. G. Cox, F.R.I.B.A., 43 Frederick Road, Birmingham, 15. Tel.: EDGBaston 3676. 2088

ARCHITECTURAL ASSISTANTS, Intermediate or Finals standard, required in Chief Architect's office. Interesting and varied work. Five-day week, bonus. Appointments permanent and superannuable. Write (in confidence) stating age, experience and salary required to Personnel Manager, Wates Limited, London Road, Norbury, S.W.16. 4704

J. DOUGLASS MATHEWS & PARTNERS have several vacancies for **ARCHITECTURAL ASSISTANTS**. Salary range £700 to £1,000. Group system operated, giving opportunity for taking part in all aspects of work. Graded salary system. Annual bonuses. Pension Scheme. Luncheon vouchers. 3 Ebury Street, London, S.W.1. 4175

H. A. HALPERN & ASSOCIATES is a young but well established, rapidly expanding practice attempting to do good modern work. If you are genuinely keen to get on, the opportunity is here with us. At the moment we require staff in the £600-£900 salary bracket, as we prefer to promote from within. Brief details to 7 Edgware Road, W.2. or AMN 2471. 4895

BOISSEvain & OSMOND require the following staff for their head office in Epsom to work on interesting major projects. Intermediate **ASSISTANTS** and qualified **ARCHITECTS** (all grades required). This is a growing practice with excellent working conditions providing an opportunity for men with initiative. Salary scales are generous and in accordance with ability and experience. Please write to Kingshead Walk, Epsom, Surrey. 4123

ARCHITECTS with busy practice in Brighton require **ASSISTANTS** with practical experience for varied work. Salary up to £750 per annum. Five-day week, pension scheme, etc. Box 5868.

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

ASSISTANTS of all grades required. Salaries by arrangement. Bonus, Pension Schemes in operation. Schools, Industrial, Commercial, Hospital and Domestic work. Write to Firth, Son & Blackburn, A.A.R.I.B.A., Broadway House, Crackenedge Lane, Dewsbury. 4898

REQUIRED, A.R.I.B.A., not less than five years' office experience, and general **ASSISTANTS**, intermediate standard. Good opportunity in expanding office, interesting variety of work. Evening interviews if required. Write or phone George E. Clay & Partners, A.A.R.I.B.A., 198 Parrock Street, Gravesend, Kent (Gravesend 1401/2). 4899

REQUIRED immediately. Senior and Junior **ARCHITECTURAL ASSISTANTS**. Varied and progressive work including large scale multi-storey housing schemes. Write or telephone to Colclutt & Hamp, 86 Prince Albert Road, Regents Park, N.W.3. PRImrose 5157. 4901

ARCHITECTS in Manchester Square require **ASSISTANT** with initiative, intermediate standard, varied work, five-day week. Commencing salary £600 per annum or by arrangement. Excellent prospects. Telephone WEL 7889 or write Box 4902.

LEDS. **ASSISTANT ARCHITECT**. A.R.I.B.A. Office engaged on University, School and Hospital programme. Able to undertake contract and site management at all stages on hostel contract. Salary range £1,250 to £1,500 to discuss. Write or phone Jones & Stocks, F.F.R.I.B.A., 7 Blenheim Terrace, Leeds, 2. Tel.: 25169. 4904

ARCHITECT required by Development Company to take charge of a number of large scale housing developments in North Wales. Preference will be given to applicants who have had experience of this type of work. The Company operate a non-contributory pension scheme and a car will be provided. Assistance will be given to providing accommodation, if required. Please write stating age, salary required, to Chief Architect, Bunting Estates Ltd., 73 Acre Lane, London, S.W.2. 4907

PROGRESSIVE opportunities for **ARCHITECTS ASSISTANTS** are offered by Westminster Bank. Commencing salary £850 to £1,500 with good prospects. Modern London drawing office, favourable house mortgage rates, luncheon club, sports club and other social activities, pensions scheme, fare for interview refunded. Write, stating age, experience and salary required to: The Architect, Westminster Bank Limited, Post Office Court, 10 Lombard Street, E.C.3. 4893

