

The Architects' JOURNAL for March 9, 1950

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

Library

News

Stragal's Notes and Topics

Letters

Societies and Institutions

TECHNICAL SECTION

Information Sheets

Information Centre

Current Technique

Questions and Answers

Prices

The Industry

PHYSICAL PLANNING

SUPPLEMENT

CURRENT BUILDINGS

HOUSING STATISTICS

Architectural Appointments
Wanted and Vacant

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

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. Marlborough Whitehead, "Dyneley," Castle Hill Avenue, Berkhamstead, Herts.	
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Welbeck 5721
ABT	Association of Building Technicians. 5, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James' Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
APRR	Association for Planning and Regional Reconstruction. 34, Gordon Square, W.C.1.	Euston 2158-9
ArchSA	Architectural Students' Association. Department of Architecture, School of Building, Ferndale Road, Brixton, S.W.4.	Brixton 7048
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Welbeck 9738
ASB	Architectural Science Board of the Royal Institute of British Architects. 66, Portland Place, W.1.	Welbeck 5721
AScW	Association of Scientific Workers. 15, Half Moon Street, Piccadilly, W.1.	Grosvenor 4761
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Welbeck 5721
BATC	Building Apprenticeship and Training Council. Lambeth Bridge House, S.E.1.	Reliance 7611, Ext. 1706
BC	Building Centre. 9, Conduit Street, W.1.	Mayfair 8641/6
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 17, Amherst Road, Ealing, W.13.	Perivale 6869
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 43, George Street, Croydon.	Croydon 5452
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BGF	British Gas Federation. 1, Grosvenor Place, S.W.1.	Sloane 8266
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BIAE	British Institute of Adult Education. 29, Tavistock Square, W.C.1.	Euston 5385
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Millbank, S.W.1.	Whitehall 5140
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 2246
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. 28, Victoria Street, S.W.1.	Abbey 3333
BTE	Building Trades Exhibition. 4, Vernon Place, W.C.1.	Holborn 8146/7
CABAS	City and Borough Architects Society. C/o Johnson Blackett, F.R.I.B.A., Borough Architect, Town Hall, Newport, Mon.	Newport 3111
CAS	County Architects Society. C/o A. Guy Chant, F.R.I.B.A., Salop County Council, 5, Belmont, Shrewsbury.	Shrewsbury 3031
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Sloane 5255
CDA	Copper Development Association. Kendals Hall, Radlett, Herts.	Radlett 5616
CIAD	Central Institute of Art and Design. 41, 42, Dover Street, W.1.	Regent 3074
CIAM	Congres Internationaux d'Architecture Moderne. Doldertal, 7, Zurich, Switzerland.	
CID	Council of Industrial Design. Tilbury House, Petty France, S.W.1.	Whitehall 6322
CPC	Codes of Practice Committee. MOW, 42, Onslow Gardens, S.W.7.	Kensington 8161
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.	Sloane 4280
CUJC	Coal Utilization Joint Council. 13, Grosvenor Gardens, London, S.W.1.	Victoria 1534
DGW	Directorate General of Works, Ministry of Works, Lambeth Bridge House, S.E.1.	Reliance 1761
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
DOT	Department of Overseas Trade. 35, Old Queen Street, S.W.1.	Victoria 9040
EC	Electricity Commission. Savoy Court, Strand, W.C.2.	Temple Bar 7565
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. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
FB 1951	Festival of Britain 1951. 2, Savoy Court, Strand, W.C.2.	Waterloo 1951
FASSC	Federation of Association of Specialists and Sub-Contractors. 21, Tothill Street, S.W.1.	Whitehall 9606
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 26, Great Ormond Street, Holborn, W.C.1.	Chancery 7583
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4041
FS (Eng.)	Faculty of Surveyors of England. 8, Buckingham Palace Gdns., S.W.1.	Sloane 2837
GG	Georgian Group. 27, Grosvenor Place, S.W.1.	Sloane 2844
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 75, Eaton Place, S.W.1.	Sloane 5615
ICE	Institution of Civil Engineers. Great George Street, S.W.1.	Whitehall 4577

0. 2874] [VOL. 111
THE ARCHITECTURAL PRESS
11 and 13, Queen Anne's Gate, Westminster,
W.1. Phone: Whitehall 0611

Price 9d.

Registered as a Newspaper.



"PERMAVENT"
LARDER LIGHT
TYPE MAS

GREENWOOD'S

"PERMAVENT" ALL-STEEL LARDER LIGHTS,
AND SKYLIGHTS.



"PERMAVENT"
NON-CONDENSATING
SKYLIGHT



"PERMAVENT"
LARDER LIGHT
TYPE MBS

DAYLIGHT AND PERMANENT VENTILATION COMBINED
 GREENWOOD'S "PERMAVENT" ALL-STEEL LARDER LIGHTS AND VENTI-LIGHTS PROVIDE VISION WITH PERMANENT VENTILATION AND ARE EQUIPPED WITH MULTI-LOUVRED VENTILATING PANELS BACKED BY DETACHABLE INSECT-PROOF SCREENS. STRONG AND DURABLE, THEY ARE DELIVERED UNGLAZED READY FOR BUILDING IN. "PERMAVENT" NON-CONDENSATING SKYLIGHTS SUPPLIED IN GALVANISED STEEL OR COPPER, UNGLAZED AND READY FOR FIXING.

PARTICULARS OF SIZES, TYPES AND PRICES UPON APPLICATION

GREENWOOD'S AND AIRVAC VENTILATING COMPANY LIMITED
 CHANCERY 8135/6/7 BEACON HOUSE • KINGSWAY • LONDON, W.C.2. AIRVAC, LONDON

Seven good reasons for using . . .

COLTENITE

CEMENT WATERPROOFING POWDER

- 1 COLTENITE effectively resists high water pressure.
- 2 COLTENITE increases the strength of the mix.
- 3 COLTENITE renders the mix more workable.
- 4 COLTENITE is inexpensive.
- 5 COLTENITE prevents disintegration due to water absorbed by capillary action.
- 6 COLTENITE saves costly repair and maintenance bills.
- 7 COLTENITE is supported by a first-class Technical Advisory Service. The booklet of data and prices is well worth a place in your files. Sent FREE on application to:

COLTENITE shows a very great saving in initial cost. Additionally, it is simple to use. Research has proved that the greatest single factor responsible for the disintegration of concrete, is the infiltration of water. Yet the addition of only 3% by weight of COLTENITE to cement used, will safeguard completely against this and all other conditions affecting mass concrete and cement mortars.

W. H. COLT (LONDON) LTD.

(Architectural Division A.21) Surbiton, Surrey, Elmbridge 6511-5





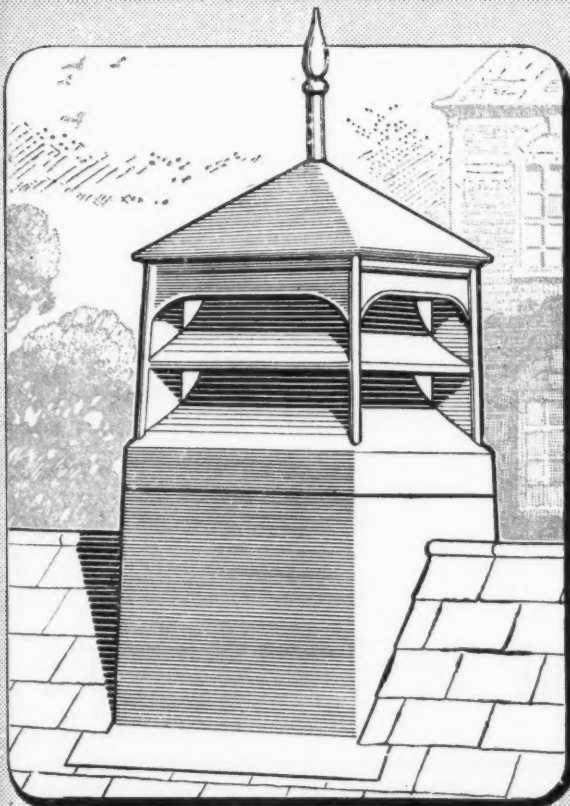
Off to a good start . . .

Getting away on time means much to the transport company. It is equally important for any project where rapid loading and unloading is essential. Roller Shutters score every time in these circumstances. Open at the press of a switch they give ample headroom and do not obstruct roads or yards. Wind proof and fire resistant, they are ideal for warehouses, loading bays, garages, factories, retail establishments, in fact anywhere requiring rapid, obstruction free, ingress or exit. In steel or aluminium, manual or hand operation. Descriptive leaflet sent on request.

Inset shows enlarged view of operative gear on inside of openings.

**ROLLER
SHUTTERS
LTD**

241-242 Great Lister Street, Birmingham 7, England. Telephone: Aston Cross 2028



**TO THE ARCHITECT-
SURVEYOR AND BUILDER**

**Yours the problem-
Harveys the answer!**

Whenever the question of "where-to-get" Ventilators arises—remember Harveys. For Harveys make the long-established "Harco" self-acting ventilator that ensures effective draught-free ventilation for any type of building—Hospital, School, Garage, Workshop, Hostel, etc. Our illustration shows "Harco" Ventilator No. 68, but this is only one of a very wide range of patterns and sizes. Get all your supplies from your local Builders' Merchant. For full particulars write for Catalogue A.J. 481.

Harvey

**G.A. Harvey & Co. (London) Ltd.
Woolwich Rd. London, S.E.7**

400 DOORS

A DAY

and



This statement has been queried; it has just not been believed. If you are one of the incredulous folk, test it by making an unannounced visit to Paddock Wood and see for yourself whether it really is true or not. As one architect said, after watching the inspection, "there is not much that can get by that." And there isn't. That accounts for the quality of the Austin-Hall doors—and what is more, every one is guaranteed.

DESIGN

::

QUALITY

::

CONSTRUCTION

AUSTIN-HALL GROUP OF COMPANIES

AUSTINS OF EAST HAM LTD.

GRAngewood 3444

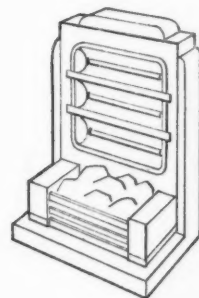
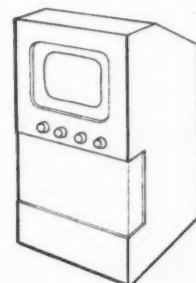
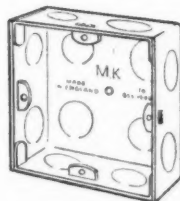
LONDON E.6

ONE "STANDARD" FOR ALL PURPOSES



B.S. 1363: 1947—Two-pole and Earthing-pin Fused-Plugs and Shuttered Socket-outlets are "All-purpose" 3 k.w. (13 amperes at 250 volts) for general domestic use. Common size Plugs for every appliance (appropriately fused) ensure maximum consumer convenience.

A feature of the M.K. range is the pressed steel universal box for Flush Socket-outlets. No less than twelve removable knock-outs are provided—six for $\frac{5}{8}$ " and six for $\frac{3}{4}$ " conduit—a variation of conduit entries to meet every conceivable installation requirement. Welded construction and well finished—bonderized for rust resistance and enamel adherence prior to Aluminium Stove Enamelling.



M. K. E L E C T R I C L T D.

WAKEFIELD STREET, EDMONTON, LONDON, N.18

Telephone: TOTTENHAM 5151 (6 LINES)

Telegrams: MULTICONTA, SOUTHTOT, LONDON

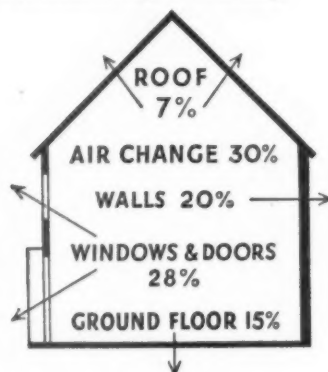
FACTS

about Thermal Insulation of Houses

Thermal insulation of houses, of course, is no new development. The results of Government research have been widely publicised, and many houses now being built are insulated in accordance with official recommendations, which are unbiased, and make due allowance for the fact that :

- A house is not a hermetically sealed chamber, but something to be lived in.
- As long as houses have doors, windows and means of ventilation, they will always be subject to heat losses, however the inner surfaces are treated.
- Thermal insulation must be both practical and economical.

The following diagram shows the heat losses likely to occur from a small terrace house of good modern construction, with insulation up to recommended standards and a reasonable degree of heating.



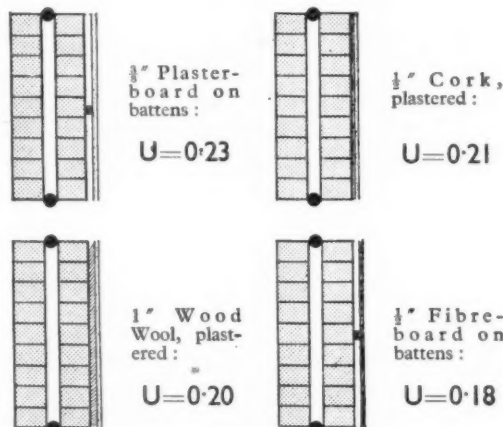
It will be seen that five factors must be taken into account when computing heat losses, that certain losses must be tolerated in all practical and economic house building, and that the loss through walls when insulated to recommended standards is only about one-fifth of the total.

RECOMMENDED STANDARDS FOR WALLS

In the Official Housing Manual, the recommended U-value for walls under normal conditions of exposure is 0.3, with a suggestion that, where the type of construction permits, this figure should be improved to 0.15. In the Post-war Study Committee Report No. 19, it is suggested that external walls should, if possible, have a U-value of not more than 0.2, and that round the living room, where the greatest heat loss occurs, the value should be not more than 0.15, if the mode of heating is capable of close control. Where careful regulation of the heating is not possible, however, e.g. with an open fire, the recommended value for all walls is 0.2.

EFFICIENCY OF BRICK WALLS

Brickwork normally provides reasonably good insulation, and the thicker the wall the lower its thermal conductivity. Cavity construction, particularly when the cavity is unventilated, is more efficient than a solid wall. 9" solid brickwork, plastered on the inner face, has a U-value of 0.43. An 11" unventilated cavity wall, plastered on the inner face, has a U-value of 0.30. When it is desired, in the interests of fuel economy, to reduce heat losses still further, a lining or decorative panelling may be applied to the inner face. The following diagrams show a few of many alternative treatments, and the results thereby achieved :

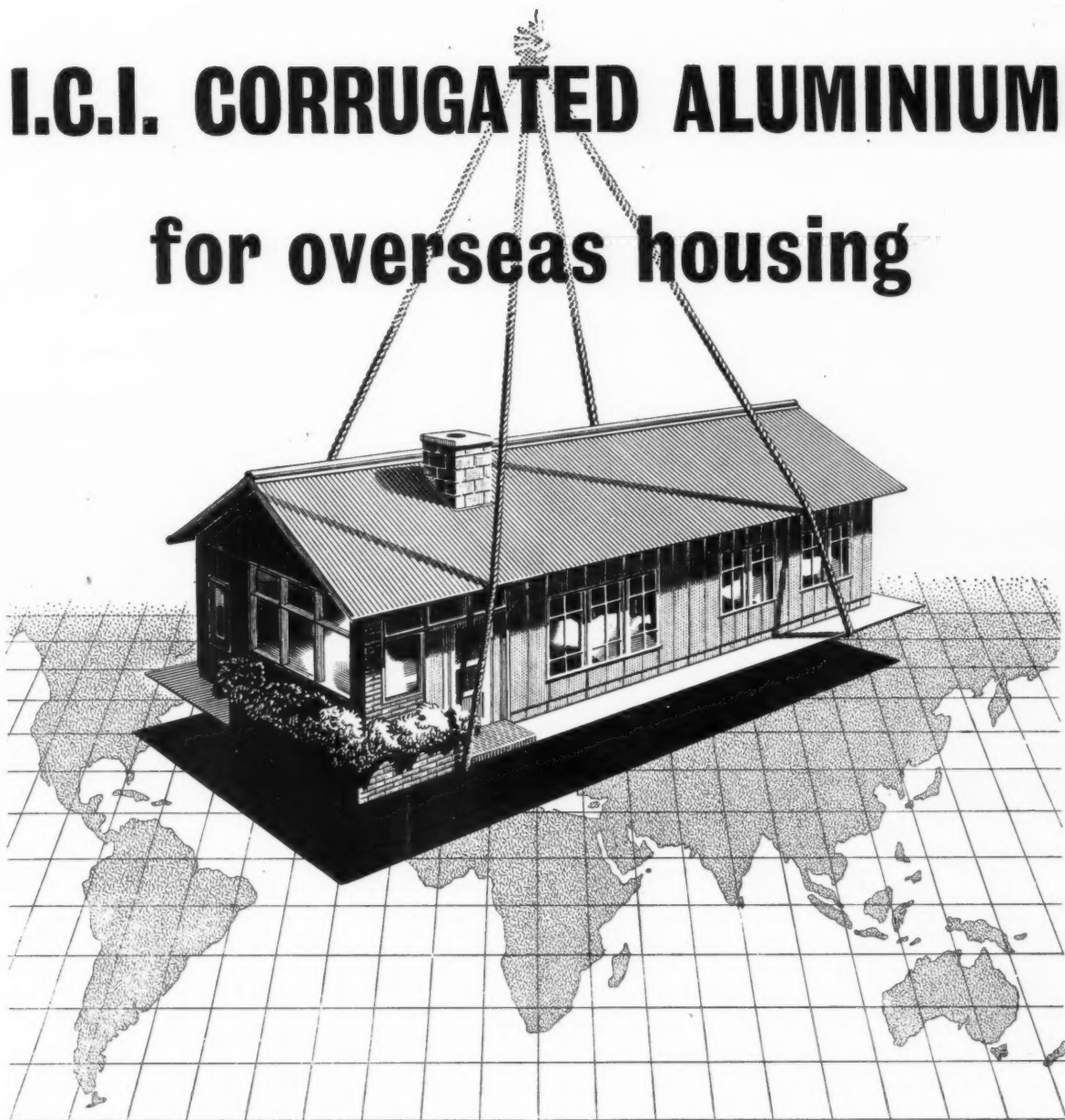


Those fortunate enough to live in brick houses know that good brick construction ensures warmth and comfort. When additional thermal insulation is desired, it may be applied as easily and economically to brick walls as to any other form of construction. But the BRICK house alone possesses all the following important characteristics: **AMPLE STRENGTH AND DURABILITY; RESISTANCE TO RAIN PENETRATION, FIRE, FROST DAMAGE and EXPOSURE; PERMANENCE OF EXTERIOR FINISH; FREEDOM FROM MAINTENANCE.**

Issued by The National Federation of Clay Industries, W.C.I.

I.C.I. CORRUGATED ALUMINIUM

for overseas housing



ALUMINIUM BUNGALOWS of this type are being built by Cawood Wharton & Co. Ltd., of Leeds, for shipping in prefabricated sections to Rhodesia. They incorporate 'Kynal' corrugated aluminium sheet supplied by the Metals Division of I.C.I.

I.C.I. corrugated aluminium is ideal for building,

especially in the tropics. Its high reflectivity keeps buildings cool in hot weather and warm in cold.

By reason of its light weight, transport charges are reduced, handling and erection facilitated. Upkeep costs are low, no protective paint being necessary, and life is very long, owing to the metal's exceptional durability.

For further information please apply to :—

IMPERIAL CHEMICAL INDUSTRIES LTD., LONDON, S.W.1



M107



"SILVER FOX"
REGD. TRADE MARKS

"SILVER FOX" STAINLESS STEELS

are

HYGIENIC

In plant for the preparation and processing of food, dairy products, brewing and all activities requiring scrupulous cleanliness, "Silver Fox" Stainless Steel gives a smooth, polished, germ-inhibiting surface, free from attack by food acids, easily cleaned, obviously clean.

SHEETS · COLD ROLLED STRIP · WIRE · BARS · FORGINGS



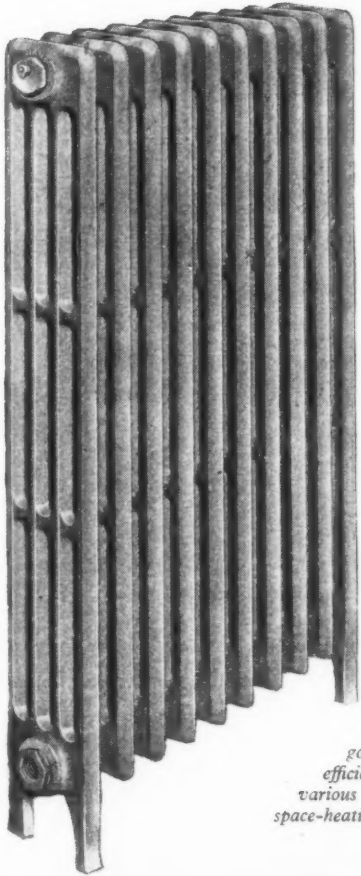
SAMUEL FOX & COMPANY LIMITED

Branch of The United Steel Companies Limited

STOCKSBRIDGE WORKS · NR. SHEFFIELD · ENGLAND

® F237

FROM THE RAW MATERIAL TO THE FINISHED ARTICLE

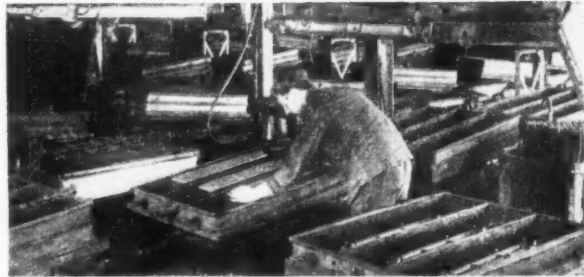
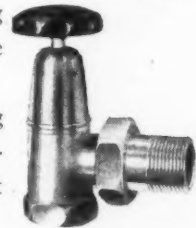


The Crane 'Pall Mall' radiator combines good appearance with great efficiency. It is available in various sizes to meet different space-heating requirements.

HEATING EQUIPMENT...

As the counterpart of their up-to-date boilers for central heating, Crane provide, in a practical range of sizes, radiators that meet any space-heating requirement. Their design, following modern trends and providing clean-cut, tasteful lines, pays regard to hygiene by eliminating inaccessible traps for pests and dust. Yet in no way has efficiency and strength been sacrificed to appearance, the metal used being carefully chosen and critically tested to ensure adequate and consistent wall thickness.

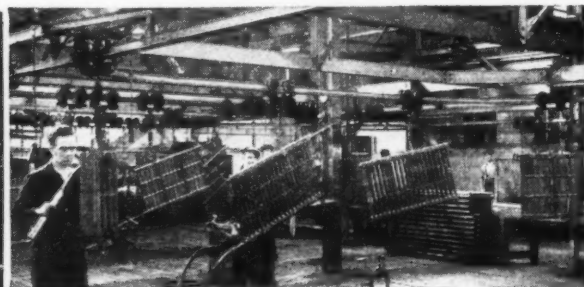
This modern design extends to every feature, including the radiator valves, of which Type No. D.201 illustrated is an excellent example. It is supplied in matt or chromium plated finish.



Part of the foundry in which the radiator moulds are formed. Photograph shows cores being placed in position.



General view of the shop in which cores for Crane radiators are made.