ARCHITECTURAL ASSISTANTS are invited to apply for positions in office at St. Albans working on industrial projects. The positions offered are permanent, with good salaries. A five-day week and staff pension scheme are in operation. Applicants should write to The Secretary, Oscar Faber & Partners, 47 Holywell Hill, St. Albans, Herts. 4916

ARCHITECTS Department to City Property Company with expanding programme of interesting commercial and residential developments wish to enlarge their staff and offer the following posts which involve considerable delegated responsibility and opportunity to work on comprehensive central area redevelopment schemes. **STAFF ARCHITECT** to lead new section and must be capable of handling contracts from sketch design to completion and supervising junior staff; salary range £1,500-£1,650. **ARCHITECTURAL ASSISTANTS**, intermediate to final standard, up to four required to work in sections on larger schemes but to be capable of running smaller contracts with the minimum of supervision; salary range £950-£1,200. Write or telephone for an appointment, Maurice H. Day, A.R.I.B.A., Industrial & Investment Services Ltd., City Wall House, Finsbury Pavement, London, E.C.2. Tel.: MOORgate 6768. 4909

ASSISTANT required to carry out medium size projects under supervision but with scope for initiative. Preferably used to commercial or school work. Excellent prospects. Box 4376.

Architectural Appointments Wanted

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

WEST INDIES. **ARCHITECT**, thoroughly conversant office organisation, supervision, contracts, would like partnership or senior position in West Indies or American area. Experienced tropical. Reply Box 4854.

SENIOR ASSISTANT, private practice, 38, formerly head of small government architects department. Returning to U.K. after eight years in British Colony and Canada (plus six years' experience U.K.), seeks responsible position. Southern England preferred. Box 4890.

Other Appointments Vacant

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

BUSINESS VACANCIES BUREAU have vacancies for **DRAUGHTSMEN**, **ESTIMATORS**, **QUANTITY SURVEYORS**, etc.—Permanent Positions. (No Fees.) Call: 28, Victoria Street, Victoria, S.W.1. Abbey 7200, 4624

DRAWING OFFICE MANAGER required in London office. Must be fully conversant with organisation, administration and practical supervision of various building works of all kinds. Five-day week, luncheon vouchers. Salary starting at £1,800 p.a. based on capabilities and experience. Box 4519.

QUANTITY SURVEYOR, approaching Final standard, capable of carrying out final accounts and all normal Quantity Surveyor's duties, required for West End Office. Salary according to age and experience. Please write giving full particulars to Box 4884.

QUANTITY SURVEYOR, approaching Final standard, capable of carrying out final accounts and all normal Quantity Surveyor's duties, required for Home Counties Office. Salary according to age and experience. Please write giving full particulars to Box 4885.

SHOPFITTING DRAUGHTSMAN and **DESIGNER** required in Architects' Office for work on Multiple Stores. Salary by arrangement. Stanley R. Nevell & Partners, 34 Smith Square, S.W.1. ABBey 3971. 4683

ASSISTANT BUILDING SURVEYOR / DRAUGHTSMAN required for W.I. Property Company. Age 24/28. Knowledge of conversions an advantage. Reply stating age, experience and salary to Box 4905.

Other Appointments Wanted

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

SECRETARY, architectural experience, car driver, seeks varied post, preferably with interior designer and decorator. Box 4765.

Services Offered

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

"DON" ARCHITECTURAL MODEL MAKERS. We offer the highest grade work with speed and reliability.—Please Phone Woolwich 1262 or write 6, Pelham Crescent, Hastings. 1673

TRANSLATIONS from and into all languages, by technical, publicity and legal experts. Tenders, agreements, descriptions, conference papers, research articles, instruction manuals, publicity matter. Olympia Translation Service, 23 Russell Gardens, London, N.W.11. MEADway 2282. 4885

ARCHITECTURAL, Civil Engineering, Land, Building and Quantity Surveying services on fee, lump sum or quantum meruit basis. Tel. SILverthorne 7561. 3862

SURVEYS. Large or small, drawn to large scales, accuracy guaranteed. Structural sewerage, sewage disposal, sanitary plumbing and drainage design. The Site Survey Company, London, S.E.3. Telephone LEE Green 7444, 5086

SURVEY OF LAND or buildings also Specifications, quantities and final accounts prepared for new or conversion work. LIV. 1839. 2366

FULLY experienced in all Building and Architectural work. I am available to undertake: Designs, Working Drawings, Details, Surveys, Specifications, Models, etc. Just telephone Wallington 9883 (near Croydon) and I will call anywhere and take your instructions. Box 5548.

MODELS AND COLOUR PERSPECTIVES. Charles Houthuesen offers work of the highest quality. 16, Thames Street, Sunbury-on-Thames, Middlesex. Sunbury 3728. 2339

ARCHITECTURAL MODELS.—Thomas E. Bartlett and Partners specialise in this work. 5 King's Ave., W.5. Phone PERivale 6283, 6176

"NAPIER Models". Specialists in Architectural work. Stanley Studios, S.W.10. FLAXman 2118. 3557

BROUGHTON MOOR
light sea green,
olive green & blue

SLATE

for Facings, Foundation Stones, Paving
and Flooring, Steps, Cills, Shop Fronts,
Surrounds, Pilasters, Fireplaces and all
architectural work.

Send for technical pamphlets:
1. Flooring 2. Facings 3. Coping
4. Cills 5. Riven Faced Slabs.

**THE BROUGHTON MOOR
GREEN SLATE QUARRIES LIMITED,**
Coniston, Lancashire
Telephone: Coniston 225/6
Telegrams: Csan, Coniston

FULL OR SUPPLEMENTARY TUITION
Provided by correspondence for R.I.B.A. examina-
tions. Revision Courses also available in any subject.
Descriptive brochure on application

ELLIS SCHOOL OF ARCHITECTURE
Principal: A. B. Waters F.R.I.B.A., F.I.Arb.
163B, Old Brompton Rd. London, S.W.7
and at Albany House, Worcester.

KIRKSTONE

GREEN SLATE FOR WALL
CLADDING, CILLS,
COPING, FLOORING, PAV-
ING, ETC.

The slate from our quarries has
been used for these purposes for
over 50 years. Our accumulated
experience is offered to Architects in
the services of our Technical Staff
and illustrated literature.

Service in Slate
**KIRKSTONE GREEN
SLATE QUARRIES Ltd.**
Ambleside, Westmorland
Tel.: Amb. 3270

F.R.I.B.A. with small North London office is
prepared to assist, during the next five or
six months, busy offices north of Euston Road
and in Herts and North Middlesex area. Box 4861.

S P E E D P L A N
ONE WORSLEY COURT, LONDON N.W.3.

SPEEDPLAN offer a comprehensive design
and advisory service to all concerned with
**HEATING, AIR-CONDITIONING, PLUMBING
OR ELECTRICAL INSTALLATIONS**
Telephone Swiss Cottage 3864. 4630

YOUNG ARCHITECT makes models from
sketch plans in weekends and evenings.
For quick layouts and models contact Box 4866.

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

COUNTRY PRACTICE FOR SALE, N. Bucks
—Northants area. Box 4664.

LONDON Architect has two-room furnished
office vacant in City near to Bank and
Liverpool Street Stations, or could be on a
shared basis. Box 4788.

FOR SALE—Small busy Midlands practice.
Box 4804.