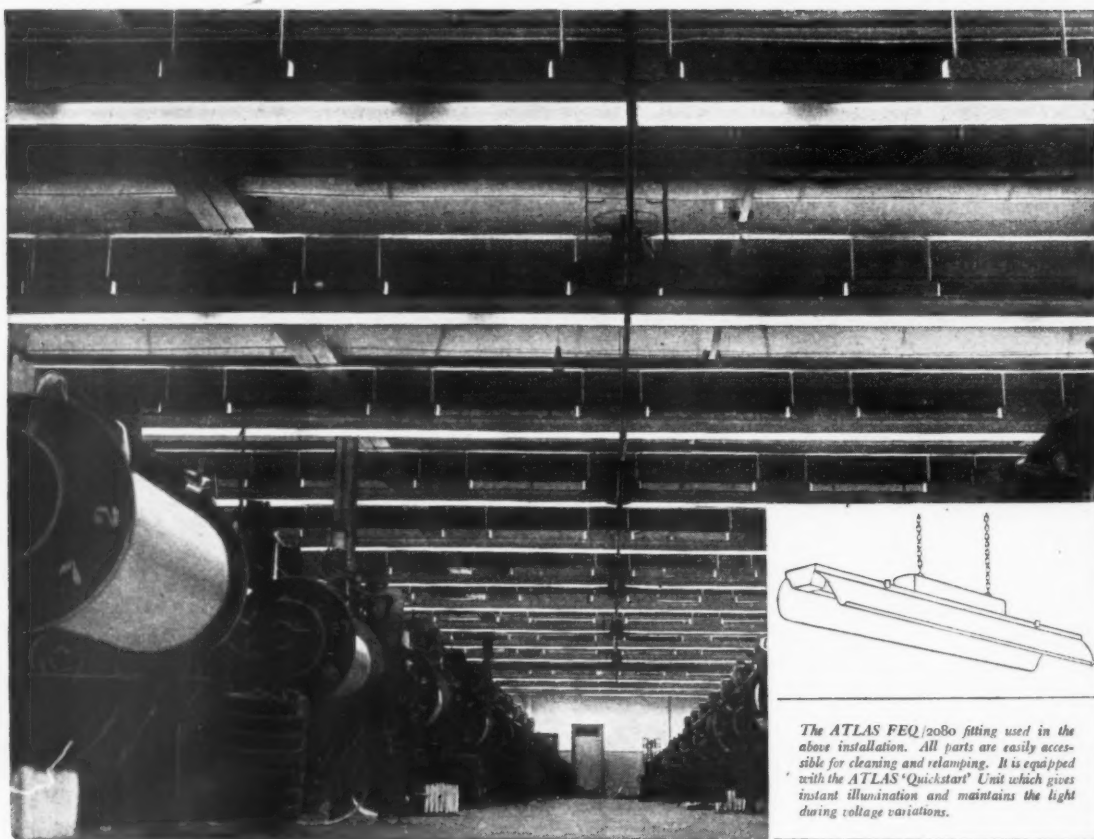
Testing the radiators for watertightness at pressure.

CRANE

BOILERS AND RADIATORS

CRANE LTD., 45-51 LEMAN STREET, LONDON, E.I. Works: IPSWICH

BRANCHES: BIRMINGHAM, BRENTFORD, BRISTOL, GLASGOW, MANCHESTER



The ATLAS FEQ/2080 fitting used in the above installation. All parts are easily accessible for cleaning and relamping. It is equipped with the ATLAS "Quickstart" Unit which gives instant illumination and maintains the light during voltage variations.

112

LOOMS and LUMENS

In this large modern silk weaving shed of Messrs. Tootal, Broadhurst, Lee & Co. Ltd., ATLAS Fluorescent provides, at extremely low current cost, an average illumination of 40 lumens per square foot. The light diffused over each working area is perfect and uniform, casting no shadows, even when the operatives are stooping over the weave. Open top construction of the fittings provides upward lighting as well, with the result that a very pleasing

and extremely desirable effect is achieved. The installation consists of eighteen rows of sixteen ATLAS FEQ/2080 fittings equipped with 5 ft. 80 watt ATLAS fluorescent lamps. The fittings are mounted in continuous runs at a height of 10 ft. 6 ins. above the floor, all related to the lines of looms.

The ATLAS range of more than thirty different patterns provides fittings that will harmonize with any architectural and decorative scheme.



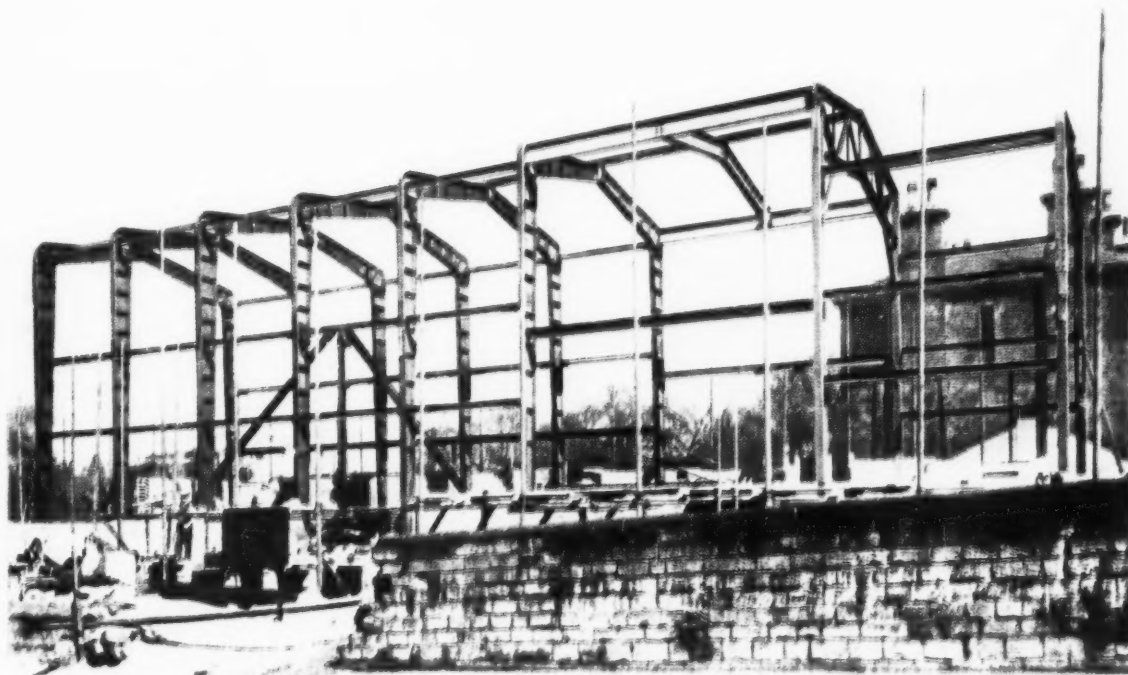
ATLAS FLUORESCENT

FOR INDUSTRIAL, COMMERCIAL, DOMESTIC AND STREET LIGHTING

Our Lighting Engineers will gladly advise on any project—without obligation

THORN ELECTRICAL INDUSTRIES LTD., 105-109 JUDD STREET, LONDON, W.C.1 TELEPHONE: EUSTON 1183

THE VERSATILITY OF STEELWORK

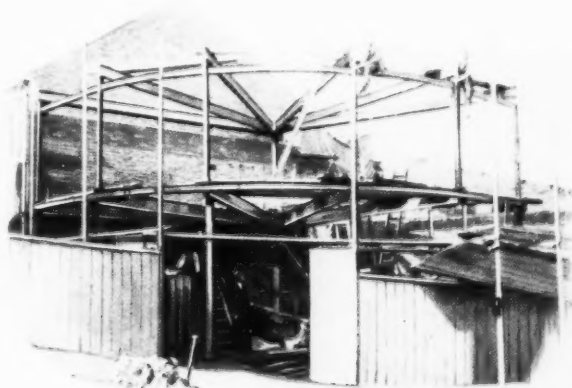


A Steel-framed Church

A lofty, open building such as this church benefits greatly from the characteristic form of the steel three-pin arch.

The structure is simplified and traditional, yet with a considerable freedom of architectural treatment. The top articulation of the half-arches can just be seen in the illustration.

Right: a contrast; an ingenious structure for a corner shop with six beams radiating from a single stanchion.



B.C.S.A

BRITISH CONSTRUCTIONAL STEELWORK ASSOCIATION, ARTILLERY HOUSE, WESTMINSTER, S.W.1.

MARBLE
MINOR & CO. LTD.
TORQUAY

SCAFFOLDING BY
RAE & FARRIS
11-12, TOTTENHAM AVENUE, LONDON

GRANITE BY
BENNETTS & CO.

WROUGHT STEELWORK BY
SPENCER & SON LTD.
LEAMINGTON SPA

STEEL SHUTTERING BY
VICKERS LTD.

ALUMINIUM WINDOWS
BROOKHILL & CO. LTD.
25, ST. MARK'S PLACE, LONDON

LIFTS BY
TRIMBLE & CO.
1, NEWINGTON GREEN, LONDON

MINISTRY OF WORKS
NEW GOVERNMENT OFFICES
WHITEHALL GARDENS

Richard
COSTAIN
Limited

LONDON S.W.1. VICTORIA 6624

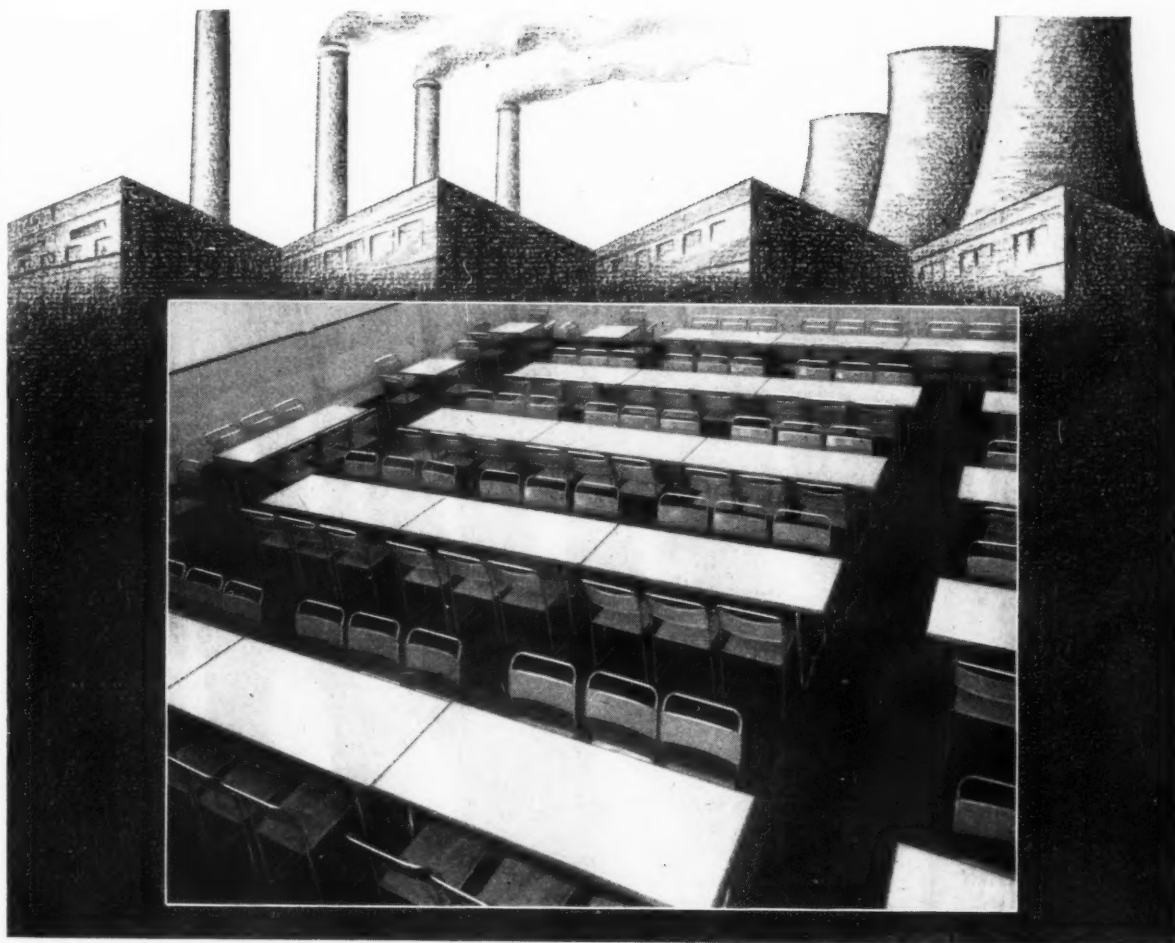
ASPHALTE
BIRCHWOODS CONSTRUCTION LTD.

STONEWORK BY
T. B. BOWEN & SONS LTD.
15, WINDHAM ROAD, LONDON

MACHINERY BY
ROBARTS & SON LTD.
HITCHIN

PRESSED STEEL TANKS BY
BEX & FEWELL LTD.
ENGINEERS LTD.

BUILDING AND CIVIL ENGINEERING CONTRACTORS



Rendezvous for refreshment

The canteen is now accepted as an essential department of the modern industrial system. Here Jack and Bill, Molly and Brenda are refreshed, mentally and physically, ready to tackle their jobs with renewed vigour when the midday meal is over. Kingfisher Equipment makes an important contribution to the problem of furnishing canteens such as these. Their Tubular Steel Nesting Chairs and Tables—renowned for their strength and lightness—are attractively designed to provide restful comfort, and quick and easy assembly or

nesting. The remarkable economy they give in storage space makes them ideal for use in canteens, public halls, civic restaurants and other public buildings.

The photograph, reproduced by courtesy of the British Electricity (London Division) Authority, shows the canteen at the Deptford Power Station equipped with Kingfisher Tubular Steel Nesting Chairs and Tables. The table tops are made of a special scratch-proof, abrasive-resistant plastic.



Kingfisher



KINGFISHER LIMITED • CHARLES STREET AND PHOENIX STREET • WEST BROMWICH • STAFFS
Telephone: Tipton 1631. Telegrams: Kingfisher, Phone, West Bromwich. London: 139, Knightsbridge, S.W.1. Telephone: Kensington 1331



... and the floors?

Yes, floors are such an everyday feature that they are often—too often—taken for granted. Yet surely it is all-important to choose a flooring that will do the most effective and trustworthy job? Consider the qualities of Martyn Mastic Domestic Flooring. It is damp-proof and dust-proof, warm and noiseless to the feet, resistant to fire, oil, grease and acid, unaffected by changes of temperature, and no expensive screeding is required. Users will appreciate the fact that the flooring can be polished to give a pleasing appearance very similar to linoleum, the colours available being black, dark red, middle red, dark brown. Nor is this effect liable to be spoilt by pittings or indentations made by the furniture; Martyn Mastic is proof against damage of this nature. It is indeed the ideal type of flooring for all domestic purposes.

In addition to being used on numerous other contracts in various parts of the country, Martyn Mastic floors have been laid with great success on many new housing estates for the London County Council.

★ Martyn Mastic Industrial flooring is also available for factories and other industrial purposes.

Our Technical Staff are always ready to advise on your problems

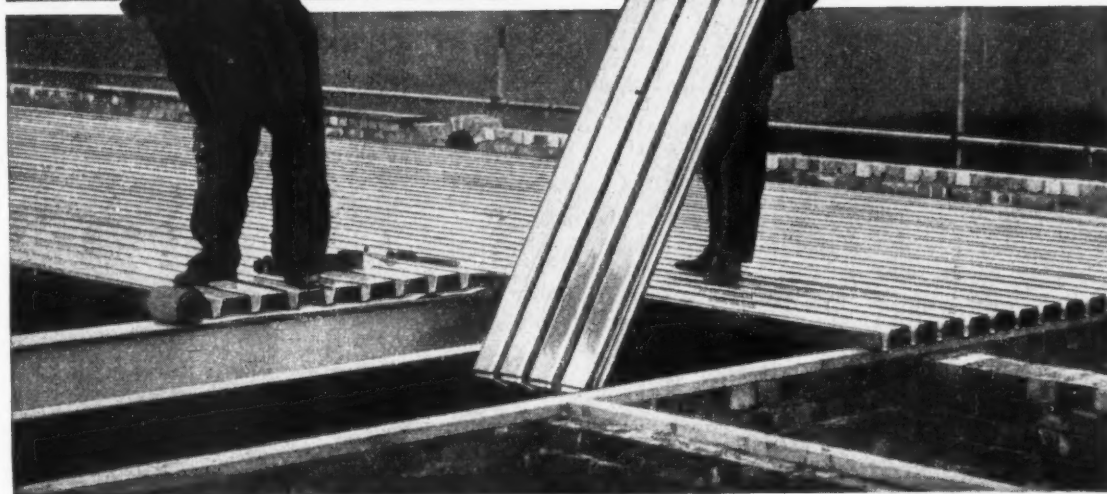
BRUCE MARTYN LIMITED

SPECIALISTS IN DOMESTIC AND INDUSTRIAL JOINTLESS FLOORING

PICCADILLY HOUSE, REGENT ST., S.W.1. PHONE REGENT 6296-7



Ceiling effect of "BITUMETAL".
Note high reflective value.



Installation of Briggs "BITUMETAL" Roof
showing Aluminium Alloy Deck Units.

Bitumetal in Action

Contracts in every part of the country for schools, factories, etc. demonstrate the quickly growing popularity of "BITUMETAL" for modern roof construction.

"BITUMETAL" is speedily and easily erected with

pre-fabricated aluminium alloy units spanned purlin to purlin. The ceiling effect is clean and attractive with high reflective value.

"BITUMETAL" INFORMATION BOOK gives you full technical details. Send for a copy to-day.

BRIGGS



THE COMPLETE ROOF

WILLIAM BRIGGS & SONS LIMITED

DUNDEE • LONDON: VAUXHALL GROVE, S.W.8

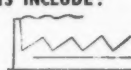
Offices & Depots at: Aberdeen, Edinburgh, Glasgow, Leicester, Liverpool, Norwich

RECENT CONTRACTS INCLUDE:



SCHOOLS

New Primary School,
Brighton
Architect:
D. J. Howe, Esq., M.L.C.E.,
M.I.M.E., Brighton.
Leicester University
College
Architects:
Messrs. Pick, Everard,
Keay & Gimson, Leicester
Litherland Modern
Secondary Sch. (2nd Phase)
Architects:
Lancs. County Council
New Primary School,
Dover
Architects:
Messrs. W. S. Willan &
D. A. Stewart, F.R.I.B.A.



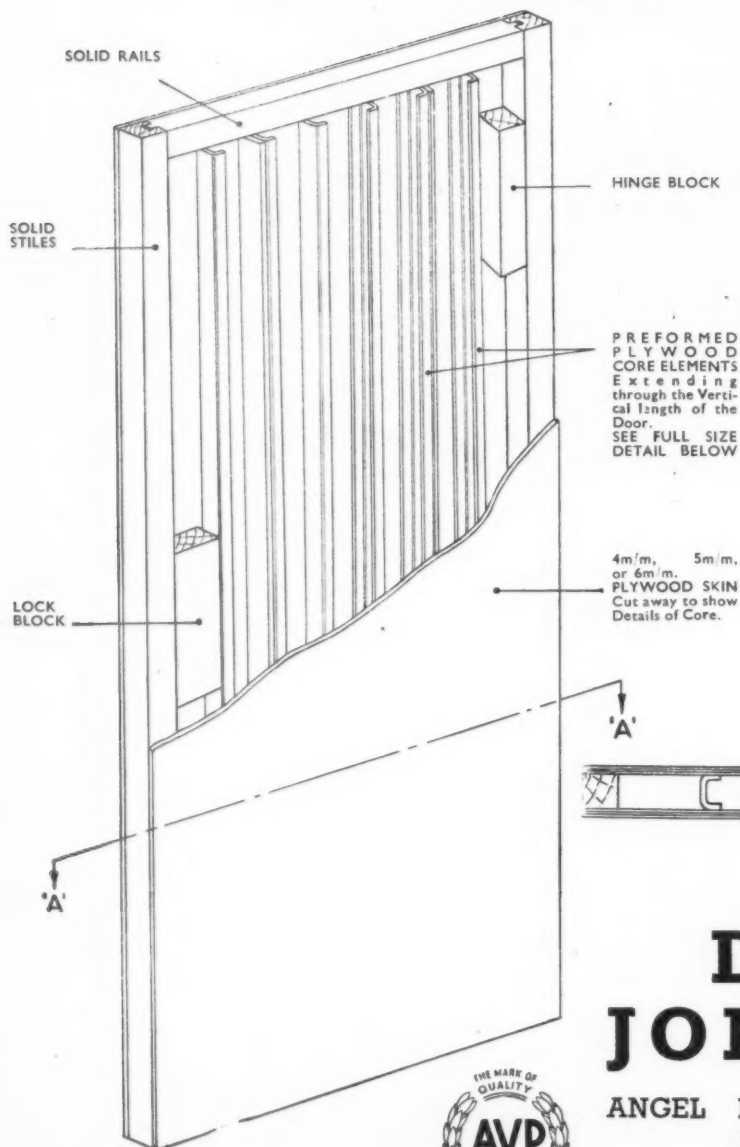
INDUSTRIAL PREMISES, etc.

New Steel Strip Mill for
Steel Company of Wales,
Ltd.,
Abbey Works, Port Talbot
Engineers:
Messrs. W. S. Atkins &
Partners, Engineers
Stoneywood Paper Mills,
Aberdeen
Architect:
A. C. Walker, Esq.,
M.I. Mech.E., Engineer
Prices (Tailors) Ltd.,
South Shields
Architect:
Evan E. Morgan, Esq.,
F.R.I.B.A., Leeds

OF
VITAL INTEREST
TO ARCHITECTS
AND LOCAL
AUTHORITIES

THE "JARMAN" FLUSH DOOR

PATENT APPLIED FOR



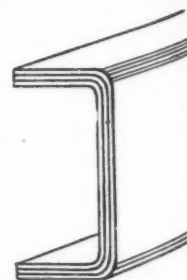
FREE OF LICENCE SCIENTIFIC CONSTRUCTION

Here, at last, is the Flush Door which will meet every architect's requirement. Frame is constructed from hardwood and no licence is required.

In the Jarman Flush Door the strength of the door is derived from pre-formed plywood sections so designed that they give maximum strength and rigidity.

These Doors may be clad with plywood or various types of Composition Boarding suitable for Painting. They are of course, also obtainable with a Decorative Veneered Surface, polished as required.

FULL SIZE DETAIL OF
PREFORMED PLYWOOD
CORE ELEMENT



SECTION 'A.A.'