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

A. J. BINNS, LTD., Specialists in the supply
and fixing of all types of Fencing, Gates
and Cloakroom Equipment. — Harvest Works.
96/107, St. Pauls Road, N.I. Canonbury 3861. 3085

HANDMADE, CLAY TILES available in many
beautiful colours. The perfect roofing
material with the longest life. Particulars,
samples and brochure from G. Tucker & Son, Ltd.,
Loughborough, Leicestershire. Phones: Lough-
borough 2446/7. 1609

CROGGON & CO. LTD.—Chain Link Fencing
and all types of Wrought Iron Fencing
supplied and erected.—230, Upper Thames Street,
London, E.C.4. CENTRAL 4382. 9429

ARCHITECTS' INDEMNITY INSURANCE.
Insurance Brokers who specialise in this
type of insurance can provide excellent cover on
very favourable terms. For an immediate
quotation send details of number of Partners
and Staff and when established. Gordon
MacRobin (Insurance) Ltd., 5, Laurence Pountney
Hill, E.C.4. 4847

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

R. I.B.A. and T.P.I. EXAMS—Stuart Stanley
(Ex. Tutor Sch. of Arch. Lon. Univ.) and
G. A. Crockett, M.A./D.A., F./F.R.I.B.A.,
M./A.M.T.P.I., prepare Students by correspon-
dence, 10, Adelaide Street, Strand, W.C.2. TEM-
1603/4. 9963

HY-RIB
combined shuttering
and reinforcement
long span metal lathing

HY-RIB DIVISION
Frampton Limited
10-11 Lower Wiche Road
Frampton, Wiltshire SN1 1JG

There are six
Architects' Journal infor-
mation sheets describing
the wide range of
Wincilate cills, cladding,
copings and other trim.
The Bow Slate & Enamel
Co Ltd The Town Hall
Bow Road E3 ADV 2203



W
today's slate
WINCILATE

FURSE LIGHTNING CONDUCTORS
AND
EARTHING EQUIPMENT
SUPPLIED ONLY BY FURSE
AND ERICSSON

SUPPLIED
FOR
EVERY CLASS
OF BUILDING
OR STRUCTURE &
EARTHING REQUIREMENT

W. J. FURSE & CO. LTD.
14, TRAFALGAR STREET, NOTTINGHAM
LONDON: 22 ALIE STREET, ALDERSHOT, HANTS.
ALSO BRISTOL, BIRMINGHAM, BRISTOL - SEE TEL. DIRECTIONS

"LEROY" LETTERING
Stencils & Equipment
Made by Keuffel & Esser Co., U.S.A.
Now obtainable from Sole Agents:-
J. H. Steward, Ltd.,
406, STRAND, LONDON, W.C.2
Est. 1852. Tel: TEMple Bar 1867
Write for List "LA"

MODELS
for Architects & Civil Engineers
by **John B. Thorp**
EST 1883
98 GRAY'S INN ROAD, LONDON
W.C.1. Tel: HOLborn 1011

**BRITISH HOME STORES
MIDDLESBROUGH**
G. W. Clarke Esq. L.R.I.B.A. Chief Architect.

HATHERNWARE
Send for details to
Hathernware Ltd. Dept. AJ
Loughborough, Leics. Tel. 273.

Constructional Faience
blockwork cornices and
window surrounds, also
Faience Slabs to ground
floor and over
entrances.

CUT ALONG THIS LINE

FIRST FOLD HERE

AJ enquiry service

If you require catalogues and further information on building products and services referred to in the advertisements appearing in this issue of the Architects' Journal please mark with a tick the relevant names given in the index to advertisers overleaf. Then detach this page, write in block letters, or type, your name, profession or trade and address in the space overleaf, fold the page so that the post-paid address is on the outside and despatch. We will ensure that your request reaches the advertisers concerned.

Postage
will be paid
by
Licensee

FOLD HERE

No Postage Stamp
necessary
if posted
in Great Britain or
Northern Ireland

BUSINESS REPLY FOLDER
Licence No. S.W. 1761

THE ARCHITECTS' JOURNAL

9-13 Queen Anne's Gate

London, S.W.1.

FOLD HERE

TUCK IN THIS END

Alphabetical index to advertisers

	PAGE	CODE
Aacington Brick & Tile Co., Ltd.	52	0003
Acme Flooring & Paving Co. (1904) Ltd.	2	0004
Alfscrow Company & Jiewood, Ltd.	36	0011
Allied Ironfounders	28	1061
Architectural Press, Ltd.	48	0026

Barnards, Ltd.	39	0977
Batley, Ernest, Ltd.	50	0032
Bilston Foundries, Ltd.	30	0067
Board Processors, Ltd.	30	0167
Bolton Gate Co., Ltd.	25	0078
Boot, Henry, & Son, Ltd.	41	0821
Bow Slate & Enamel Co., Ltd.	54	0083
Briggs, William, & Sons, Ltd.	46	0085
British Ceramic Tile Council	10	0254
British Coking Industry Association	23	0103
British Monorail, Ltd.	16	0097
British Reinforced Concrete Eng. Co., Ltd.	58	0104
British Sanitary Fireclay Association	12	0177
Brooks & Co. (1925), Ltd.	42	1108
Broughton Moor Green Slate Quarries, Ltd.	54	0115

Carron Co.	24	0132
Celcon, Ltd.	37	0908
Charringtons, Ltd.	15	1066
Cott Ventilation, Ltd.	3	0152
Conder Engineering Co., Ltd.	17	0155
Constructors, Ltd.	57	0157
Corby Development Corporation	48	—
Cordar, Ltd.	21	0159

East Ham Borough Council	48	—
Ellis School of Architecture	54	0202

F.E.B. (Great Britain) Ltd.	5	0210
Falk, Stadelmann & Co., Ltd.	40	0214
Flinkote Co., Ltd.	34	0229
Furse, W. J., & Co., Ltd.	54	0241

Hathernware, Ltd.	54	0691
-------------------	----	------

Kay, William (Bolton), Ltd.	57	0335
Kaye, Joseph, & Sons, Ltd.	19	1121
Kenrick, Archibald, & Sons, Ltd.	44	0337
Kenyon, Wm., & Sons (Metamica), Ltd.	27	0982
Kings Langley Engineering Co., Ltd.	43	0120
Kirkstone Green Slate Quarries, Ltd.	54	0739

Lilleshall Co., Ltd.	39	0910
London Electric Firm, Ltd.	18	0367

Marryat & Scott, Ltd.	2	1119
Maxwell, Andrew, Division (The Liverpool Borax Co., Ltd.)	43	0363
Monk Metal Window Co., Ltd.	46	1193

Peel, H., Ltd.	44	1160
Permanite, Ltd.	35	0458
Pilkington Brothers, Ltd.	33	1166
Pilkington Brothers, Ltd.	8	0472
Production Engineering Ltd.	46	—

Plyglass, Ltd.	22	0479
Precon, Ltd.	13	0813
Previte & Co., Ltd.	45	0487

Range Boilers, Ltd.	11	0498
Rubery Owen & Co., Ltd.	6	0522

Small & Parkes, Ltd.	46	0568
Smith, S.	29	1167
Sommerfelds, Ltd.	44	0576
Steward, J. H., Ltd.	54	1178
Strait Boards, Ltd.	14	0604

Thermacoust, Ltd.	45	0629
Thorp, John B.	54	0633
Truscon, Ltd.	54	0645
Tunnel Portland Cement Co., Ltd.	26	0647

Ulster Chipboard Co., Ltd.	4	1136
----------------------------	---	------

Wallpaper Manufacturers, Ltd.	31	0671
Ward & Co. (Letters), Ltd.	44	0676
Weatherford, Ltd.	9	0685
Westland Engineers, Ltd.	38	0687
Williamson, Jas., & Son, Ltd.	7	1129

Yale & Towne Manufacturing Co.	32	0704
--------------------------------	----	------