A PRODUCT OF
DRYTONE
JOINERY LTD

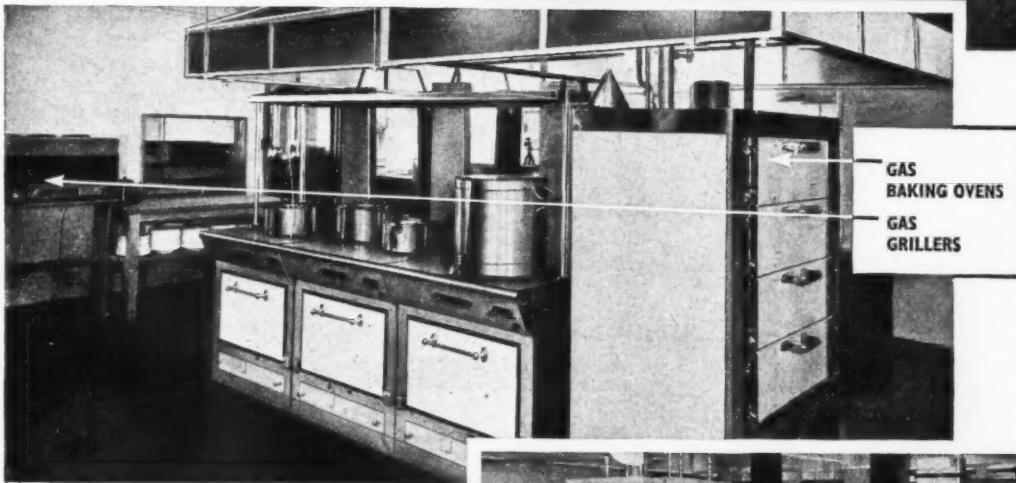
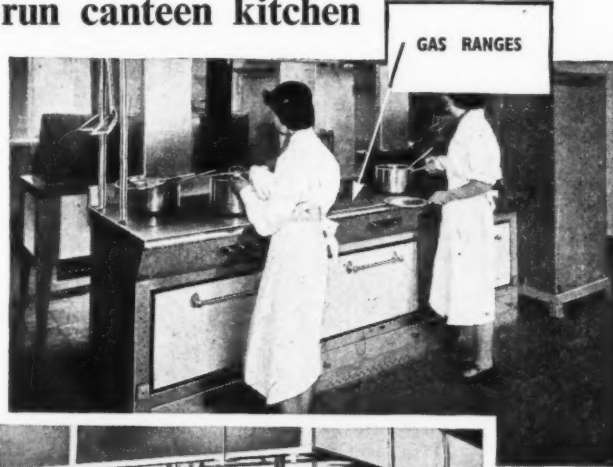
ANGEL FACTORY COLONY, ANGEL ROAD
EDMONTON, LONDON, N.18

Telephone : TOTTENHAM 2372



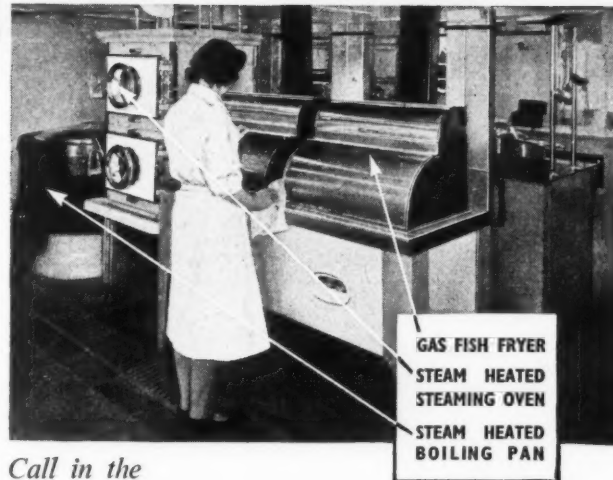
How 'Falkirk' designed and equipped this compact, easy-to-run canteen kitchen

George Spencer, Molton & Co. Ltd., Bradford-on-Avon. For this firm's canteen, which was required to cater for 150 people per sitting, the space available was small. The Falkirk Planning Staff drew up the plans and, these being approved, the necessary equipment was ordered from our factories. Throughout the whole period of installation, every operation, up to the serving of the first meal, was carried out under the direction of responsible Falkirk engineers. The highly efficient, space-saving layout can be seen in the photographs.



The 'Falkirk' Service covers everything. A fully qualified staff will co-operate with you in drawing up plans for the whole installation, including heating, ventilating and cooking equipment. In this way, you will obtain the most suitable type of equipment, for the 'Falkirk' Service supplies apparatus for steam, electricity, gas, heat storage, oil and solid fuel.

PERSONAL CONSULTATIONS AT YOUR CONVENIENCE. We shall be glad to give you further information regarding Falkirk Installations and Service, including advice and assistance on any large-scale catering plans you may be working on at present. Please write to :



Call in the

'Falkirk' SERVICE

One firm does the whole job

ALLIED IRONFOUNDERS LTD.

Catering Equipment Department

Mortimer House, 37-41 Mortimer Street, London, W.1.

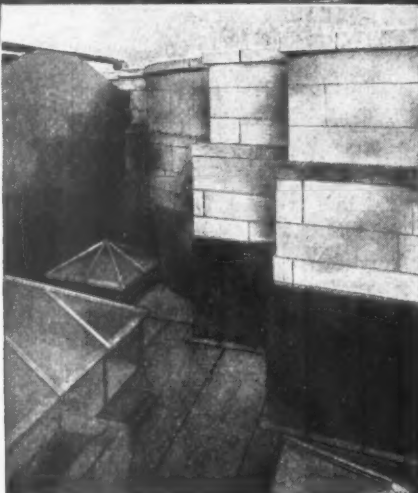


There are always practical reasons for specifying **RUBEROID ROOFING**

▶ **Nº1 ADAPTABILITY**



R45



Architects, Engineers and Builders are invited to write for a copy of Publication No. 326 "Standard Specifications for Ruberoid Roofs."

The complex roof structure of the Lady Lever Art Gallery at Port Sunlight presented many technical problems. Ruberoid Roofing was chosen for the work because of its ready adaptability to the special conditions imposed by the contour of the roof and its surrounds. Any failure of the roof surface could result in irreparable damage to the valuable paintings on exhibition in the Art Gallery.

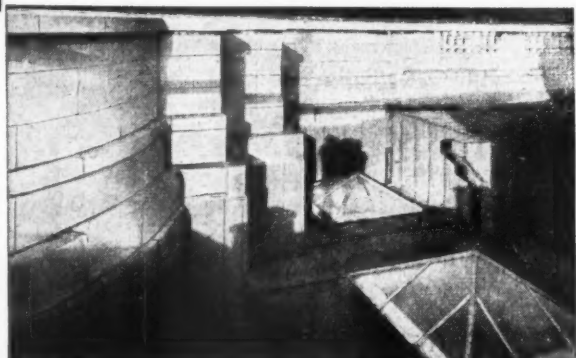
There are Standard Ruberoid Specifications designed to meet the practical requirements of any type of roof construction irrespective of shape or area. In every case the result is a permanent waterproof surface immune from deterioration in any climate.

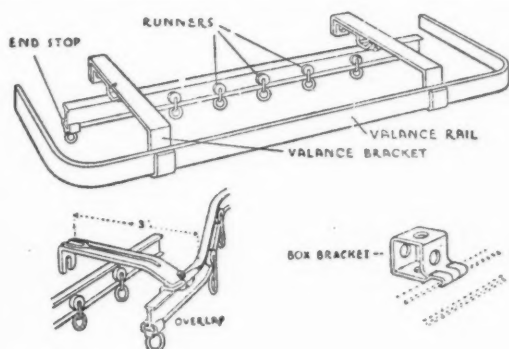
Ruberoid Contract Departments operating from centres in London, Birmingham, Manchester, Nottingham, Leeds, Newcastle, Edinburgh, Glasgow and Belfast will estimate for supplying and fixing Ruberoid Roofing anywhere in the British Isles.

RUBEROID ROOFING

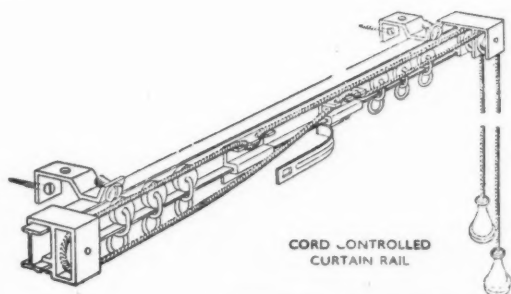
THE RUBEROID COMPANY LIMITED

1, COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON, W.C.1



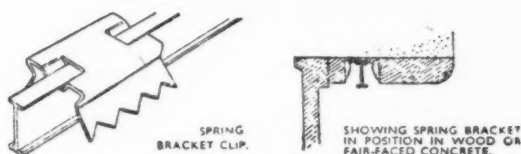


The special feature of this rail is the use of extension supports from the main rail for the valance and net curtain rails; this reduces the number of main supports needed and minimises drilling. 'Rufflette' brand M Series Curtain Rail can be fitted to any shaped window straight or curved. The 'Rufflette' M Series Curtain Rail is specially designed for quick and easy fitting to metal windows.

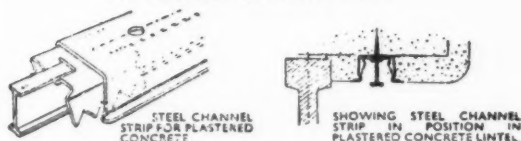


Architect's Journal : the following Information Sheets are available and will be sent on request to manufacturers.
SHEET 44 D.1. ('RUFFLETTE' RECESSED TRACK). SHEET 44 D.2. ('RUFFLETTE' B/I and M Type Rails).

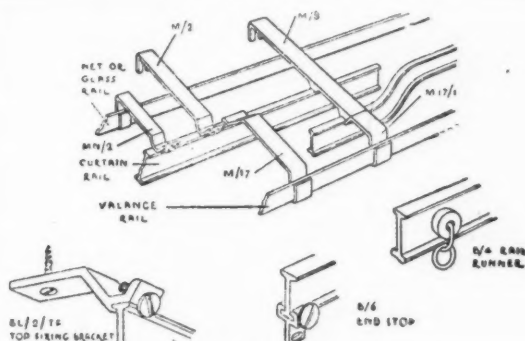
FOR WOOD OR FAIR-FACED CONCRETE



FOR PLASTERED CONCRETE LINTELS



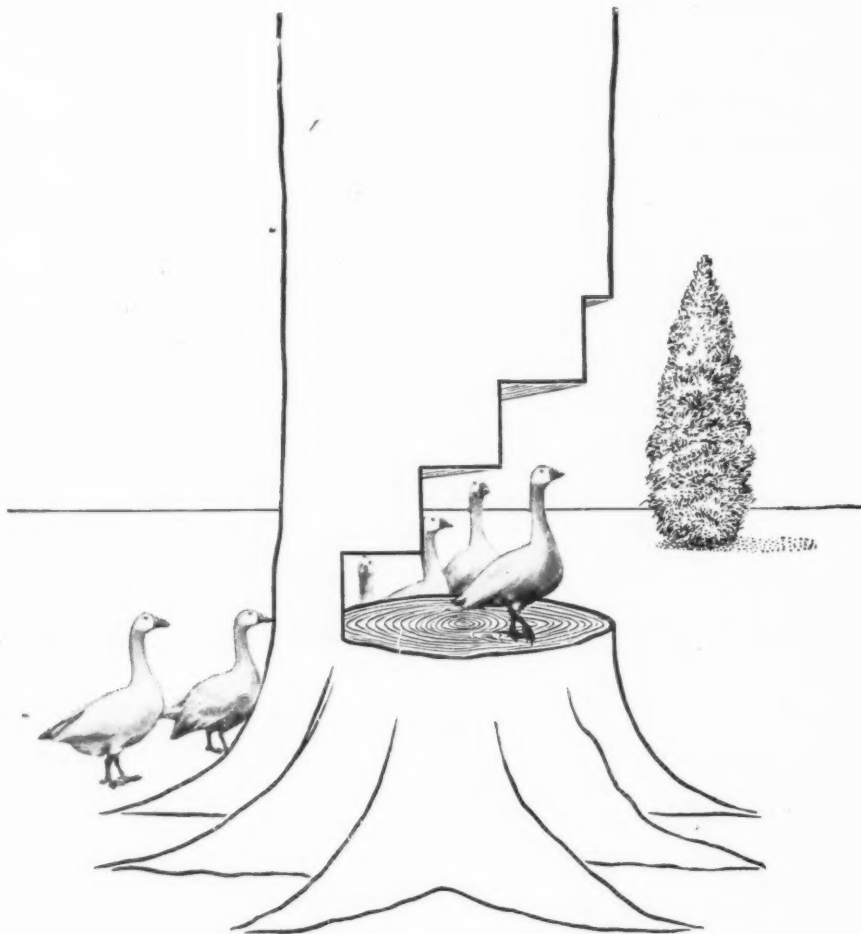
This rail has been specially designed for wood frame windows. The construction is of heavy extruded brass, with top or face fixing brackets made specially for quick fitting and is therefore a valuable time-saving device. For strength, durability and easy running, specify 'Rufflette' brand B/L Curtain Rail.



For smooth and trouble-free operation the 'Rufflette' brand Cord Controlled Curtain Rail is recommended for use in large establishments such as hotels, residences and offices where curtains receive constant usage. It is of simple construction and quickly fitted without dismantling. 'Rufflette' brand Cord Controlled Curtain Rail will fit all straight windows.

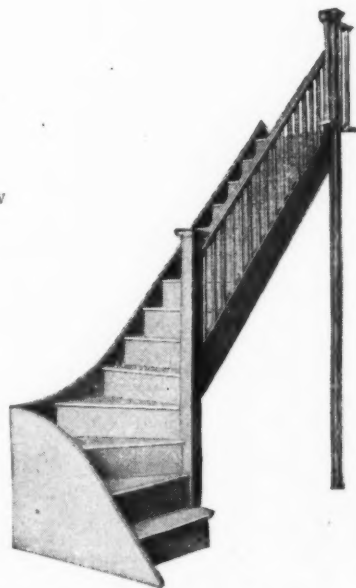
'Rufflette' BRAND

MANUFACTURED BY THOMAS FRENCH & SONS LTD., CHESTER ROAD, MANCHESTER 15
WORKS: Manchester, Wythenshawe, Fall River, Mass., U.S.A. LONDON OFFICE: 156-162 Oxford Street, W.1
Also at BRITISH EMPIRE BUILDING, NEW YORK CITY and 751, VICTORIA SQUARE, MONTREAL



Take a gander at this set of stairs.

Made from seasoned timbers, accurately machined,
it's one of the standard products that we produce by the
hundred. Our standard joinery includes gates, doors, window
frames, cupboards, dressers, kitchen fittings. And here's
another thing: we deliver them (against your
timber licence) straight to your site—
and get them to you bang on time.



Midland Woodworking

Standard Joinery where you want it, when you want it →

THE MIDLAND WOODWORKING COMPANY LIMITED ★ MELTON MOWBRAY ★
CRC 3

HIGGS AND HILL
LIMITED

LONDON

LEEDS

COVENTRY

THE Masticon PROCESS

FOR THE MAINTENANCE, REPAIR, RECONSTRUCTION, AND WATERPROOFING OF INDUSTRIAL ROOFS

A waterproofing Compound, black in colour, made with a base of Canadian asbestos fibre. When laid approximately $\frac{1}{4}$ in. thick—it provides a durable and thoroughly waterproof covering to any type of roof surface. MASTICON remains permanently keyed to any roof surface, is unaffected by atmospheric conditions and is the ideal waterproofing material since it remains pliable and does not become brittle and break away.

MASTICON is manufactured in many grades e.g. :—

BEDDING MASTICON for bedding in roofing glass.

GLAZING MASTICON for top pointing all types of glazing bars.

STANDARD MASTICON for covering defective slates, diamond asbestos tiles and treating seams, laps and bolt heads on corrugated iron and asbestos.

ASPHALTIC MASTICON for covering all types of flat roofs and gutters. This is a special consistency to allow of normal light foot traffic.

MASTICON EMULSION for defective felt roofing.

FLEXOLAC (MASTICON in liquid form) for the protective treatment of corrugated iron surfaces and external metal structures.

We have our own permanent staff of skilled labour in your district to carry through any glazing or roofing contract.



ZINC ROOFS AT KING'S CROSS, LONDON



DIAMOND ASBESTOS TILES



ASPHALT ROOFS



GLAZING AND CORRUGATED IRON ROOFS



GENERAL RECONSTRUCTION

INDUSTRIAL ENGINEERING LTD.

Head Offices : MELLIER HOUSE, ALBEMARLE ST., LONDON, W.1

Telephone : REGent 1411 (4 lines). Cables : Dustickon, Piccy, London



L.T.E. CANTEEN, Baker Street.

Architect: THOMAS BILBOW, F.R.I.B.A.

CANTEEN RADIANT HEATING BY EMBEDDED PANELS

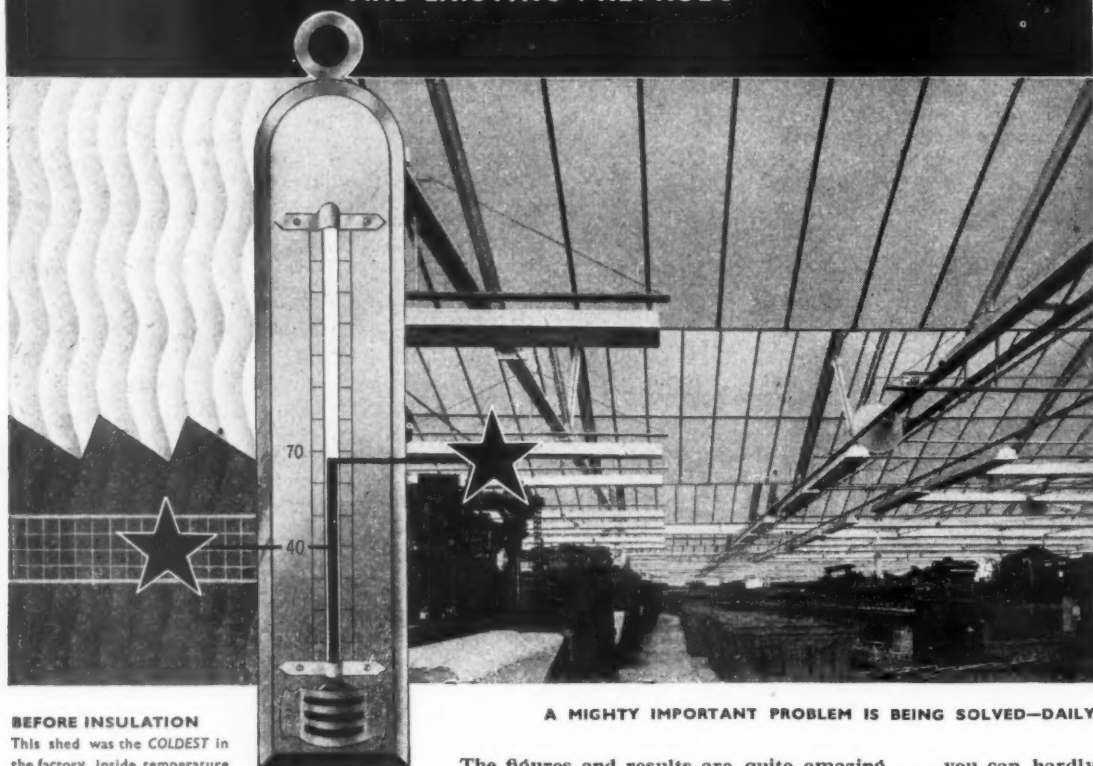
*Radiant Warming by Embedded Panels,
Hot Water Service, Balanced Inlet & Ex-
tract Ventilation to kitchen, Thermostatic
control of room temperature by*

RICHARD CRITTALL

RICHARD CRITTALL & COMPANY LIMITED, 151 Great Portland, Street, London, W.1. Tel. Museum 3366
and at Martins Bank Building, Liverpool, Central 3283, Prudential Buildings,
St. Philip's Place, Birmingham, Central 2478, and 136 Wellington Street,
Glasgow, C.2. Douglas 8761

Heywood's PATENT SYSTEM OF THERMAL INSULATION

CONSERVES HEAT • IMPROVES CONDITIONS
AND SAVES FUEL • FOR NEW PROJECTS
AND EXISTING PREMISES



BEFORE INSULATION

This shed was the COLDEST in the factory. Inside temperature could only be raised 23° over outside temperature due to heat loss.

AFTER INSULATION

With outside temperature at 30° inside temperature was raised to 67°, this shed became the WARMEST in the factory.

A MIGHTY IMPORTANT PROBLEM IS BEING SOLVED—DAILY

The figures and results are quite amazing . . . you can hardly fail to be interested to know how veritable "ice-boxes" have been transformed at comparatively low cost COINCIDENT with a 75% fuel saving : or how quickly the cost of installation is recovered by fuel savings and increased output : or how the efficiency and economy of the Heywood System compared with others lies in the design and quality of the fittings. Let us send a competent representative with FACTS AT HIS FINGER-TIPS to discuss the matter with you. The installation of new machinery has now made it possible to offer immediate service on all contracts.

W.H. Heywood and Company Ltd
HUDDERSFIELD.

Tel.: 1254 (4 lines)

Branches at: LONDON : 54 Victoria Street, Westminster, S.W.1.

MANCHESTER : 19 Old Millgate.

NEWCASTLE-UPON-TYNE : 57 Cathedral Buildings.

BELFAST : E. H. Pearce & Sons, Ltd., 29-33 Laganview Street.

And LEICESTER, COVENTRY, LIVERPOOL, BIRMINGHAM, BRISTOL, NOTTINGHAM,

GLASGOW & EDINBURGH.

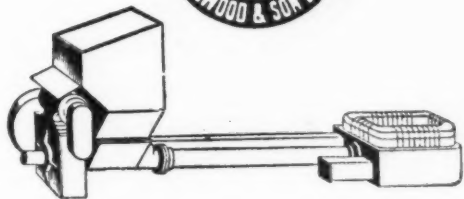
n.d.h.



NO HIT OR MISS WITH UNICALOR

Chance doesn't come into the picture with a Bigwood Unicalor Stoker—exactly predetermined proportions of fuel and air are automatically varied and fed for every new demand, however this may fluctuate. The result is uniform firing leading to economical, smokeless combustion and maintenance of constant temperature or steam pressure in the fired furnace or boiler.

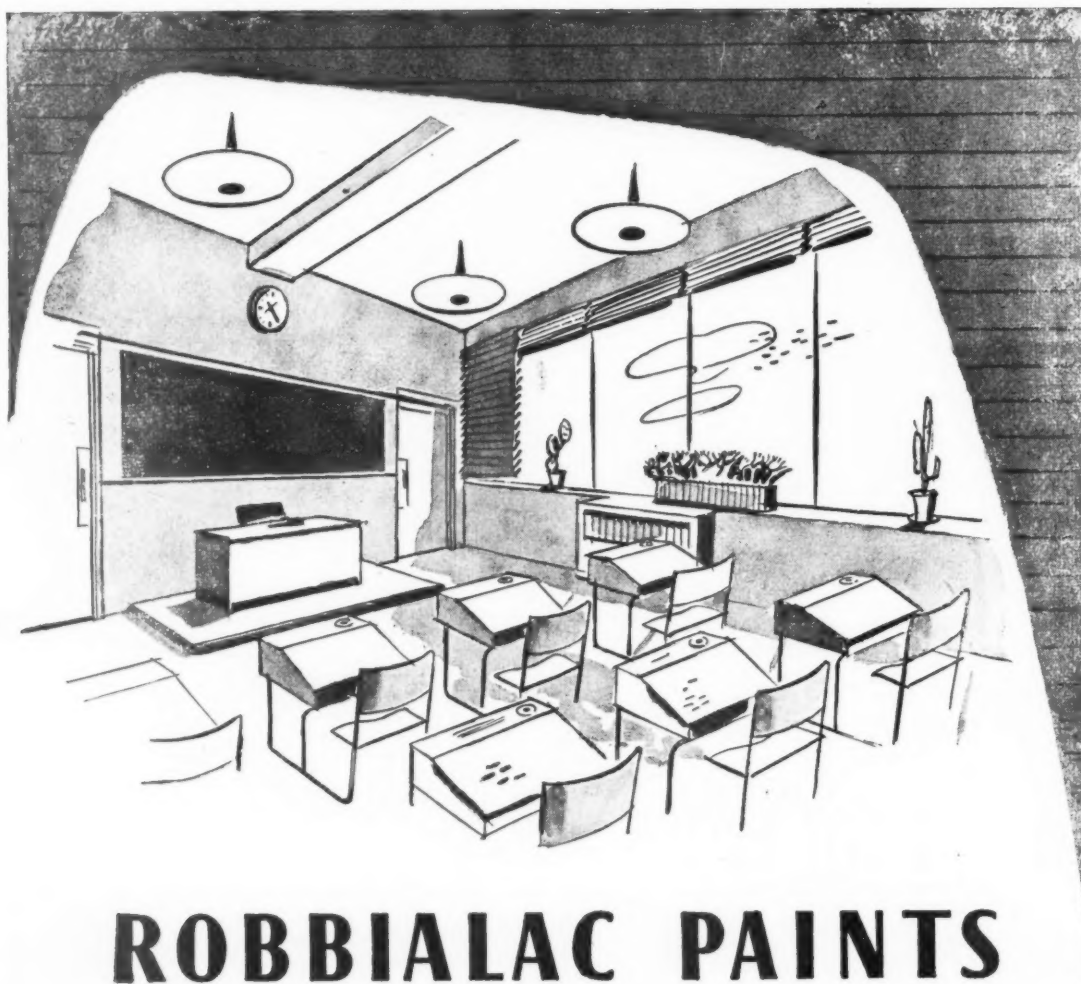
**JOSHUA BIGWOOD & SON LIMITED
WOLVERHAMPTON**



BIGWOOD

UNICALOR

COAL STOKERS



ROBBIALAC PAINTS

Bring the tonic of colour to schools

With modern ideas in education has come the realisation that knowledge flows more freely from teacher to pupil in the friendlier atmosphere of a gaily decorated classroom. Robbialac is playing an ever-increasing part in brightening the walls, ceilings, woodwork and furnishings of our schools. The makers are always happy to advise on finishes for all decorative and protective purposes, inside and outside.