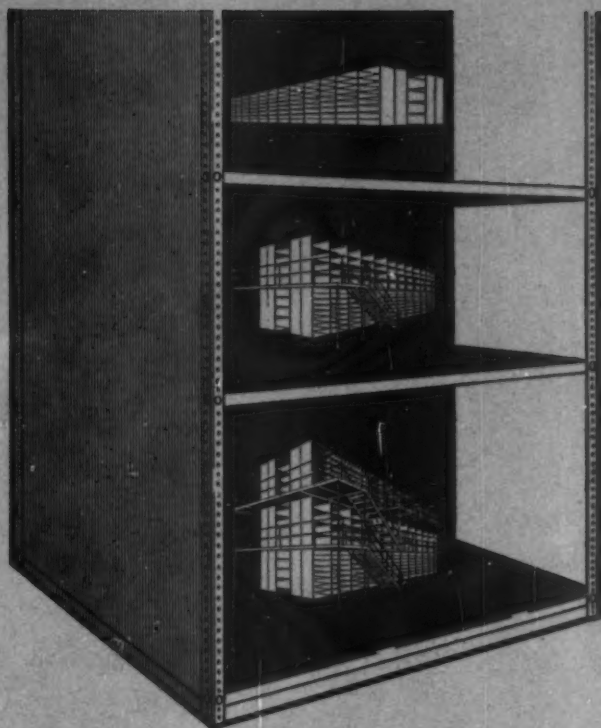
For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Education, Legal Notices, Miscellaneous, Property and Land Sales, see 47, 48, 49, 50, 51, 52, 53, 54.

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 _____



from small beginnings...

Constructors' 'Adjusteel' Shelving designed to conform to B.S.S. 826/1955 can be extended to 2, 3, or 4 tier installations as your organisation progresses.

Open or closed shelving in all standard sizes available from stock.

Layouts and suggestions prepared without obligation.

We can save time, space and money in your storage.

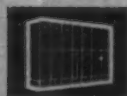
GOOD PLANNERS ALWAYS CONSULT

CONSTRUCTORS

FOR FACTORY EQUIPMENT & OFFICE FURNITURE



OFFICE BUILDING



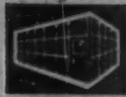
CLOTHING LOCKERS



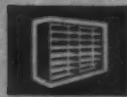
FILING CABINETS



CYCLE PARKING



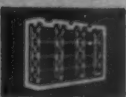
PARTITIONING



ADJUSTABLE SHELVING



RECORD SYSTEMS



PALLET RACKING

CONSTRUCTORS LIMITED, Dept. Z, Tyburn Road, Erdington, Birmingham 24. Telephone: ERDington 1616

London Office: 98 Park Lane, W.1. Telephone: MAYfair 3074

Leeds Office: 25 Merrion Street. Telephone: Leeds 28017



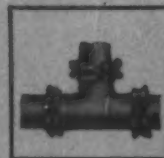
AND STANDARD TOO

All high standard
pipe fittings from

KONTITE

A MEMBER OF THE ALBANY GROUP OF COMPANIES

Kontite's range of 22,000 standard fittings for copper tube is the biggest in the business. Most of these can be supplied straight from stock. Specials take only a little longer. That's what makes Kontite service the *best* in the business. First class materials and the proved efficiency of Kontite Gunmetal fittings are your guarantee of complete reliability.