JENSON & NICHOLSON LTD

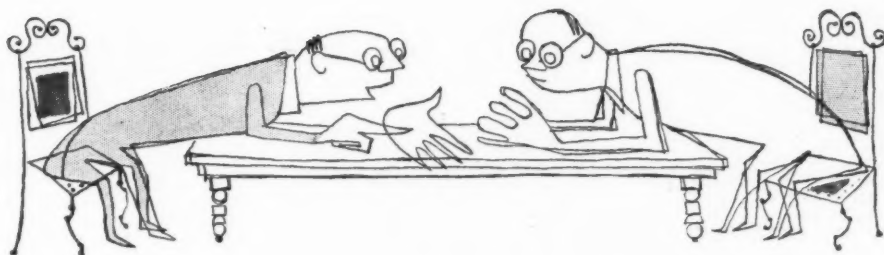
Jenson House · Stratford · London, E.15

NEW INTERIOR WALL TREATMENT

ROBBIALAC SUEDE FINISH WALL PAINT is the perfect, new finish for walls and ceilings . . . velvety in appearance and to the touch. Hygienic, dirt-resistant and washable. Suede Finish is ideal for wherever a high-grade, luxurious yet economical interior surface is desired. Rubbing or scrubbing will not harm the surface and, after years of wear, it will need little or no preparation for subsequent coats. Many beautiful pastel tints all intermixable. Please write for details.

for colour

quality & lasting beauty



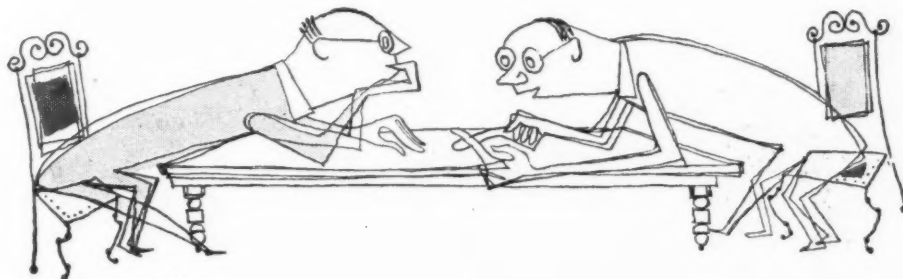
Cooks and Conferences

The Hydro Hotel, Harrogate, is famous for its cooking and popular for Conferences and Conventions.

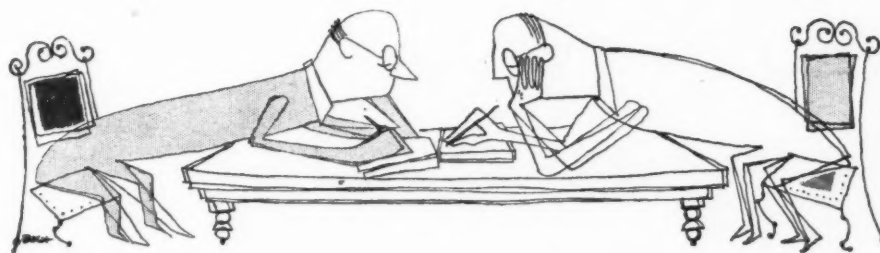
Like many another first-class hotel, its kitchens were planned and completely equipped by Radiation Large Cooking Equipment, Ltd.

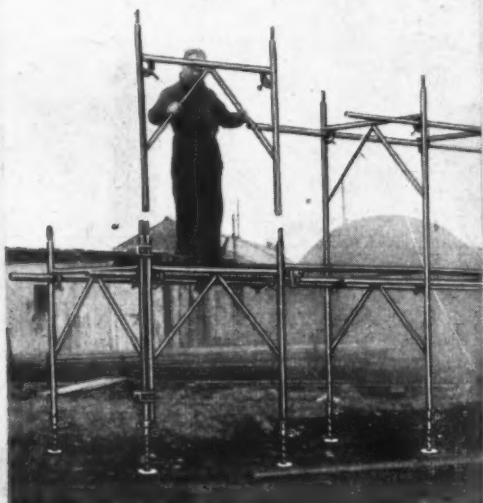
The services of Radiation engineers are available to all who are or may be concerned in the planning and equipping of kitchens for schools, hospitals, hotels, restaurants, canteens and similar establishments.

Please send a note of your requirements to either of the addresses shown below.



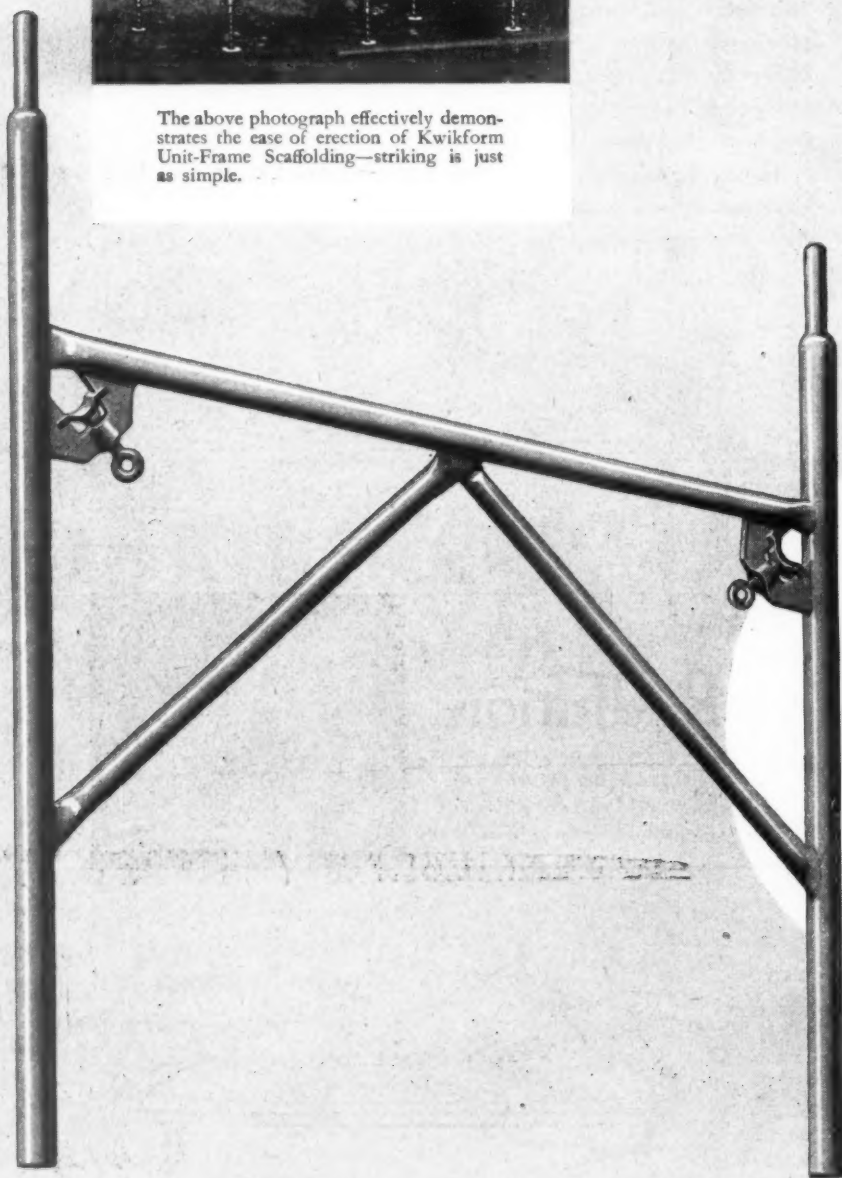
Radiation
Large Cooking Equipment, Ltd.,
PALATINE WORKS,
WARRINGTON LANCs.
London Offices & Showrooms: 7 & 8 Stratford Place, W.1.





The above photograph effectively demonstrates the ease of erection of Kwikform Unit-Frame Scaffolding—striking is just as simple.

KWIK



KWIKFORM LTD., WATERLOO ROAD,

KWIKFORM

... the Unit-Frame Scaffolding System ...

... has revolutionised all previous conceptions of scaffolding. Economies obtained from its usage have been officially acknowledged by Government Authorities as well as by all sections of the Building and Civil Engineering Industries. Fully descriptive literature is available on application.

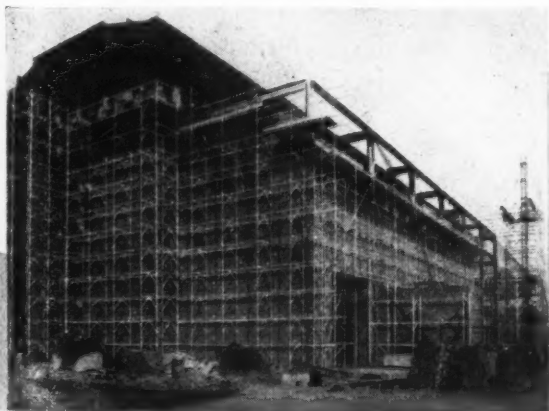


The 'twist-core collet' provides for rapid adjustment to fine limits on the Adjustable Base. It was only by this ingenious 'Kwikform' invention that the scaffolding problems of the building industry could be brought within the scope of full scale factory pre-fabrication with all its benefits.

Patents Granted and Pending in all Principal Countries of the World

The illustration below of Nechells Power Station which is reproduced by kind permission of the British Electricity Authority shows the application of our Unit-Frame System to external and internal large scale constructional operations.

Illustrated below is the adaptability of our Unit-Frame System to extremely difficult site conditions.



BIRMINGHAM 25. London Office: 66 Victoria St., S.W.1

L.G.B.



By courtesy of John Groves & Sons Ltd. Weymouth.

The G & C NEW BAR Technique *for all-round efficiency*

"Gather round" says this new bar, installed by G. & C. in the King's Arms (Dorchester) lounge. Clean, efficient lines and G. & C. fittings make for easy serving and customers' comfort.

Cabinet Work at its best is seen in the solid oak construction, the Dalex (Regd.) Counter Top, inlaid Terra Cotta with Oak Margins.

Details for brewers and their architects of the new developments in bar fittings will be sent on request, with coloured drawings and full specification.

**Gaskell
Chambers**
LIMITED

BRITAIN'S BIGGEST BAR FITTERS

Head Office: Dalex Works, Coleshill Street, Birmingham, 4, and at London, Bristol, Cardiff, Leeds, Portsmouth, Newcastle-on-Tyne, Liverpool, Manchester, Preston, Hanley, Sheffield, Nottingham, Glasgow, Edinburgh.

Bryce Canyon, Utah



NATURE'S architecture, so immense, so majestic, and so magnificently non-utilitarian! Millions of years went into its making to provide, perhaps inspiration, perhaps merely a panorama for tourists. Man's building can never be on that sublime scale, but there is inspiration in it also . . . in the thought that man builds to live more fully.



WE BUILD IN STEEL*

*RIVETED AND WELDED

**BANISTER,
WALTON & CO.
LTD.**

STRUCTURAL ENGINEERS
AND STOCKHOLDERS

LONDON, S.W. 1 — 82 Victoria Street

MANCHESTER 17 — Trafford Park

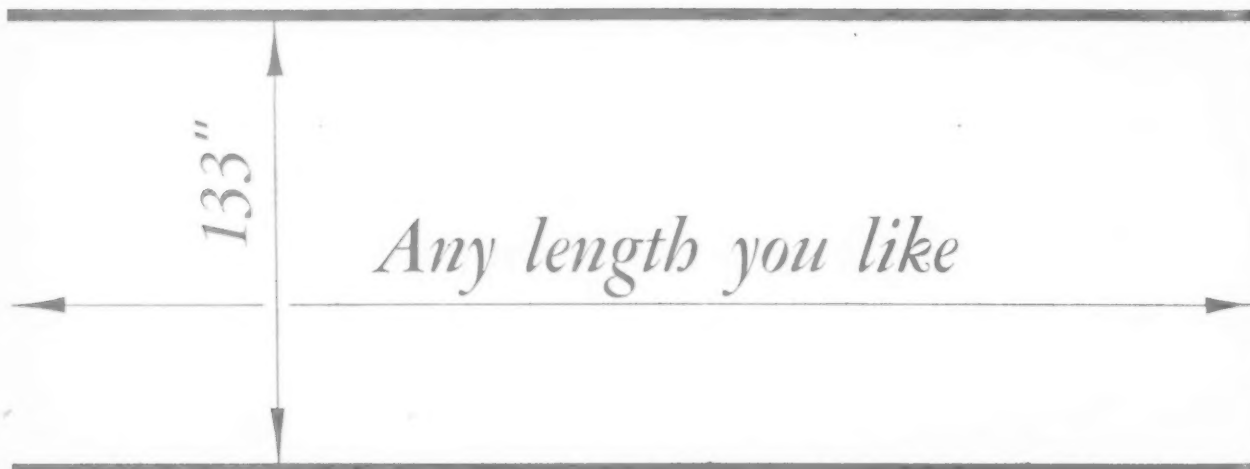
BIRMINGHAM 18 — 61-63 Western Road

What did Pugin say in 1841?

"Every linen-draper's shop apes to be something after the palace of the Caesars; the mock stone columns are fixed over a front of plate glass to exhibit the astonishing bargains" That remark, and a good many others about the things that Augustus Welby Pugin disliked, was set down in his book, *The True Principles of Pointed or Christian Architecture*. Here is the illustration that went with it, which shows an



early and not very happy use of Polished Plate Glass. Now, over a century later, British Polished Plate Glass has helped to create the technique of contemporary shop design. Available in any quantity.



Supplies are available through the usual trade channels.



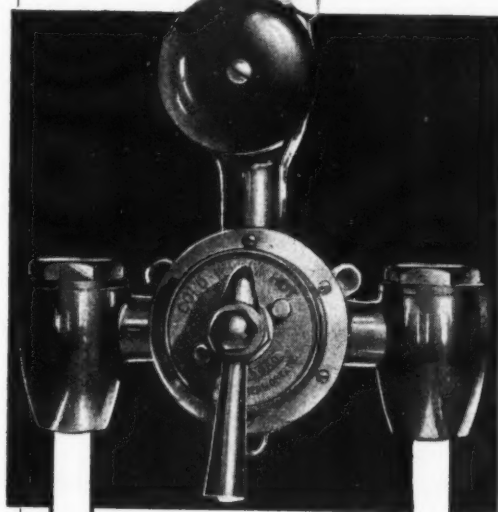
Architects and Architectural Students are invited to consult our Technical Sales and Service Department at St. Helens, or our West End Office at Selwyn House, regarding the properties and uses of glass. Head Office and Works: St. Helens, Lancashire. Tel.: St. Helens 4001. West End Office and Showrooms: Selwyn House, Cleveland Row, St. James's, S.W.1. Tel.: Whitehall 5672-5676.

PILKINGTON BROTHERS LIMITED

Wherever **WARM WATER** is used
Leonard-Thermostatic
MIXING VALVES are **ESSENTIAL!**

**HOLDS THE
TEMPERATURE
STEADY**

WARM WATER



HOT WATER

COLD WATER

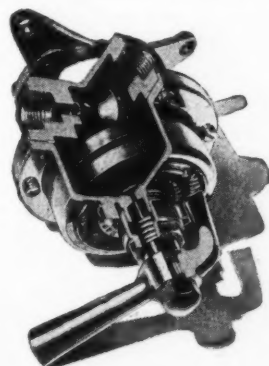
SAFETY The Thermostatic control makes it virtually impossible for the valve to deliver water at any temperature other than that which is required. Consequently the risk of scalding, or the risk of damage in process work is eliminated.

ECONOMY Where there is a Leonard Valve there is no wastage; Hot, warm, or cold water is delivered from the one tap, as and when required. No heat storage is necessary, and consequently radiation losses do not occur.

SIMPLICITY The Leonard Thermostatic Mixing Valve can be quickly and easily introduced into your existing hot water system, and is as simple to service and maintain as an ordinary stop valve.

If you have available
HOT and COLD WATER

You can obtain warm water at whatever temperature you require. The two supplies are simply connected to the valve, and the thermostat in the mixing chamber does the rest! It holds the temperature steady.



Please write for leaflet
WB/2

WALKER, CROSWELLER & CO., LTD.

WHADDON WORKS, CHELTENHAM, GLOS. Telephone: Cheltenham 5172 (3 lines)

London Office:

Manchester Office:

4, VERNON PLACE, LONDON, W.C.1.

1, RIDGEFIELD, DEANS GATE, MANCHESTER

Telephone: HOLborn 2986

Telephone: Blackfriars 0058

Recommended -

- ★ The GLOW-WORM "DERWENT" Combination Grate is in the Ministry of Health's Approved list of improved appliances recommended to all local authorities.

THE compact, sturdy, Glow-worm "Derwent" Combination Grate has behind it, years of the best foundry experience and has stood up to the most exacting tests. Its high performance, pleasing appearance, rapid assembly and easy maintenance make the "Derwent" the architect's and builder's first choice in Combination Grates.

One efficient and economical fire provides heat for a

- ★ Large and uniformly heated oven.
- ★ Fast boiling machine ground hot-plate with extension hob.
- ★ Hot closet.
- ★ Supply of hot water for an average family household.

The cooker may be adjusted to stay alight overnight, and is capable of giving the performance specified in B.S. 1252, 1945, on both coal and anthracite. Other solid fuels, such as coke, wood, or patented fuels may be used if the cooker is not required to stay alight unattended for a very long period.

The cooker has been selected for inclusion in the Ministry of Health's Approved List of improved appliances as recommended to all local authorities.

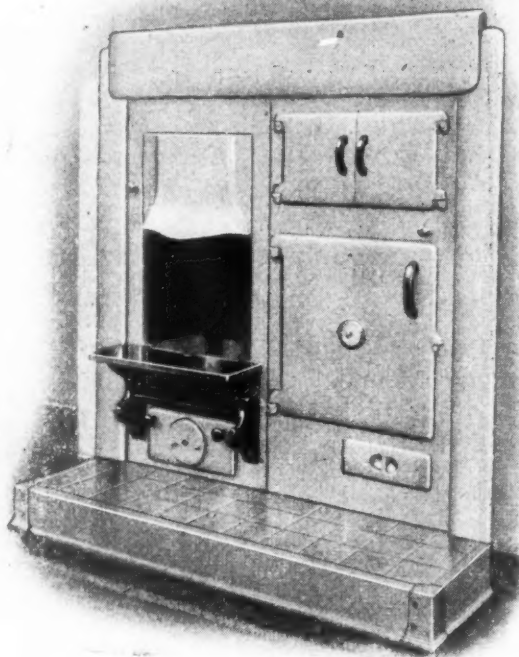
*Send for
Illustrated Leaflet No. A.2.*

GLOW-WORM

"Derwent"

COMBINATION GRATE

GLOW-WORM BOILERS LTD. DERWENT FOUNDRY, MILFORD, NR. DERBY



SPECIFICATION

GRATE.—Overall size, 38 in. by 38 in. by 14½ in.
Brickwork opening required, 44 in. high by
40 in. wide and 15 in. deep.

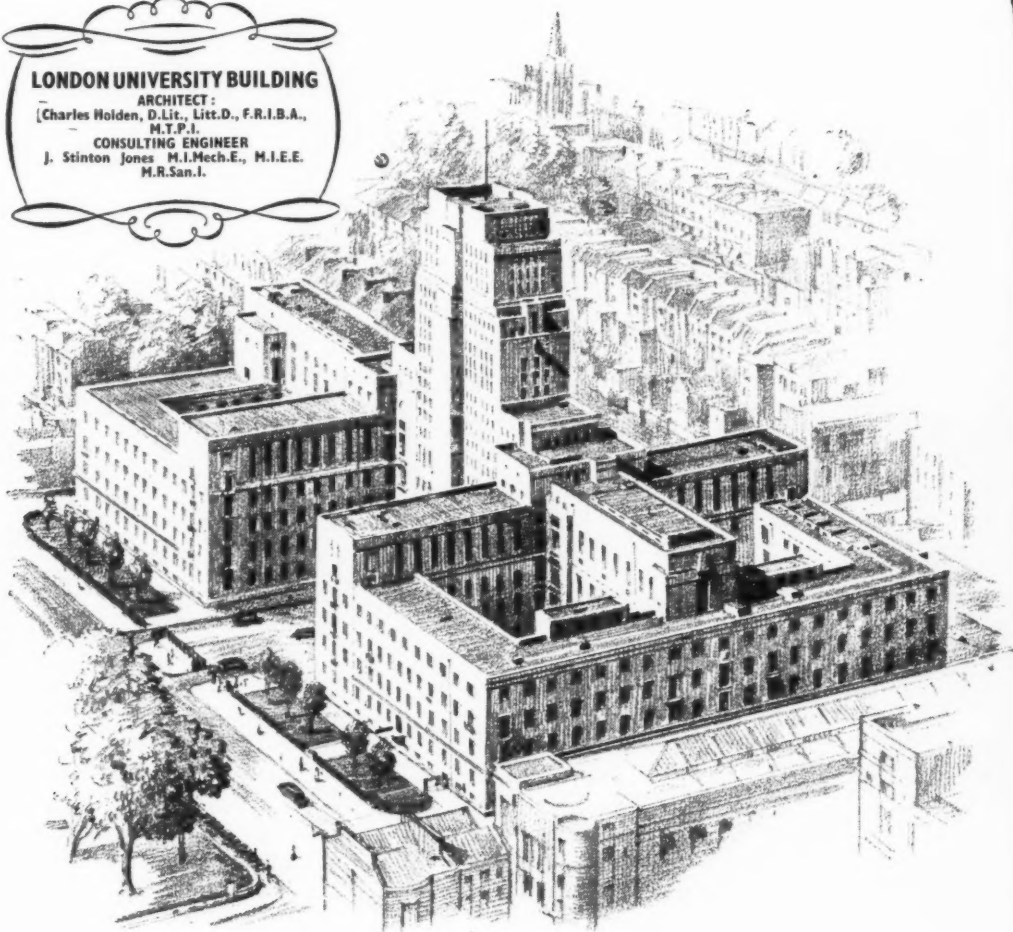
MANTEL.—Overall size, 45½ in. wide by 44½ in.
high.

KERB.—To suit 44 in. by 12 in. tile hearth.

Grate supplied in mottled fawn, mottled green, or black vitreous enamel. Mantel is supplied in mottled fawn, mottled brown (to tone with the mottled fawn grate), mottled green vitreous enamel or fine-cast and primed one coat. Kerb is supplied in mottled fawn, mottled green or black vitreous enamel. A bolster can be supplied to restrict heat losses from firebox in its closed position.

LONDON UNIVERSITY BUILDING

ARCHITECT:
[Charles Holden, D.Lit., Litt.D., F.R.I.B.A.,
M.T.P.I.]
CONSULTING ENGINEER
J. Stinton Jones M.I.Mech.E., M.I.E.E.
M.R.San.I.



THE launching of a project on the scale of the London University Building is today more than difficult... but at least it is not difficult to obtain the same



J.&P. CABLES

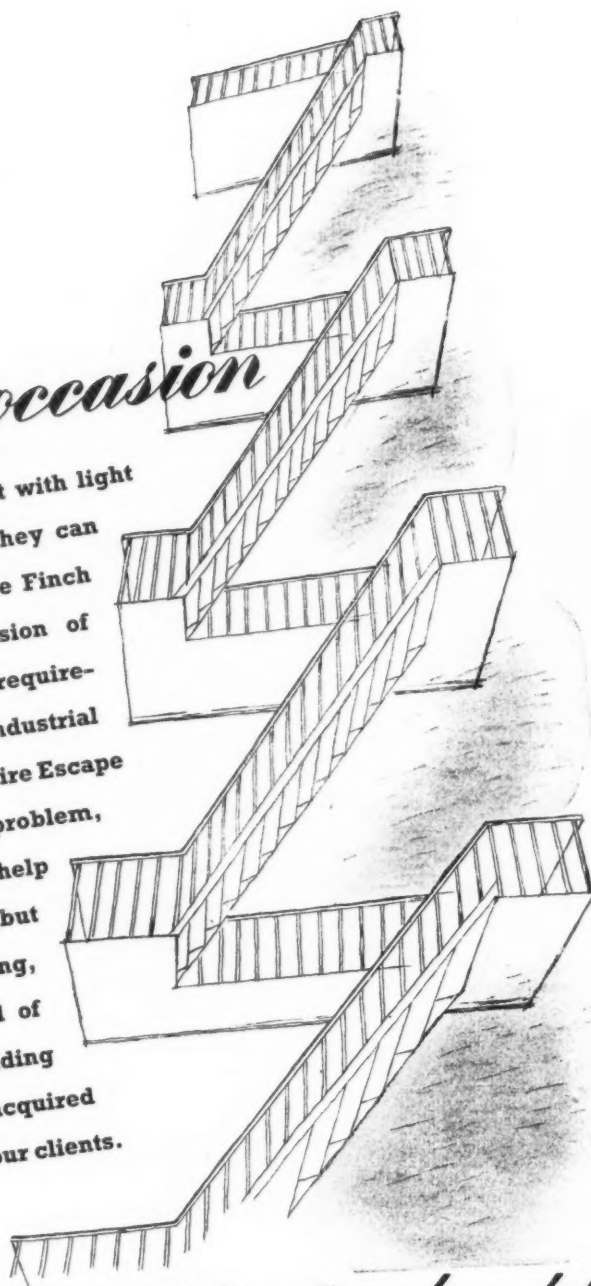
J. & P. ARE FOUNDATION MEMBERS OF THE C.M.A.

JOHNSON & PHILLIPS LTD., LONDON, S.E.7

ELECTRICAL ENGINEERS AND CABLE MAKERS SINCE 1875

rising to the occasion

When the architect and builder meet with light constructional steelwork problems they can rely with complete confidence on the Finch Organization. Finch's have a division of experts whose job it is to provide all requirements, be it Catwalks, Ladders, Industrial Canopies, Ornamental Steelwork or Fire Escape Staircases. Whatever the building problem, Finch's have a Division that can help solve it, not only with material aid but with that little all-important something, called service. We bring to the aid of architect and builder an understanding of their problems that has only been acquired by years of active co-operation with our clients.



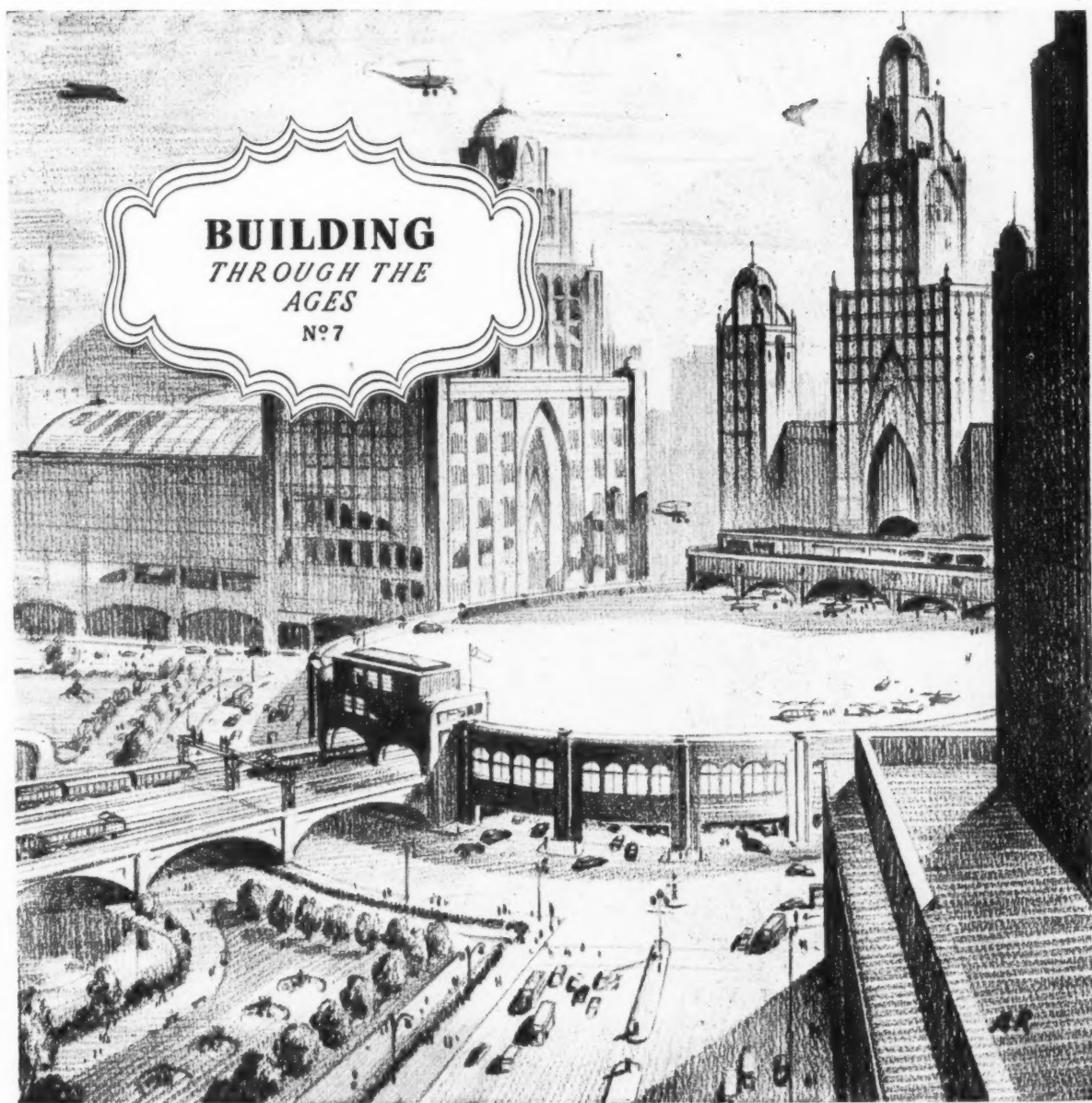
SPECIALIST DIVISIONS IN: Sanitary Appliances and Plumbers' Brasswork · Fireplaces · Stoves and Ranges · Ironmongery Tubes and Fittings · Castings and Drainage Goods · Oils, Paint and Wallpaper · Tools and Hardware · Heavy Building Materials · Roof Tiling and Slating · Wall and Floor Tiling · Glazing and Leaded Lights · Constructional Engineering · Agricultural Buildings and Equipment.

constructional work by



"BUILDING MATERIALS WITH SERVICE"

B. FINCH & CO. LTD. · BELVEDERE WORKS · BARKINGSIDE · ESSEX · Telephone: VALEntine 8888 (20 lines)
SHOWROOMS AT FINCH CORNER, EASTERN AVENUE, ILFORD



The City of Tomorrow

THE culmination of thousands of years of hard and laborious progress in the building art is seen with the modern steel-framed structure. To-day this is the accepted form of building for almost everything except the private house. Tomorrow's architecture will depend even more upon steel.

The theory of a metal skeleton carrying the load, with the outer walls no more than a curtain round it, was first evolved in Victorian days with cast-iron girders. Not until the development of the stronger and lighter steel girder was such modern type of structure brought to its perfect form.

This method of building was pioneered in the United States with the earliest "skyscrapers." Throughout the years these have gradually climbed upwards to reach their present summit with the eighty-five storey mass of the Empire State Building.

In this country, for various reasons, we have never matched the loftier erections of America. Yet Britain has, in her own way, attained a standard of constructional steelwork comparable to that of any other country in the world. Whatever pattern the construction of the future may take, British architects and builders will lead the way.

THOMAS BLACKBURN & SONS LIMITED

PRESTON, LANCASHIRE.

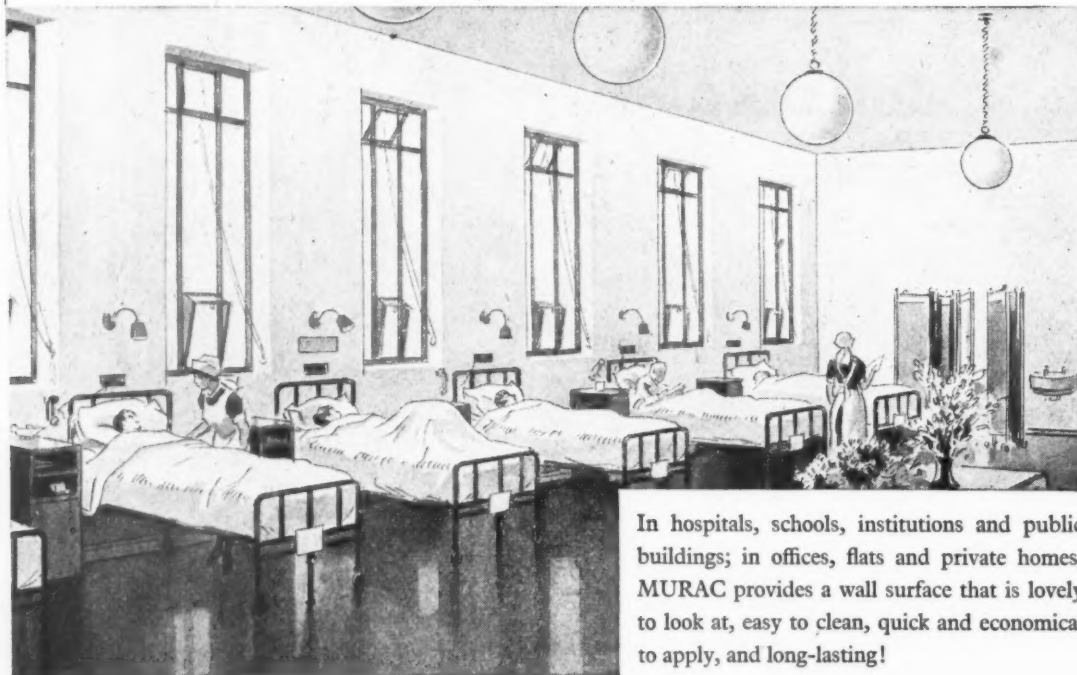
LONDON OFFICE: 8 BLOOMSBURY SQUARE, W.C.1.

TEL: HOLBORN 8638.

Fabricators in Steel Constructional Steelwork Iron Castings Railings & Gates Metal Windows Farm Implements

NEW *matt* FINISH FOR WALLS

supersedes distemper and water paint!



In hospitals, schools, institutions and public buildings; in offices, flats and private homes, MURAC provides a wall surface that is lovely to look at, easy to clean, quick and economical to apply, and long-lasting!



Stains, grease and dirty fingermarks easily washed off!



You can wash it...rub it...scrub it!

Send for **FREE**
colour scheme booklet

Made in the BROLAC works by JOHN HALL & SONS (Bristol and London) LTD., HENGROVE • BRISTOL 4

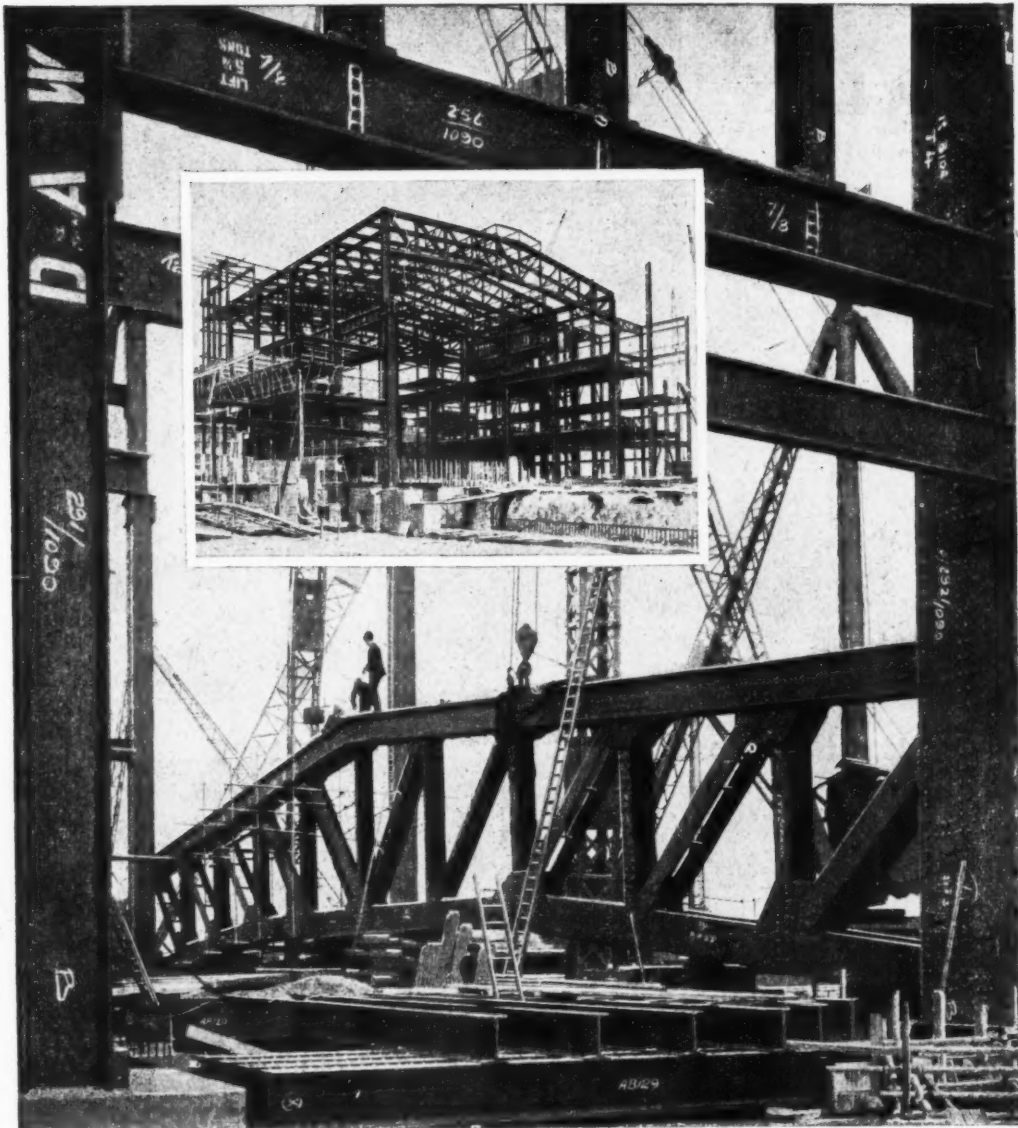
MURAC COSTS NO MORE TO APPLY THAN DISTEMPER

- ★ *Special new matt finish for wall decoration*
- ★ *Tested in use over the past fifteen years*
- ★ *Applied with large flat wall brush*
- ★ *Dries matt with attractive dull sheen*
- ★ *Long-lasting; no powdering or flaking*
- ★ *Can be washed and scrubbed over and over again*
- ★ *Available in eighteen basic colours*
- ★ *Easily blended to any shade*

MURAC

NEW MATT FINISH FOR WALLS





A main roof girder prior to erection over Turbine House.

Part of a 6,000 ton Generating Station contract for
the British Electricity Authority

DAWNAYS LIMITED

BRIDGE AND STRUCTURAL ENGINEERS

HEAD OFFICE: Steelworks Rd., London, S.W.11: Telephone BATTERSEA 2525.

King's Dock Works SWANSEA 3185	East Moors Works CARDIFF 2557	54 Victoria St., London, S.W.1 VICTORIA 1541	Bridge Rd. Works WELWYN GDN. 242	Thorpe Works NORWICH
2 Rockstone Place SOUTHAMPTON 2474	40 Park Road PETERBOROUGH 4547	155 Princes Avenue, HULL HULL, CENTRAL 8161	Western Chmrs., South St. ROMFORD 2106	7 The Close NORWICH 23141

Cables and Telegrams "DAWNAYS, LONDON"—Code Bentley's 2nd.

NEW WALLS

Sprayed
LIMPET ASBESTOS
*



COUNCIL CHAMBER,
BELFAST CITY HALL.

The ceiling illustrated has been treated with Sprayed Limpet Asbestos to reduce reverberation, and shows the excellent finish which can be obtained by this method of acoustic treatment.

Sprayed Limpet Asbestos is used wherever a Sound Absorbent Surface is required, and because of its Fire-proof and Vermin-proof qualities, it is especially suitable for use in Hospitals, Offices, Swimming Baths, and in other places where reverberation is excessive.

Newalls Sprayed Limpet Asbestos is also widely used for Acoustic Correction in Cinemas, Churches, and other Auditoria.

Newalls Insulation Co. Ltd., maintain a fully equipped Sound Laboratory for the investigation of problems connected with the use of Acoustic materials.

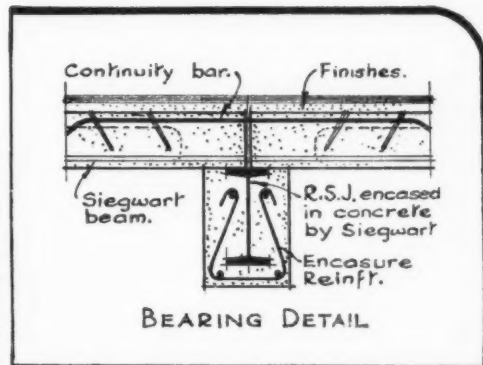
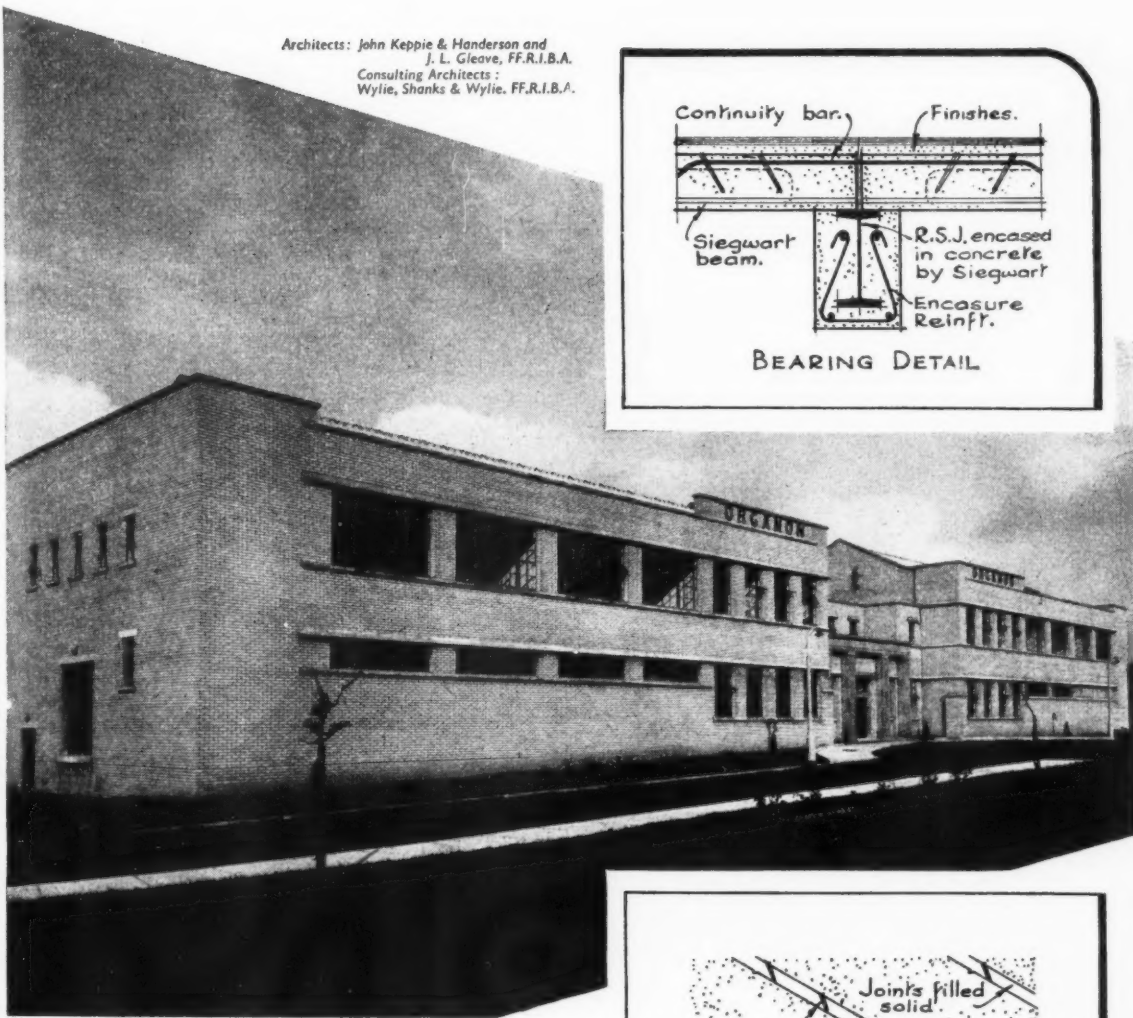


NEW WALLS
Insulation Co. Ltd.

HEAD OFFICE: WASHINGTON, COUNTY DURHAM
A MEMBER OF THE TURNER AND NEWALL ORGANISATION.

OFFICES & DEPOTS AT: LONDON, GLASGOW, MANCHESTER, NEWCASTLE, BIRMINGHAM, BELFAST, BRISTOL & CARDIFF

Architects: John Keppie & Handerson and
J. L. Gleave, F.F.R.I.B.A.
Consulting Architects:
Wylie, Shanks & Wylie, F.F.R.I.B.A.