KAY & CO. (ENGINEERS) LTD.
BOLTON BRASS WORKS · BOLTON · LANCs.
TELEPHONE: BOLTON 3041

Alphabetical index to advertisers

	PAGE	CODE
Aacrington Brick & Tile Co., Ltd.	52	0003
Acme Flooring & Paving Co. (1904) Ltd.	2	0004
Aircrew Company & Jewwood, Ltd.	36	0011
Allied Ironfounders	28	1061
Architectural Press, Ltd.	42	0026
Barnards, Ltd.	39	0977
Batley, Ernest, Ltd.	50	0052
Bilston Foundries, Ltd.	30	0067
Board Processors, Ltd.	20	0167
Bolton Gate Co., Ltd.	25	0078
Boot, Henry, & Son, Ltd.	41	0821
Bow Slate & Enamel Co., Ltd.	54	0083
Briggs, William, & Sons, Ltd.	46	0085
British Ceramic Tile Council	10	0254
British Coking Industry Association	23	0103
British Monorail, Ltd.	16	0097
British Reinforced Concrete Eng. Co., Ltd.	58	0104
British Sanitary Fireclay Association	12	0177
Brooks & Co. (1925), Ltd.	42	1108
Broughton Moor Green Slate Quarries, Ltd.	54	0115
Carron Co.	24	0132
Celcon, Ltd.	37	0908
Charringtons, Ltd.	15	1066
Colt Ventilation, Ltd.	3	0152
Corder Engineering Co., Ltd.	17	0155
Constructors, Ltd.	57	0157
Corby Development Corporation	48	—
Cordar, Ltd.	21	0159
East Ham Borough Council	48	—
Ellis School of Architecture	54	0202

	PAGE	CODE
F.E.B. (Great Britain) Ltd.	5	0216
Falk, Stadelmann & Co., Ltd.	40	0214
Flinkote Co., Ltd.	34	0229
Furse, W. J., & Co., Ltd.	54	0241
Hathernware, Ltd.	54	0691
Kay, William (Bolton), Ltd.	57	0335
Kaye, Joseph, & Sons, Ltd.	19	1121
Kenrick, Archibald, & Sons, Ltd.	44	0337
Kenyon, Wm., & Sons (Metamica), Ltd.	27	0982
Kings Langley Engineering Co., Ltd.	43	0120
Kirkstone Green Slate Quarries, Ltd.	54	0739
Lilleshall Co., Ltd.	39	0910
London Electric Firm, Ltd.	18	0367
Marryat & Scott, Ltd.	2	1119
Maxwell, Andrew, Division (The Liverpool Borax Co., Ltd.)	43	0363
Monk Metal Window Co., Ltd.	46	1193
Peel, H., Ltd.	44	1160
Permanite, Ltd.	35	0458
Pilkington Brothers, Ltd.	33	1166
Pilkington Brothers, Ltd.	8	0472
Production Engineering Ltd.	46	—

	PAGE	CODE
Plyglass, Ltd.	22	0479
Precon, Ltd.	13	0813
Previte & Co., Ltd.	45	0487
Range Boilers, Ltd.	11	0498
Rubery Owen & Co., Ltd.	6	0522
Small & Parkes, Ltd.	45	0568
Smith, S.	29	1167
Sommerfelds, Ltd.	44	0576
Steward, J. H., Ltd.	54	1178
Stramit Boards, Ltd.	14	0604
Thermacoust, Ltd.	45	0629
Thorp, John B.	54	0633
Truscon, Ltd.	54	0645
Tunnel Portland Cement Co., Ltd.	26	0647
Ulster Chipboard Co., Ltd.	4	1136
Wallpaper Manufacturers, Ltd.	31	0671
Ward & Co. (Letters), Ltd.	44	0676
Weatherfoil, Ltd.	9	0685
Westland Engineers, Ltd.	38	0687
Williamson, Jas., & Son, Ltd.	7	1129
Yale & Towne Manufacturing Co.	32	0704