Organon Laboratories Ltd.

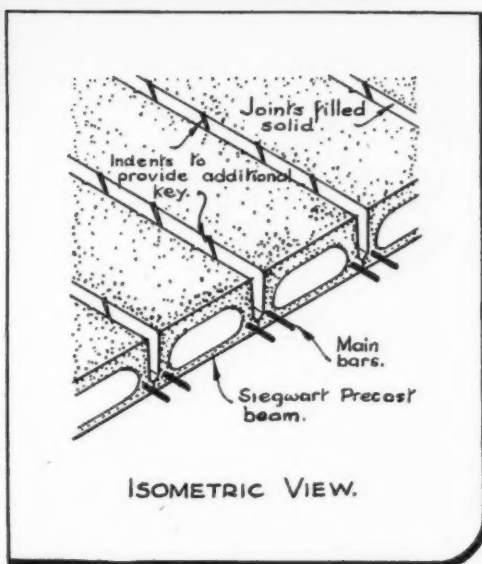
Newhouse Industrial Estate,

Lanarkshire.

Built for Scottish Industrial Estates Ltd.

by John Train & Co. Ltd.

SIEGWART PRECAST FLOORS



SIEGWART FLOOR CO. LTD.

GABLE HOUSE, 40 HIGH STREET, RICKMANSWORTH, HERTS.

Branch Offices at Birmingham Manchester and Glasgow.

Telephone: Rickmansworth 2268

Works at Croxley Green Enderby near Leicester and Paisley

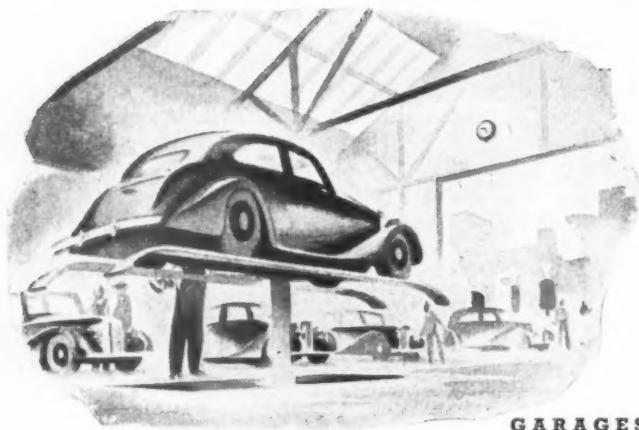
S/2/50

The Clock That is Always in Keeping

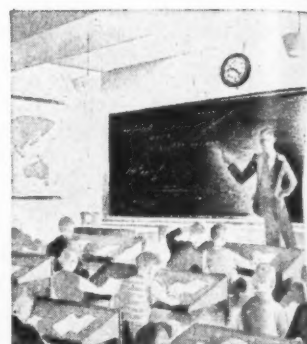
SMITHS

Delhi

WALL CLOCK



GARAGES



SCHOOLS



FACTORIES



OFFICES

The Smiths 'Delhi' has always been one of the most popular wall clocks in the fine range of 'Sectric' and Lever models available. This is because it combines

dignity with simplicity and harmonises admirably with most surroundings. It is available with 9" and 6" dials (Sectric and Lever) and 12" dial (Sectric only).

SMITHS

SUPPLY THE WORLD WITH TIME

SMITHS ENGLISH CLOCKS LTD., SECTRIC HOUSE LONDON, N.W.2 The Clock & Watch Division of S. Smith & Sons (England) Ltd

HARPER No 4008 *Convector* GAS RADIATOR

Here is a beautifully proportioned gas radiator, free standing, portable, light yet robust, ideal in every way for the intermittent heating of nurseries, playrooms, halls, landings, etc. Working on the convector principle, the 4008 projects heat forward and upward. Heat-resisting finishes of pearl-blue or coinage bronze. Top louvre and door chromium plated. Internal baffle vitreous enamelled to prevent corrosion.

Luminous jets give a cheerful glow when alight. Gas consumption regulated to 10 cubic feet per hour. Dimensions: Height, 21in.; Width, 12½in.; Depth, 6in.; Weight, 15lb.

Supplied through gas undertakings or wholesale merchants.



**HARPER
HOUSEWARES**

JOHN HARPER & COMPANY LTD., ALBION WORKS, WILLENHALL, STAFFS.
LONDON OFFICE: CHANDOS HOUSE, BUCKINGHAM GATE, S.W.1. 'Phone: ABBey 3184

MODERN HOUSING ESTATE



PETERBOROUGH CORPORATION HOUSING SCHEME, PETERBOROUGH, NORTHANTS.
(BY KIND PERMISSION OF F. J. SMITH, ESQ., CITY ENGINEER AND SURVEYOR)

Some 400 houses on this modern estate are each fitted with a pair of sliding doors dividing the dining room and lounge, enabling these two rooms to be opened up into one large room for entertaining, etc., and allowing sunshine into opposite aspects of the houses simultaneously.

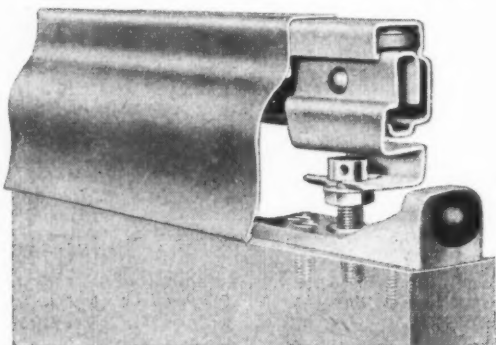
After comparison and trial, the fittings chosen for this scheme were :—

“ESTATE”

SLIDING DOOR GEAR

(Supplied through Messrs. Hayward & Tourell, Ltd., Wholesale Ironmongers, North Street, Peterborough)

The salient features governing this choice are summarized thus :—



- ★ Silent operation
- ★ Inexpensive
- ★ Clear threshold
- ★ Rustproof finish
- ★ Neat appearance
- ★ No maintenance
- ★ Speedy fixing
- ★ Full adjustments

“Estate” sliding door gear is used extensively in blocks of flats where kitchenettes and other small rooms necessitate space economy.

An exclusive “snap-on” pelmet conceals all fittings and will harmonize with picture rail or panelled effect.

“Estate” gear is stocked by hardware firms throughout the British Isles, also in many countries overseas, and supplies are quickly available from your local merchants.

MAY WE SEND YOU DESCRIPTIVE LITERATURE AND ERECTION DATA ?

Clarke Ellard Engineering Co. Ltd.

WORKS ROAD

LETCHWORTH, HERTS

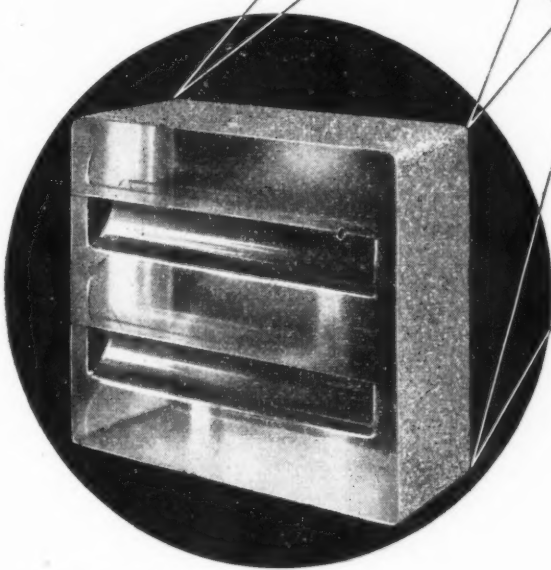
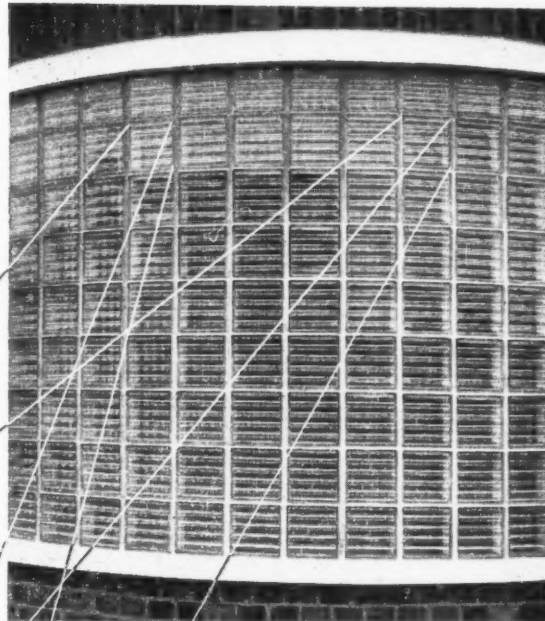
Telephone : Letchworth 979

SEE OUR EXHIBITS AT THE BUILDING CENTRE, 9, CONDUIT STREET, LONDON, W.1
& THE SCOTTISH BUILDING CENTRE, 425-427, SAUCHIEHALL STREET, GLASGOW, C.2.

A PROBLEM SOLVED

The problem of introducing ventilation without interrupting the symmetrical pattern of hollow glass block panels has now been solved satisfactorily.

The Clark-Eaton 'Ventiblock' is designed to course-in with standard P.B.3 type of 'Insulight' Hollow Glass Blocks, and can also be used individually or in groups for lighting and ventilating purposes.

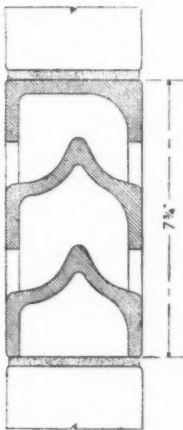


The 'Ventiblock' is of all-glass construction. Internal baffles prevent direct draughts without impeding a free flow of air, exclude driving rain and obscure vision. It is neat and unobtrusive, and so closely resembles a standard hollow glass block that its presence in a panel is hardly noticeable, even at close quarters. Size: $7\frac{3}{4}$ ins. \times $7\frac{3}{4}$ ins. \times $3\frac{3}{4}$ ins. Price: 25/-.

THE CLARK-EATON ALL-GLASS 'VENTIBLOCK'

Patent Nos. 552195, 583552

Designed by Lethinallier Gilbert, A.I.A.A., L.R.I.B.A., and L. James Hobson, A.R.I.B.A.



SECTION

A Ventilating Unit for Glass Block Installations

Also for use individually or in groups for Light plus Ventilation

Can be supplied through the usual Trade channels.

Sole Licensees:

JAMES CLARK & EATON LTD.

(Amalgamating James Clark & Son, Ltd., and Eaton, Parr & Gibson, Ltd.)

GLASS FOR ALL STRUCTURAL AND DECORATIVE PURPOSES

SCORESBY HOUSE, GLASSHILL STREET, BLACKFRIARS, LONDON, S.E.1.

Telephone: WATerloo 4611 (16 lines)

BRANCHES: CANTERBURY · BOURNEMOUTH · EASTBOURNE · READING



THE Radiation Group of Companies have much pleasure in announcing to architects, builders and municipal engineers that the experimental work on whole-house warming systems carried out by them at Stanmore, Middlesex, is complete.

The results of the tests were satisfactory beyond expectations, and fully justify measures to put Radiation House Warming Units—both gas and solid fuel types—into production. Supplies in gradually increasing quantities will from now be available.

RADIATION LTD.

ASTON, BIRMINGHAM, 6 Telephone: Birmingham East 1752
7/8 Stratford Place, London, W.1 Telephone: Mayfair 6462

WHOLE-HOUSE WARMING BY DUCTED AIR

Supplied and fixed by **MARLEY** means

free maintenance in good condition for **10 YEARS**

guaranteed against lamination and decay for **50 YEARS**

*Whatever tiles you specify insist
on these guarantees backed by a
Company of standing.*



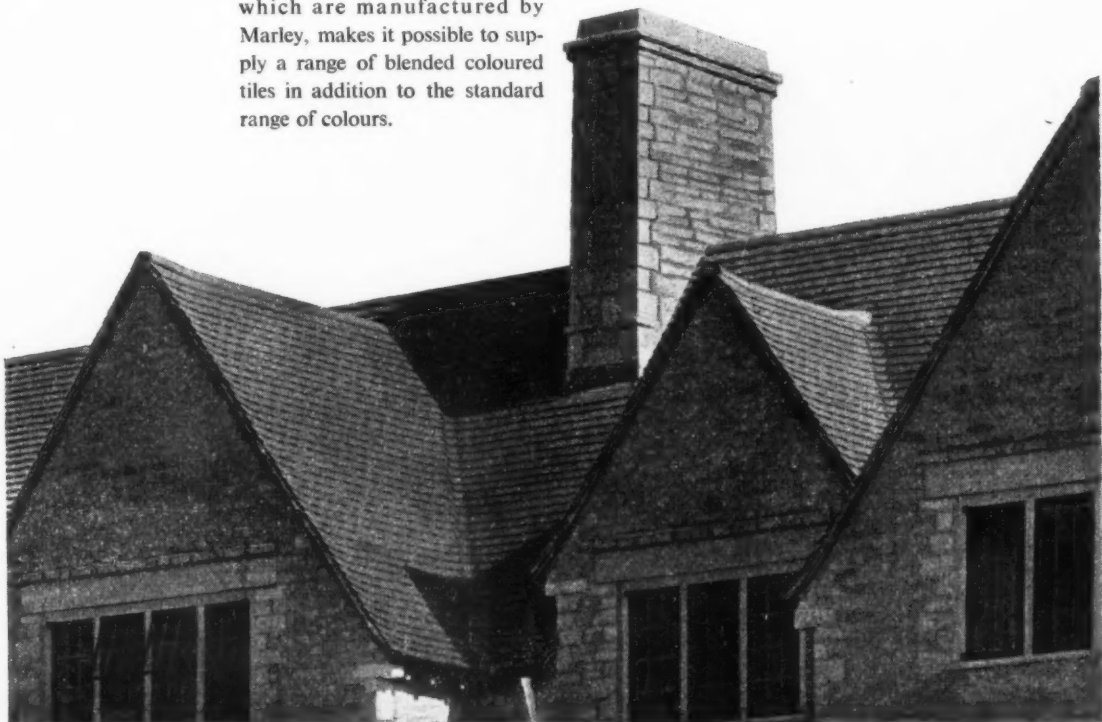
"Not for an age—but for all time"

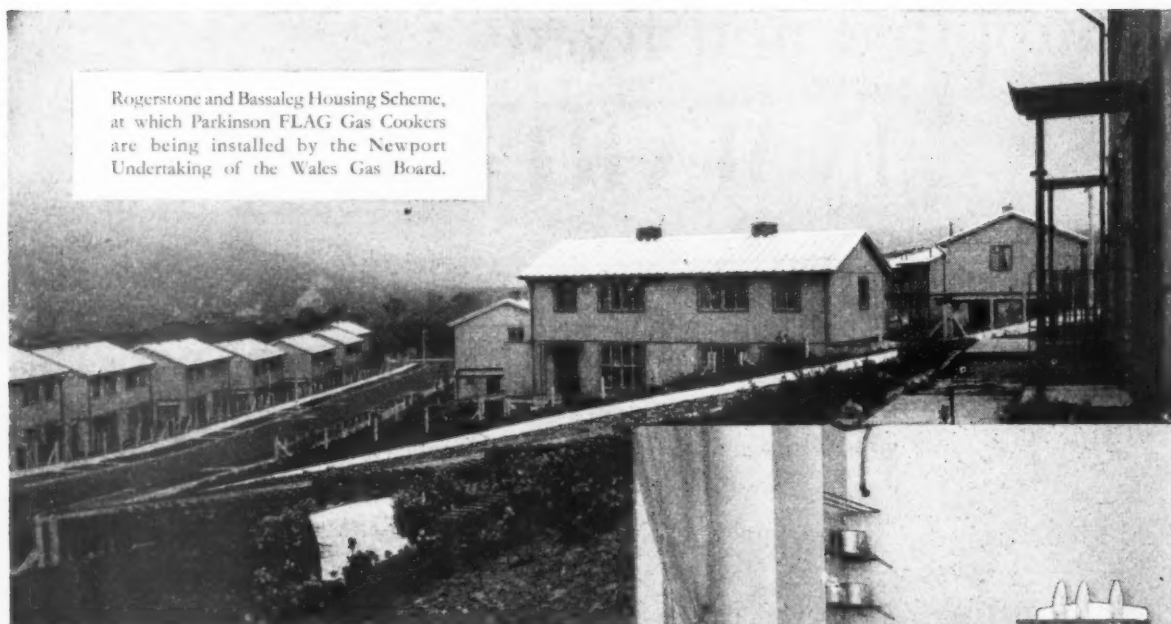
THE MARLEY TILE CO · LTD · RIVERHEAD · SEVENOAKS · KENT

Telephone : Sevenoaks 2251

PERMANENT COLOUR

All Marley roofing tiles are now surfaced with permanently coloured granules which cannot fade, but give a distinctive texture to the tiles and assist the weathering process. The use of these granules, which are manufactured by Marley, makes it possible to supply a range of blended coloured tiles in addition to the standard range of colours.





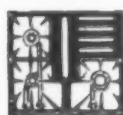
Rogerstone and Bassaleg Housing Scheme, at which Parkinson FLAG Gas Cookers are being installed by the Newport Undertaking of the Wales Gas Board.

Steel Houses erected by the Magor & St. Mellons U.D.C. — one of the many Housing Schemes in the United Kingdom where the Cooker specified was

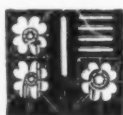
The PARKINSON FLAG

G A S C O O K E R

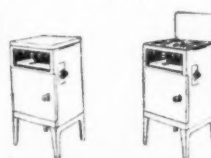
*An attractive, low-priced
Cooker of proved efficiency*



The Flag Cooker has three boiling burners and a grill burner and can be supplied with either Stoved Black 'Open' Top Bars (left) or Black Vitreous Enamelled 'Disbed' Top Bars (right).

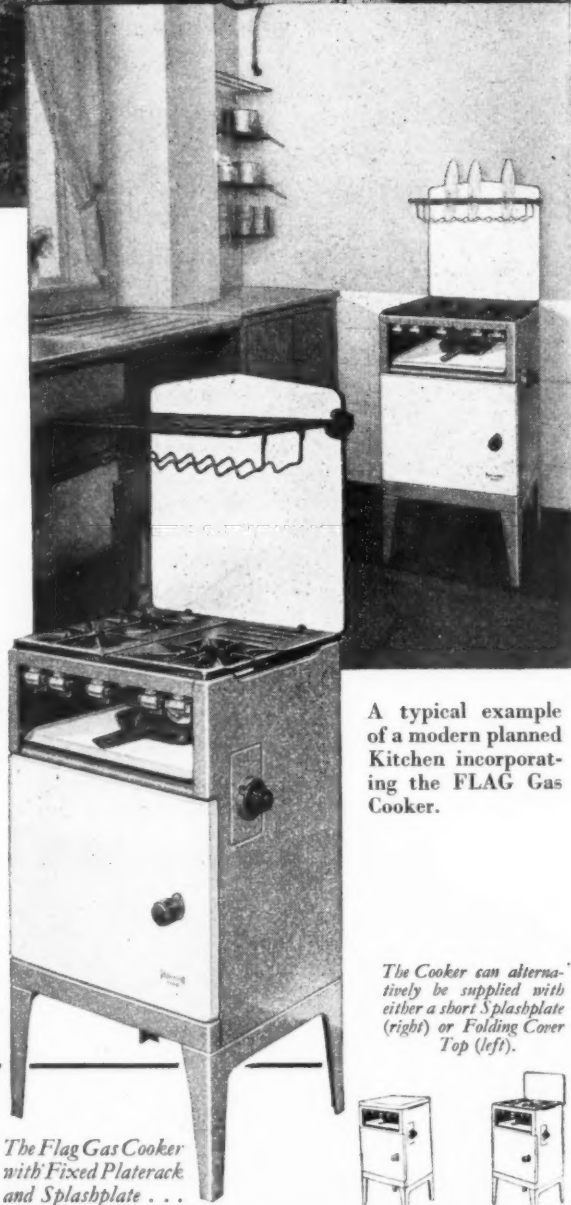


The Flag Gas Cooker with Fixed Platerack and Splashplate . . .



The Cooker can alternatively be supplied with either a short Splashplate (right) or Folding Cover Top (left).

A typical example of a modern planned Kitchen incorporating the FLAG Gas Cooker.





THE ARCHITECTS' JOURNAL

No 2874 9 March 1950 VOL III

EDITORIAL BOARD: (1) *Consulting Editor*, F. R. Yerbury Hon. A.R.I.B.A. (2) *Guest Editor*, Raglan Squire F.R.I.B.A. of Arcon (3) *House Editor*, J. M. Richards A.R.I.B.A. (4) *Technical Editor*, Cotterell Butler A.R.I.B.A. (5) *Editorial Director*, H. de C. Hastings.

SPECIALIST EDITORS*: (6) Planning (7) Practice (8) Surveying and Specification (9) Materials (10) General Construction (11) Structural Engineering (12) Sound Insulation and Acoustics (13) Heating and Ventilation (14) Lighting (15) Sanitation (16) Legal.

ASSISTANT EDITORS: *Chief Assistant Editor*, D. A. C. A. Boyne *Assistant Editor (News)*, K. J. Robinson *Assistant Editors (Buildings)*, L. F. R. Jones, A. P. Lambert *Assistant Editor (Information Sheets)* E. G. Johnson *Photographic Department*, E. R. H. Read, H. de Burgh Galwey *Editorial Secretary*, Betty E. Harris

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

9, 11 & 13 Queen Anne's Gate, Westminster, London, S.W.1 Whitehall 0611

Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription: single copies, 1s. 6d.; post free, 1s. 9d. 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; carriage 1s. extra.



PEEP SHOW

The seven arches underneath the approach to Waterloo Bridge on the Thames South Bank have been assigned to an exhibition of the CID's stock list for the 1951 Festival. This list, you may remember, was compiled at the request of the Festival authorities to enable them to have an illustrated index of well-designed contemporary products from which to skim the cream for the exhibition itself.

*

The CID plan to display somewhere between twenty and thirty thousand photographs and samples of which the latter, like the young person in the Song of Solomon, must be flat. The number, on the face of it, sounds appalling. At ten seconds an object it would take about fifty-five hours to get through the seven arches alone—quite apart from the rest of the South Bank exhibition.

Fairy godmother CID, however, does not intend leaving the poor visitor unaided in this mammoth inspection, for she is preparing a "new method of mechanical presentation which will present a general picture of the range and quality of British products to the public at large while enabling visitors with special interests to slow down the movement and examine a section in more detail." This sounds more exciting than all the mechanical peep shows on Brighton pier rolled into one. It has a fine Edwardian brave-new-century touch in the words "a new method of mechanical presentation," and smacks of a contrivance designed by Heath Robinson and drawn by Emmett. I intend procuring such a contraption for myself, of course, and adapting it for use at all building exhibitions and trade shows. It hasn't come a moment too soon.

THE FESTIVAL

To leave the CID preparing its bed beneath the arches and to return to the 1951 Festival proper, I hear that Mr. Jack Howe has been appointed co-ordinating designer for street decoration. This job apparently applies to any street anywhere in Great Britain, if the authorities feel in need of advice, as well as ensuring that the various decorations for airports, railways and towns do not clash too seriously.

*

While on the subject of the Festival, which is little more than twelve months ahead, I wonder if sufficient attention is being paid by local authorities to the full implication of the title Festival of Britain. Despite all the attention given recently to the South Bank site, this exhibition is only the starting point for an exhibition which includes the whole of Great Britain. The travel associations are going all out to bring over a record number of tourists, before whom

this country is going to be displayed. It would be just as well, therefore, if local authorities made the Festival an excuse for a little tidying up. I'm not referring only to the planting of bombed sites in city centres, but to clearing the rubbish out of village ponds, screening rubbish dumps and to making a real effort to avoid using the national colour scheme of cream and green when they brighten up their old town halls.

NEW MINISTERS

The appointment of R. R. Stokes as Minister of Works is the Ministerial change of most interest to architects. Mr. Stokes is a manufacturer and director of a go-ahead firm, who has made most of his Parliamentary reputation as a critic of inefficiency in design and production. He now has the chance to show what a brisk industrialist can do at MOW in 6 or 9 months. Most architects will hope that he will begin with licensing: telling us the principles on which it works and about the system of priorities, and whether something can be done to meet some of the most urgent unregarded needs—for instance, for some new office buildings in the long-suffering City. Then there is the low productivity of the industry, and the complex tangle of people now conducting research into new methods of construction and equipment. We can think of other things but these are enough to fill in the period before the next election.

*

Hugh Dalton's membership of the Cabinet is no doubt personal, and does not mean that MOTCP is now considered a post of added political consequence. One imagines that Mr. Attlee had quite a hunt to find someone who knew something about the subject but not so much as to lead to head-on clashes with Mr. Bevan; and

AVOID CORROSION



HOPE'S WINDOWS ARE HOT-DIP GALVANIZED

Send for Literature

HENRY HOPE & SONS LTD., SMETHWICK, BIRMINGHAM
OR 17 BERNERS STREET, LONDON, W.1.

that Mr. Dalton filled the bill. One also imagines that nothing much is expected to happen in town planning and that Mr. Dalton is to give some time to other things. That the 1947 Act is proving too cumbrous in administration seems likely to be tolerated until the next election; after all, it's another deterrent to capital investment. Architects may feel that this is very foolish, but it seems certain there will be no amending Act until one side or the other has a good working majority.

MR. SILKIN

Politics is a rough trade. Mr. Silkin has gone from MOTCP without, so far, any tributes or any tears. ASTRAGAL shall be the first to correct this injustice. Mr. Silkin put through a great reform and was almost certainly the only man in his party who understood both the fundamental principles of the 1947 Act and also the extremely complex questions which the Act raised in a dozen different fields. To have put through the Act almost single-handed will ensure Mr. Silkin a small pedestal in political history. But subscriptions probably will not flow in for at least a decade, when an amending Act has been passed, the machinery simplified and when some results can be seen in bricks and mortar, or whatever material is then in vogue.

COUNCIL MINUTES

I see in the LCC's minutes two items of interest. Firstly, that the LCC are considering acquiring the Crystal Palace site. If this means that steps will soon be taken to get the grounds cleaned up and put to some use I am all in favour. However, I do not feel so happy about going ahead with the buildings themselves. The designs of these, readers will remember, were the result of a competition in 1946, and were approved by the assessors mainly on the grounds of the site layout and planning. The elevations were to be slightly amended. They could certainly do with it, and I hope the LCC will soon publish the final version. Not, of course, that a nine million pound building is likely to be started for many a year yet.

The second item of good news is that the LCC propose reducing housing

ceiling heights from eight feet six inches to eight feet. This intelligent move has long been advocated by many architects. There should be a slight saving in costs if this is done. I hope this saving will be ploughed back as extra heat insulation and equipment. Nearly all the post-war houses need the former, at any rate, in spite of all the learned tracts from BRS.

THE IMPORTANCE OF BEING HENRY

Those who attended the talk by I. C. Perrott, the reporter, at the AA recently will remember him saying "There has been no town plan for London, however modest, which has not envisaged shifting Charing Cross Station to the other side of the river, and, as one the greater part of whose time in getting to the office is spent in queueing for the 68 bus at Waterloo, this prejudices me against them from the start!"

The latest advocate for this move is Tom Braddock, the late Socialist MP for Mitcham. He proposes using the existing station, forecourt and Hungerford Bridge as the main entrance and exhibition gallery for the South Bank exhibition. He is reported in the *Daily Telegraph* as supporting the suggestion for a year's postponement of the opening, made by the National Amenities Council, and is quoted as saying "... it is clear that the site will be too small. But what I am even more concerned about is the layout of the exhibition. It is all wrong. What I would do would be to close Charing Cross ..."

Here is a chap who Hugh Casson the Festival Architect, should have on his staff at once. Just out of a job too, unless his architectural practice has absorbed all his spare time following the end of his Parliamentary activities. Had you forgotten, gentle reader, that Mr. Braddock was an architect? Or did you recognize from the words I have quoted the voice of a brother practitioner? You should have done; these Architectural Jeremiahs always appear on the scene when any large scheme is under way and they *always* say: "It is all wrong. What I would do ..."

WINDOW-CONSCIOUS MANCHESTER

On a brief visit to Manchester recently,

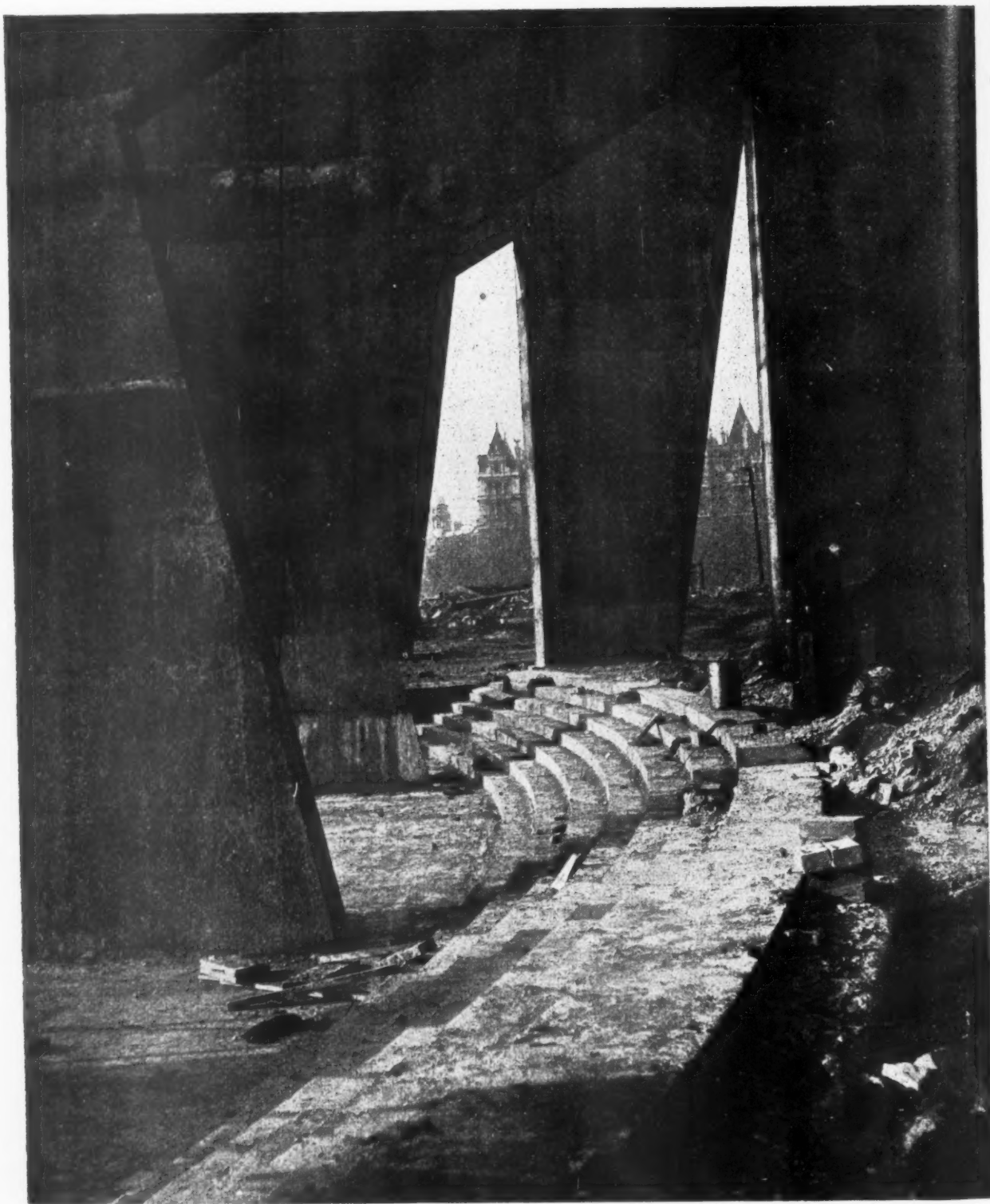


This chair by Finn Juhl, and the painting on the screen by a Danish artist, form a focus for the exhibition on Danish architecture at the RIBA. Mr. Juhl the exhibition's designer included this picture as it "expresses the architectural spirit in painting form." See page 303 for further illustrations of exhibits.

I came across two instances of the workings of popular taste which I hand on to students of the subject. The first was in the Didsbury district. Here some enterprising person has conceived the notion of *painting* glazing bars on the plate-glass windows of nineteenth-century houses; what is more, he has persuaded whole rows of twentieth-century householders that this is the thing. Stylistically, the more ambitious specimens of his art might be described as hesitating between Gothic and *Art Nouveau*.

The other fruit of my Manchester visit was gathered in a large store in the middle of the city, where I saw two customers choosing curtain material. They had with them a carefully coloured elevation of the street front of their house, against which they tried the effect of each pattern.

Of course, I already knew that in the North (especially) some people believe that curtains should be—how shall I put it?—extraverted. But I did not know that the problems resulting from this belief were approached in so scientific a spirit.



Dome of Discovery

This view through the main supports of the Dome of Discovery, which is being constructed to the design of Ralph Tubbs for the Festival of Britain Exhibition on the south bank of the Thames, shows the entrance steps. As will be seen on pages 299-302, the building will have three platforms. Each platform will display records of discoveries in a particular sphere. The subject shown on the

lowest platform will be the Sea, that on the centre will be the Living World, and that on the top, Inner and Outer Space. Discoveries relating to the Earth will be displayed in the centre area, at ground level, and details of accomplishments in the Polar Regions will be housed at the same level. Work on the roof will begin next month, and the building is due for completion by November.

OVER THE
There
to a co
the fun
reader.
which
still. Y
night a
author
suade
garden
baths a

I have
lished,
from m
than th
tion, C
ing ho
course
execut
During
leapt f
other v
tician.
pause
tects h
suade
taste,
all. (C
of th
colour
block
taking
Culpi
in the
house
creep
they
users

Com
of th
the ar
their
tages
whole
twelv
all th
cities
The
abroa
forgo
still c
to lo
local
shou
every
woul

OVER THE GARDEN FENCE

There are few things more invigorating to a columnist than a shrewd kick on the funny bone delivered by an outraged reader. I have received one this week which has left my pen-hand humming still. You may remember that a fortnight ago I queried the right of local authorities to do more than try to dissuade tenants from fencing in front gardens and from filling them with bird baths and tall shrubs.

I have now been shown a letter (published, I believe, elsewhere in this issue) from no less formidable an opponent than the architect for the estate in question, Clifford Culpin, who is designing housing layouts for Bridlington. Of course, as my readers will recall, I can execute a *volte face* as quick as anyone. During many years as a columnist I've leapt from one side of the fence to the other with the regularity of a tame politician. But, while halfway over I would pause to add that I maintain that architects have the right only to try to persuade tenants on questions of domestic taste, and no rights of compulsion at all. (This includes the vexed question of the discordant effect of multi-coloured curtains in the facades of blocks of flats.) I also maintain (I'm taking my time on this fence) that Mr. Culpin's suggestion to keep plants low in the narrow strip between path and house is unnecessary. Tall shrubs and creepers can be very attractive, even if they do shower cold dewdrops on to users of the path below.

Coming down at last on the other side of the fence I hasten to congratulate the architect and the local authority on their policy of treating the road frontages of a housing estate as an æsthetic whole. Far too many of our new twelve-houses-to-the-acre suburbs share all the disadvantages of the old garden cities and have none of the advantages. The communal front, so often praised abroad, and once practised in nearly forgotten places like Port Sunlight, is still one of the most attractive solutions to low density housing estates. If only local authorities would agree to shouldering the burden of maintenance everything in the front garden, at least, would be lovely.

ASTRAGAL

The Editors

SITING HOUSES IN COUNTRY DISTRICTS

AN extremely realistic and encouraging attitude has been adopted by the MOTCP in an advisory memorandum (HMSO, 3d.) on the building of isolated houses in country districts and on the extension of villages.

Until recently it has been a generally accepted Ministerial doctrine that rural housing should be confined to existing settlements, in order to prevent sprawling development, and to encourage the countryman to remain in the country by giving him the benefits of communal life in the form of main water, drainage, shops, buses and village halls. It was a too vigorous interpretation of these precepts which led to controversy over the village of Letcombe Bassett. As readers will remember, it was suggested by the local authorities that the condemned houses of this poorly serviced village should not be rebuilt, but that alternative accommodation should be provided in a larger village nearby. This was a sensible proposal in many respects. Unfortunately, however, the planner ignored the crux of the whole planning principle. He did not realise he was dealing with human beings.

That this dangerous mistake is easy to make has obviously been recognized by the MOTCP. The memorandum advises authorities to be very cautious in assuming that certain villages are unsuitable for expansion or even for survival. Such villages, the memorandum states, often make up in charm and local community sense what they lack in convenience. This understanding of the peculiarities of the average citizen will go far towards recovering the Ministry's popularity. Throughout the memorandum the attitude is reasonable. It allows the stockman to live near the farm, while recommending that the majority of farmworkers are better off in villages. It recognizes the right of the small holder to build a house on his land. And lastly, it allows a man to live in isolation, and, by implication, will ensure that he stays isolated, provided that, in so doing, he does not make unjustified demands on public utilities, that he does not take land from agriculture, or finally, disfigure the landscape. These principles, soundly applied, will shape well our countryside.

THE ARCHITECTS' SHARE

What proportion of the annual expenditure on building in Great Britain goes to the architectural profession and their staff? What is this sum of money, and among how many architects, assistants and draughtsmen is this sum divided? There are no official answers to these questions. Like so many factors vitally affecting the profession these questions have hardly been raised, far less answered, by the people responsible. The results of the RIBA questionnaire sent out last March by a committee considering the present and future of architectural practice are still unpublished a year later. The MOLNS Report, of last December, on the present and future supply and demand for architects, completely failed to come

to grips with reality, due largely, no doubt, to a lack of information about the architectural profession. Yet it is vital, if the status of the profession is to be improved, that questions concerning the architect, and his relationship with the economic structure of the country as a whole, be considered. It is not, surely, being unduly materialistic, to relate the number of architects required by the country with the amount the country can afford to pay them, or to endeavour to ensure that the conditions in which architects work are such as to give maximum efficiency. This is not to advocate a policy of "big business" methods, but only to ensure a fair return for the hard work and the long training which make up the architect's life. Good conditions for working are not inimical to the art of architecture.

The JOURNAL editors have been aware for a considerable time of the fog of ignorance of vital facts in which the leading bodies of the profession wander and stumble. The JOURNAL has repeatedly asked for further information in order to ensure the realization by the profession of its true status, of the prospects for its future, and of the chances of increasing its power and responsibility throughout the country. The position of the architect in private practice, in particular, remains obscure, and it forms a problem with which the editors of the JOURNAL are deeply concerned. Advised by Raglan Squire, our guest editor for 1950, and a member of the firm of Arcon, which is well known as a pioneer in practice methods, we propose to give approximate answers to these major questions. The total output, in millions of pounds, of the building and civil engineering work of Great Britain for the years 1946 to 1949, inclusive, averages at approximately £1,086,000,000. Of this considerable sum, the proportion which is handled by architects is difficult to assess. The figure lightly given before the war was 30 per cent. of the total, but it is frequently suggested that the percentage today is higher. There is good reason to doubt this optimism, and the MOW statistics show why. In an average year the amount spent on building factories, shops, houses, schools, hospitals and commercial and industrial premises is less than a third of the total, and these are the buildings with which architects are most concerned. Even these, however, are not invariably the work of an architect, so the assumption that the amount of work designed by an architect is only 30 per cent. of the total output is not unduly pessimistic.

This means that in an average post-war year the architects handle over £325,000,000. Of this figure, the architect claims a proportion as a fee. The 6 per cent. recommended by the RIBA is too high, when one allows for the special rates for housing work, and so on, but a more reasonable figure of 5 per cent. gives a total income to the architectural profession of £16,250,000. This is the sum poured every year into the profession to keep the offices going, and the architects, assistants and draughtsmen, the practitioners of a great art, alive. The full implication of this to those in private practice will be discussed further in subsequent issues.



C. E. Culpin, F.R.I.B.A.

R. H. Harvey, A.R.I.B.A.

Suburban Dictatorship

SIR.—As the architect for the Bessingby Estate at Bridlington I have derived a lot of amusement from the humorous comments in the daily and weekly popular press regarding the proposal to limit the heights of the flowers in the front gardens. I was appalled, however, to see Astragal following the ill-informed hacks who make a living by writing these comic little paragraphs in which accuracy is subordinated to sensationalism.

The forecourts of the houses on the Bessingby Estate are to be open "communal" spaces and the grass will be maintained by the Corporation. A small strip between the house and a path two or three feet away, may, however, be cultivated by the tenant, and it was my suggestion that, to avoid discordant notes, only low plants should be grown. The tenant's back garden, however, will be completely fenced in, and the gate between each house and its linking outbuilding will serve the very necessary purpose of keeping children off the roads. The tenant may, if he likes, fill his private domain completely with hollyhocks and sunflowers interspersed with gnomes, windmills and concrete bunnies.

The areas between the fronts of houses will remain the pleasant, carefully-designed open spaces they were planned to be. Surely this is the only satisfactory way to treat forecourts in a housing scheme. At any rate, unlike Astragal, I do not find the idea "monstrous."

CLIFFORD E. CULPIN

Bridlington.

Frank's Folly

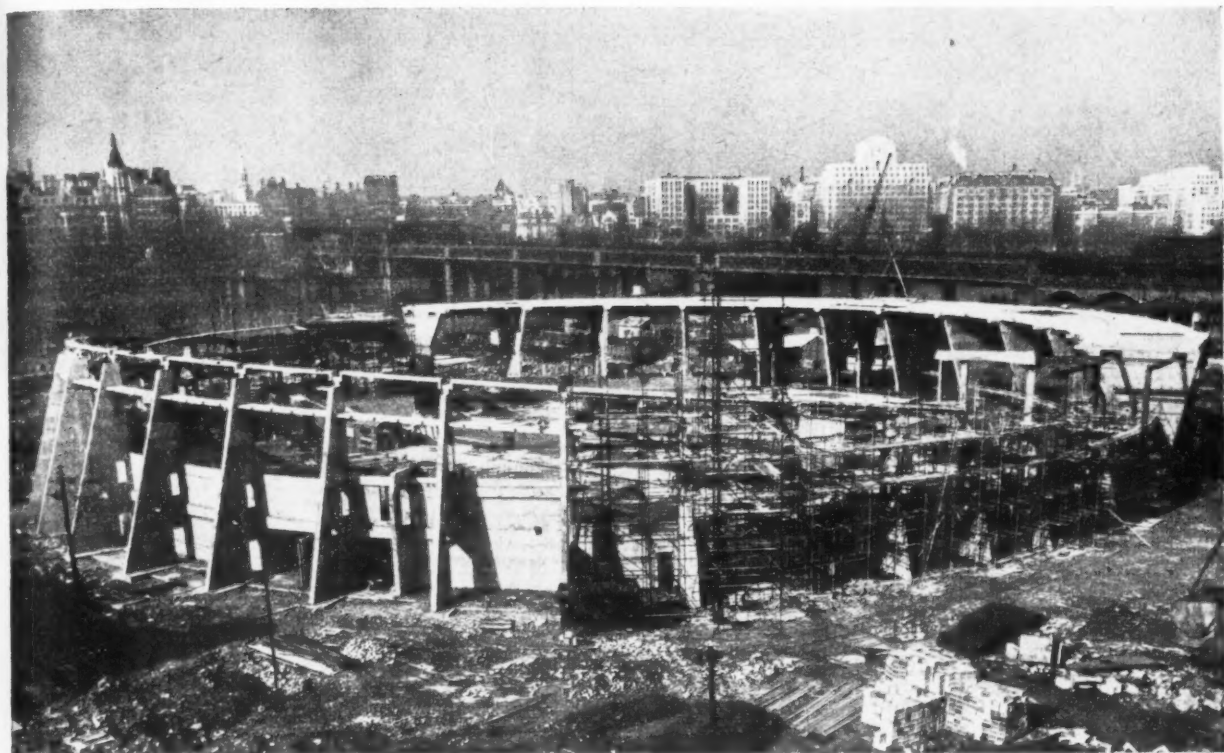
SIR.—Your correspondent, Mr. Russell, has been man enough to acknowledge that his remarks concerning the Morris shop were impetuous. I would like to suggest, however, that if, when he paused for reflection, he had paused a little longer he might have seen that it is not the problems Mr. Wright is asked to handle which are "removed from the sphere in which most architects have to work" but his solutions to them. The pity is that it is not only the solutions which are "removed" but the approach which leads to these solutions and more like them.

R. H. HARVEY.

Birmingham.

The EDITORS reserve the right to shorten letters from readers. Whenever possible, however, they are published in full.