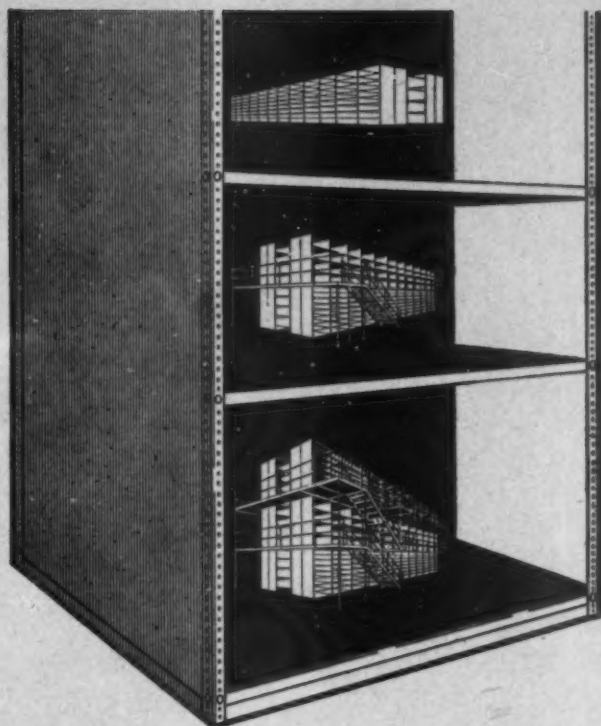
For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Education, Legal Notices, Miscellaneous, Property and Land Sales, see 47, 48, 49, 50, 51, 52, 53, 54.

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 _____



from small beginnings...

Constructors 'Adjusteel' Shelving designed to conform to B.S.S. 826/1955 can be extended to 2, 3, or 4 tier installations as your organisation progresses.

Open or closed shelving in all standard sizes available from stock.

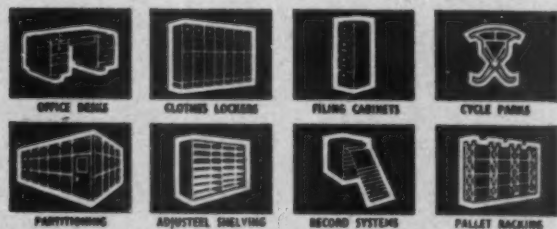
Layouts and suggestions prepared without obligation.

We can save time, space and money in your storage.

GOOD PLANNERS ALWAYS CONSULT

CONSTRUCTORS

FOR FACTORY EQUIPMENT & OFFICE FURNITURE



CONSTRUCTORS LIMITED, Dept. Z, Tyburn Road, Erdington, Birmingham 24. Telephone. ERDington 1616

London Office: 98 Park Lane, W.1. Telephone: MAYfair 3074

Leeds Office: 25 Merrion Street. Telephone: Leeds 26017



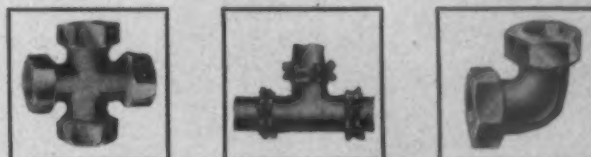
AND STANDARD TOO

All high standard
pipe fittings from

KONTITE

A MEMBER OF THE ALBENCO GROUP OF COMPANIES

Kontite's range of 22,000 standard fittings for copper tube is the biggest in the business. Most of these can be supplied straight from stock. Specials take only a little longer. That's what makes Kontite service the *best* in the business. First class materials and the proved efficiency of Kontite Gunmetal fittings are your guarantee of complete reliability.



KAY & CO. (ENGINEERS) LTD.
BOLTON BRASS WORKS · BOLTON · LANCs.
TELEPHONE: BOLTON 3041



BRC FABRIC

In standard sizes is available for immediate despatch to all parts of England, Scotland and Wales.

BRC

BRC WELDED FABRIC is manufactured with mechanical perfection, ensuring that the exact sectional area per foot width is always maintained. It is supplied in sheets or rolls and is the ideal reinforcement for slab construction.

THE BRITISH REINFORCED CONCRETE ENGINEERING CO. LTD., STAFFORD

London, Birmingham, Bristol, Leeds, Leicester, Liverpool, Manchester, Newcastle, Cardiff, Glasgow, Dublin, Belfast, Bulawayo, Calcutta, Johannesburg, Singapore, Vancouver.

Export Sales: 54 Grosvenor Street, London, W.1

FF/10/B

H-11-976