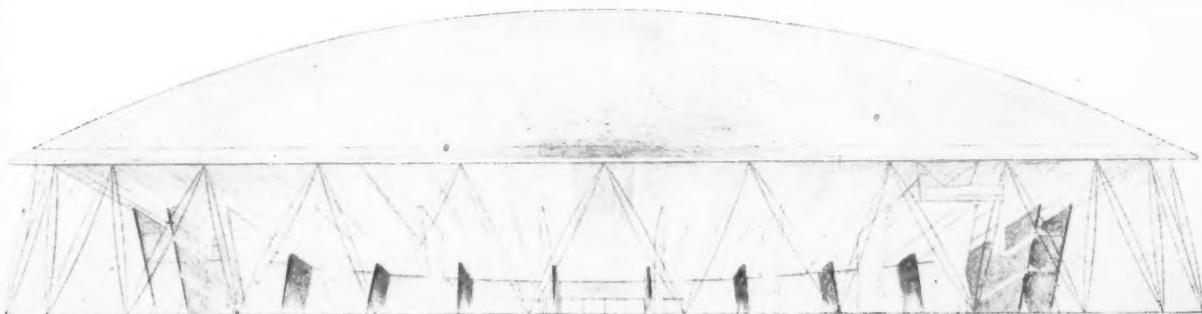
DETAILS OF DOME OF DISCOVERY FOR FESTIVAL OF BRITAIN



On this and the following pages we give details, some of which have not hitherto been published, of the Dome of Discovery, which has been designed by Ralph Tubbs for the Festival of Britain Exhibition. Above is a recent progress photograph of the building. Another photograph appears on page 296. Following are details of construction:—The dome (93 ft. high and 45 ft. to eaves) incorporates three platforms: the first, 12 ft. from the ground; the second, 22 ft. and the third, 35 ft. Concrete podium has gravel finish. Platforms are of hollow concrete blocks, supported on steel frames. Top platform is supported on concrete fins; lower two on stanchions. Top two platforms have balustrades of wire mesh; lowest has corrugated aluminium skirting. Ground floor has $1\frac{1}{2}$ -in. granolithic finish on concrete raft. Wall of drum, which is 260 ft. in diameter to base of struts, and has 365 ft. clear structural span, is of concrete up to

platform level, and of breeze above. Outer skin of drum wall, which has slope of 1 in 4, is of expanded metal, plastered. Ribs are great arches running in three directions, thus forming a completely triangulated pattern. Roof is of aluminium sheeting laid concentrically on aluminium trusses, 2 ft. 10 in. deep. Whole roof supported on 48 steel struts, each cigar-shaped and consisting of three 3-in. tubes. Struts, which are jointed at top and bottom, in sockets, to allow for 2 in. expansion and contraction variations, are fixed to steel ring which, in turn, supports roof. Overhang of the roof over the ring is 8 ft. 6 in. The skirt, which spaces between the drum wall and the steel ring, is of aluminium sheeting supported on aluminium radial girders. Staircases are either of concrete or of pressed steel. Rainwater is collected from pipes which run down inside of radial girders supporting skirting to central collector pipe which follows fall

North elevation

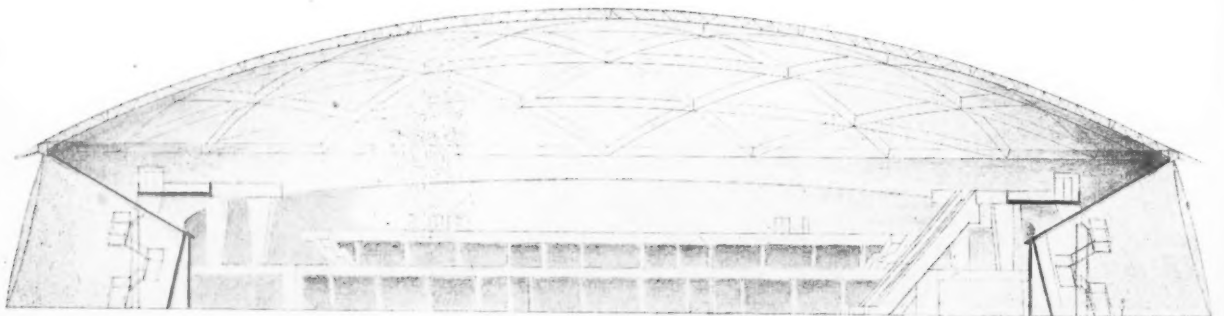


DETAILS OF DOME OF DISCOVERY FOR FESTIVAL OF BRITAIN



Ground floor plan

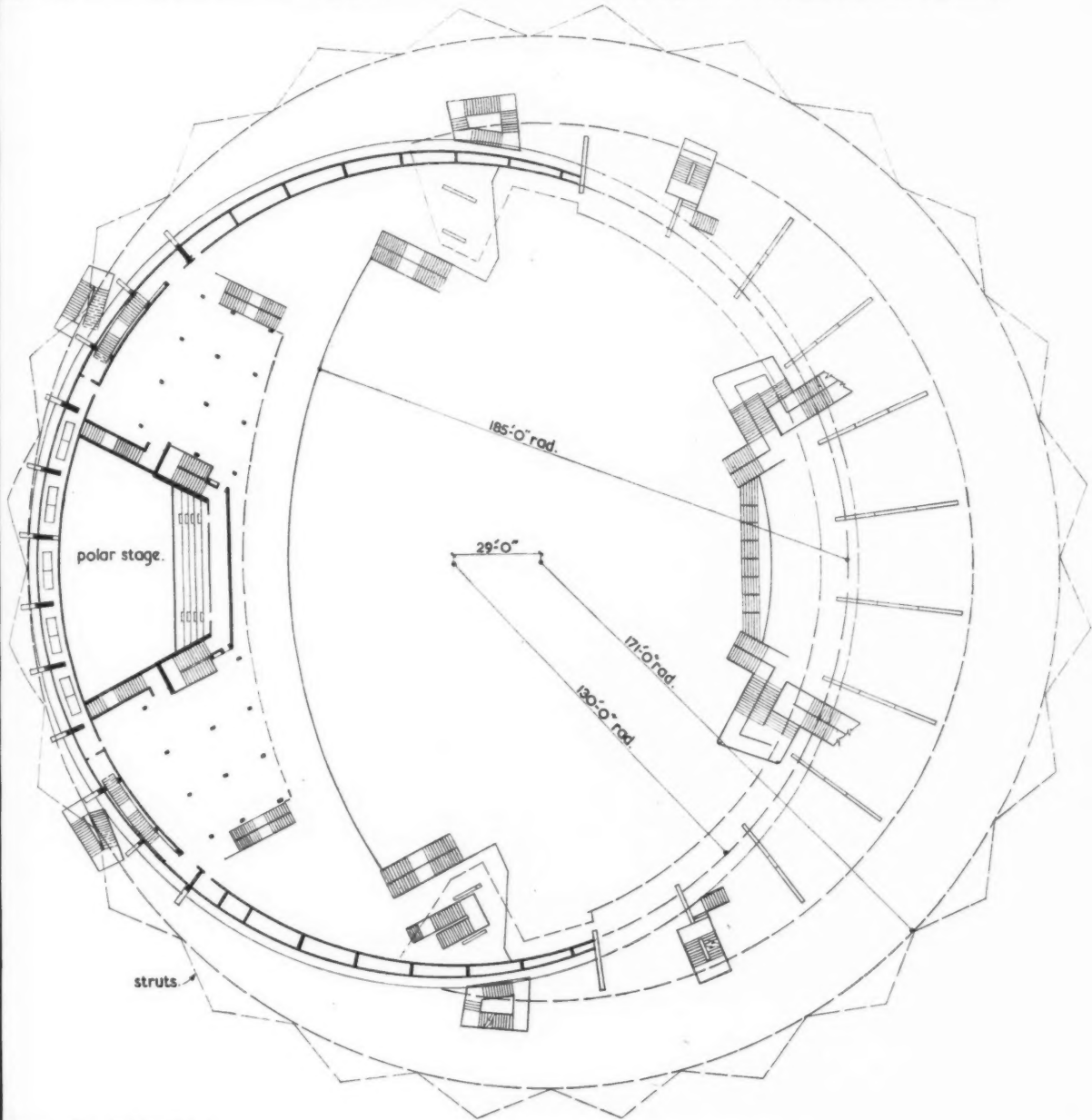
Section from north



AIN BY RALPH TUBBS

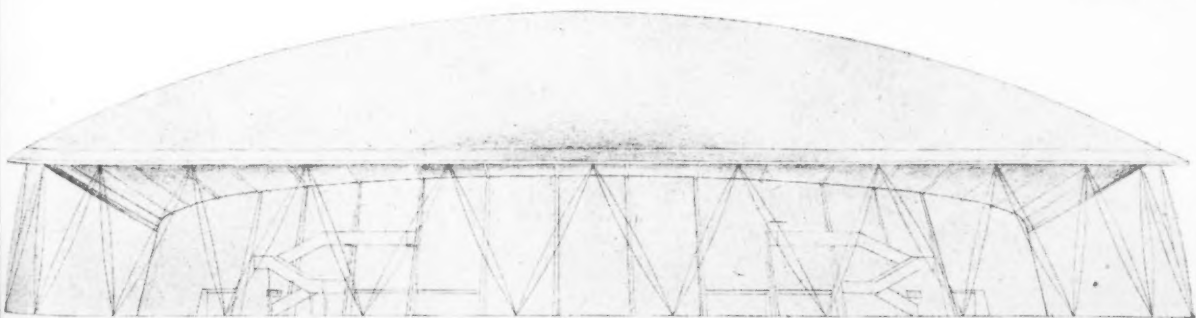
of drum wall and empties down two pipes which are placed on either side of main entrance. Lavatories are only part of building to receive direct outside lighting. Dome is entirely artificially ventilated, fan chambers being provided in highest

part of drum wall while outlets are fixed at top of skirting. General contractor : Richard Costain ; contractors for aluminium dome : Horseley Bridge & Thomas Pigott, Tipton, Staffs ; consulting engineers : Freeman Fox and Partners.

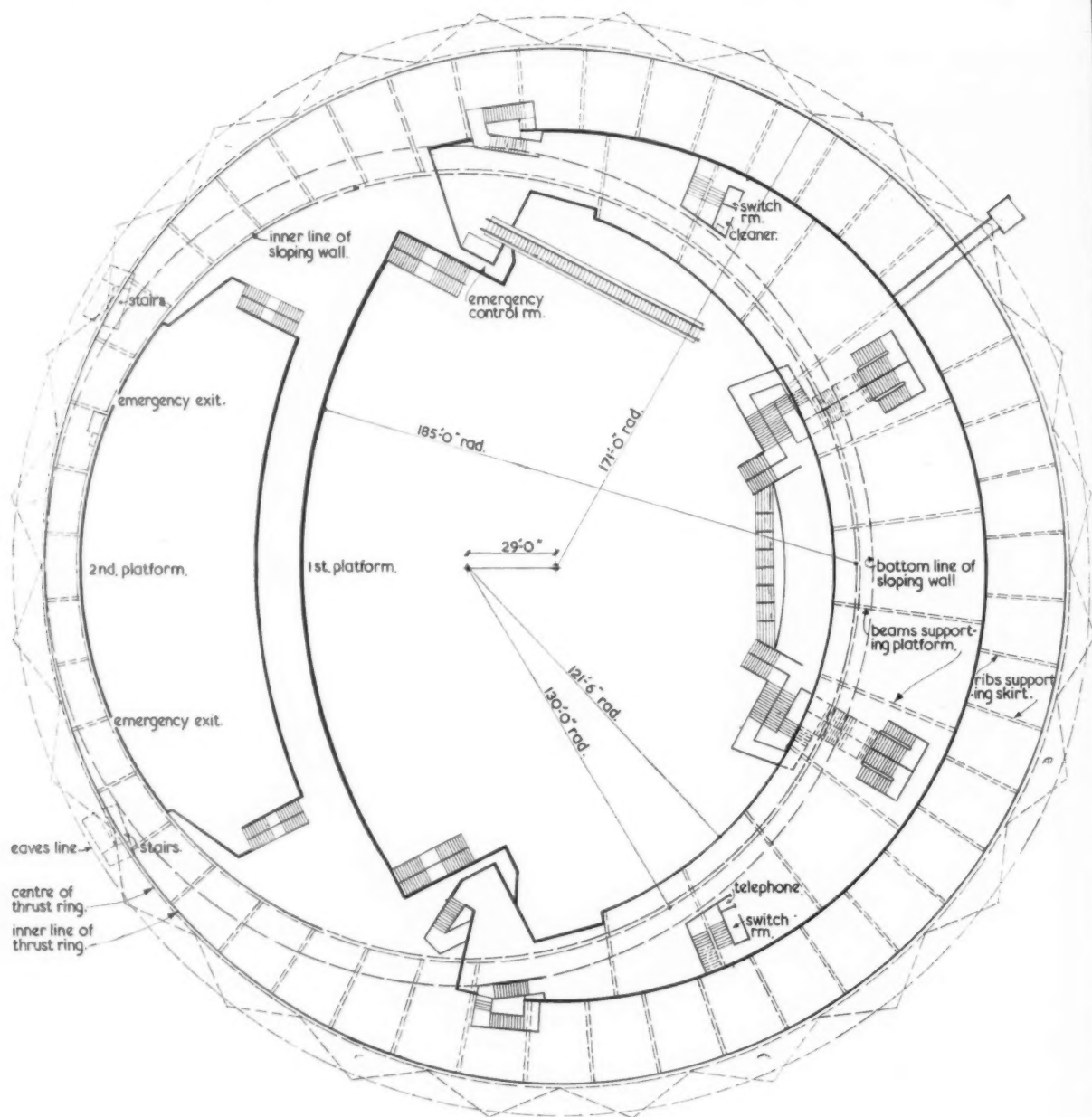


Plan at first platform level

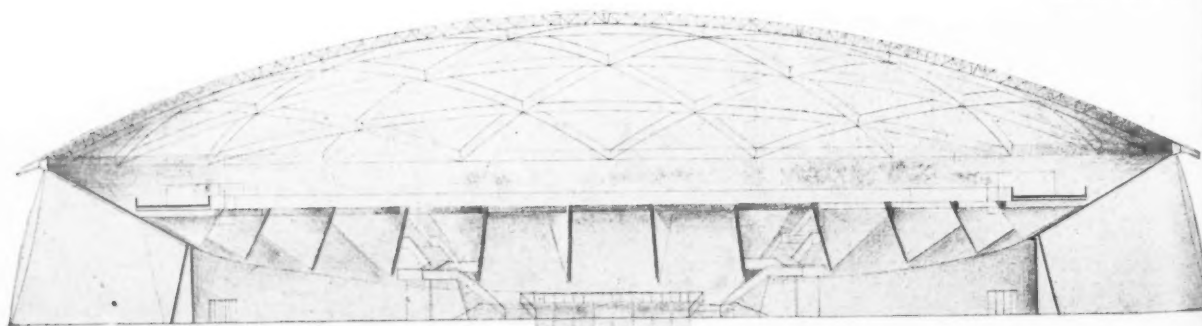
South elevation



DETAILS OF DOME OF DISCOVERY FOR FESTIVAL OF BRITAIN



Plan at dome base level



Section from south

CO
Me

The mission must be Institute students laying of N point of £1 aware design decision be o Nunc £1 1s of a docu

AB
Cr
Re

Like archi lished Natio Futu with Engi being of fa in a tract "T throw fessio of archi archi ques the urge the raisi peop "It are with men buile hom over "T rega adq train of a

RIBA EXHIBITION OF DANISH ARCHITECTURE



COMPETITION

Memorial at Nuneaton

The Borough of Nuneaton invites the submission of designs from competitors who must be professional members of the Institute of Landscape Architects, or student members of this Institute, for the laying out of gardens in the central area of Nuneaton. H. F. Clark has been appointed to advise as assessor. Premiums of £150, £75, £25 and two supplementary awards of £5 each for highly commended designs will be made in consequence of his decision. The conditions of the competition and all the necessary particulars may be obtained from T. Oldroyd, town clerk, Nuneaton, on payment of a deposit of £1 ls., which will be refunded on receipt of a *bona fide* design or on return of the documents.

ABT

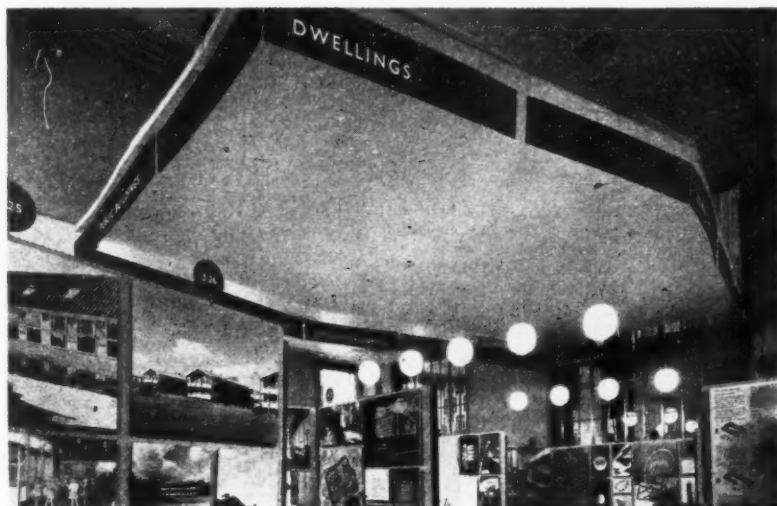
Criticism of MOLNS Reports

Like its predecessor, which dealt with the architectural profession, the recently published report of the Minister of Labour & National Service on the "Present and Future Supply and Demand for Persons with Professional Qualifications in Civil Engineering" must be strongly criticized as being inadequate both in its presentation of facts and in its conclusions, say the ABT in a press statement. Following is an extract from this statement:

"The stated aims of these reports is to throw light on the future demand for professional personnel in the various branches of science, engineering, surveying and architecture. Yet, like its predecessor on architecture, the report accepts without question the cuts in capital expenditure in the building programme and ignores the urgent necessity to modernize industry as the key to increasing productivity, thereby raising the standard of living of the British people.

"Its conclusion that the existing facilities are . . . adequate . . . can only be regarded with alarm, especially in view of the tremendous expansion in civil engineering and building which must take place not only at home but in the vast undeveloped areas overseas.

"The Association of Building Technicians regard the present facilities as wholly inadequate for producing sufficiently highly trained civil engineers to meet the needs of an expanding industry, with all the com-



Above is a general view of the exhibition of Danish architecture, designed by Finn Juhl, which is being held in the Henry Florence Hall at the RIBA until March 29. Left, model of a block of flats to be built at Bellahøj to designs by Eske Kristensen. Below, model of "chain-houses," by Arne Jacobson, which are in course of erection at Klampenborg. Bottom, model of scheme by same architect for central school to be built in village of Horby in Funen.



plex developments in technique and mechanization which are taking place. It is to be hoped, for the sake of our recovery and future national well-being, that the Government will pursue a man-power policy in civil engineering with greater vision than appears to have governed the preparation of this report."

The ABT have also issued a statement rejecting some conclusions reached in two latest documents in the series dealing with manpower and the professions, published by the MOLNS. These two deal with building and quantity surveying, and valuation and estate management. The conclusions referred to by the ABT are as follows: *Building Surveying*: "No additional facilities for training, beyond those now in existence, seem to be required." *Quantity surveying*: "It, therefore, recommends that no special steps are necessary to increase facilities for training quantity surveyors." *Valuation and estate management*: "... the normal group of training establishments can be relied upon to cope with the long-term increase."

The ABT, in rejecting these conclusions, state that "present facilities are hopelessly inadequate, and that it is vitally important for the efficiency of the building industry that better facilities for training be made available without delay. Evening schools are overcrowded and day schools are in an even worse plight. The College of Estate Management can take no further full-time students for quantity surveying and valuation courses until 1951. A very large proportion of students rely on correspondence courses; do the committee consider correspondence courses adequate training for the profession of surveying? These two documents, with their self-satisfied *laissez-faire* attitude, do no service to the profession of surveying. They show lack of knowledge of the facts and an appalling lack of vision. It is to be hoped, for the sake of present and future students, that the views of this Government Committee will be vigorously opposed."

HOLBORN

Housing guide for residents

As members of the Holborn Council believe that few people in the Borough realize the true position of housing, the Council have issued a leaflet to all households and to all applicants on their Housing Register. This leaflet explains all the housing problems that the borough has to face. Not only does it outline the steps taken to make the Ministry of Health aware of the need for increased accommodation in the area, but it gives details of the routine which a council has to go through before it can build. It is pointed out that there are now over one thousand applicants still on the borough's list and that, although business enterprises, which have long made Holborn famous, urgently need offices, the only offices built in the borough since the war are for occupation by Government Departments. Those who are not compelled to live in Central London are advised to seek accommodation in the LCC flats in Greater London.

OBITUARY

Joseph Peascod

Joseph Peascod, architect and surveyor, who died at his home, Southey-street, Kewick, on Thursday, February 23, was architect of the first Kewick Council houses. Mr. Peascod, a member of an old Cumberland family, was 68 years of age, and practised in London before returning to his native town in 1920.

DIARY

Exhibition of Danish Architecture of Today. RIBA, 66, Portland Place, W.1. Weekdays, 10 a.m. to 7 p.m. Saturdays, 10 a.m. to 5 p.m. UNTIL MAR. 29

Paris-London Exhibition. New trends in sculpture and painting represented by 16 young French and English Artists. New Burlington Galleries, Old Burlington Street, W.1. (Sponsor, ICA.) 10 a.m. - 6 p.m., daily. Tuesdays and Thursdays, 10 a.m. - 8 p.m. UNTIL APR. 4

Exhibition of Models and Perspectives of 1951 Exhibition Buildings. RIBA, 66, Portland Place, W.1. 10 a.m. to 7 p.m. Saturdays, 10 a.m. to 5 p.m. (Closed on Sundays.) MAR. 10-17

Ideal Home Exhibition. Olympia, London. 9.30 a.m. to 9.30 p.m. (Sundays, excepted.) UNTIL APR. 1

Housing in the USSR. Prof. J. D. Bernal, 13, Suffolk Street, S.W.1. (Sponsor, HC.) 1.15 p.m. MAR. 14

Talks on the County of London and Greater London Plans. BBC Third Programme. John Summerson: *The Nature of London* (Mar. 18). Peter Shephard: *What is wrong with London?* (Mar. 19). Arthur Ling, Gordon Stephenson and Peter Shephard: *The New London* (Mar. 28). Prof. Holford: *How will the Plans Work?* (Apr. 5).

MAR. 18, 19 and 29; APR. 5



This feature covers aspects of legislation, parliamentary news and statutory rules and regulations which are of special significance to the architectural profession.

ERNEST WATKINS

The Architect and Current Affairs

I NEVER quite believed that the National Parks and Access to the Countryside Act, 1949, was all that it pretended to be. The title, for instance—is it not too ugly, too deliberately contrived, to be entirely a matter of routine civil service phrasing? Is there not, even there, some hint that access to a fairy countryside is also implied, that at some moment, out of the interpretation clause or from the seventeenth schedule, a fairy godmother will appear? Laugh if you will, but how otherwise do you explain the happenings of the last two weeks?

Why did MOTCP choose the day before polling day to publish its circular to all county councils, calling on them to start their three-year investigation into each footpath, bridlepath, cart track and green road in England and Wales? Was it mere coincidence that on the following day hundreds of candidates—Liberals, Communists, and even a few Labour and Conservatives—would start back into the wilderness of lost causes from which they had but recently and spectacularly emerged? And was it a coincidence that within a week of that announcement who should descend on MOTCP itself but the hiking doctor, with the song in his heart, ready to shake off the dust of the Durham pitheads in the rather dimmed elegance of St. James's Square? I can believe a lot of coincidences, but not that many. I look forward to the day when Dr. Dalton stands on the pinnacles of Wells Cathedral and looks round the eastern horizons. Then, indeed, we shall hear about quarrying.

The provisions of the Access to the Countryside Act on this question of rights of way are so full of common sense that one can't really understand why we have had to wait so long for something of this kind. Their object is straightforward. This part of the Act makes very little difference to the legal rules over the creation of a right of way. Its intention is to record those rights of way that exist, or that come into existence, on the one plan in the charge of a public body. Further, there are various provisions to make certain that this map, the record, is reliable as well as comprehensive. If any owner or tenant of land claims that an alleged right of way no longer exists, or never existed, there is machinery by which his allegation can be thrashed out and settled and that by the local magistrates, not by another governmental committee. It may take three years to give us an accurate map of where we may walk without trespass, but when the job is done is should be done once and for all time.

The kind of practical difficulties that arise now are well illustrated by the case of *Lewis v. Roberts*, decided in the Court of Appeal at the end of last year. The dispute arose over a track connecting two parts of a main road. The owner of the land agreed that there was a right of way on foot over the track, but disputed that there was a right of way for agricultural vehicles and cattle. The point in the case turned on whether the use of the track for those purposes had been "interrupted" at any time during the preceding forty years (the time required in law to establish conclusively a right of way). The only evidence of interruption, so the County Court Judge found at the first hearing, was that, in 1942, a tenant had locked one of the gates across the track at night but had always unlocked it the following morning, and that the interruption had been no more than for the purpose of preventing the straying of cattle. The Court of Appeal held that interruption means interruption in fact, whatever the intention, but that the locking of a gate at night, plus its reopening in the morning, did not amount to an interruption in the use of the track. The case, incidentally, was decided under the Rights of Way Act, 1932.

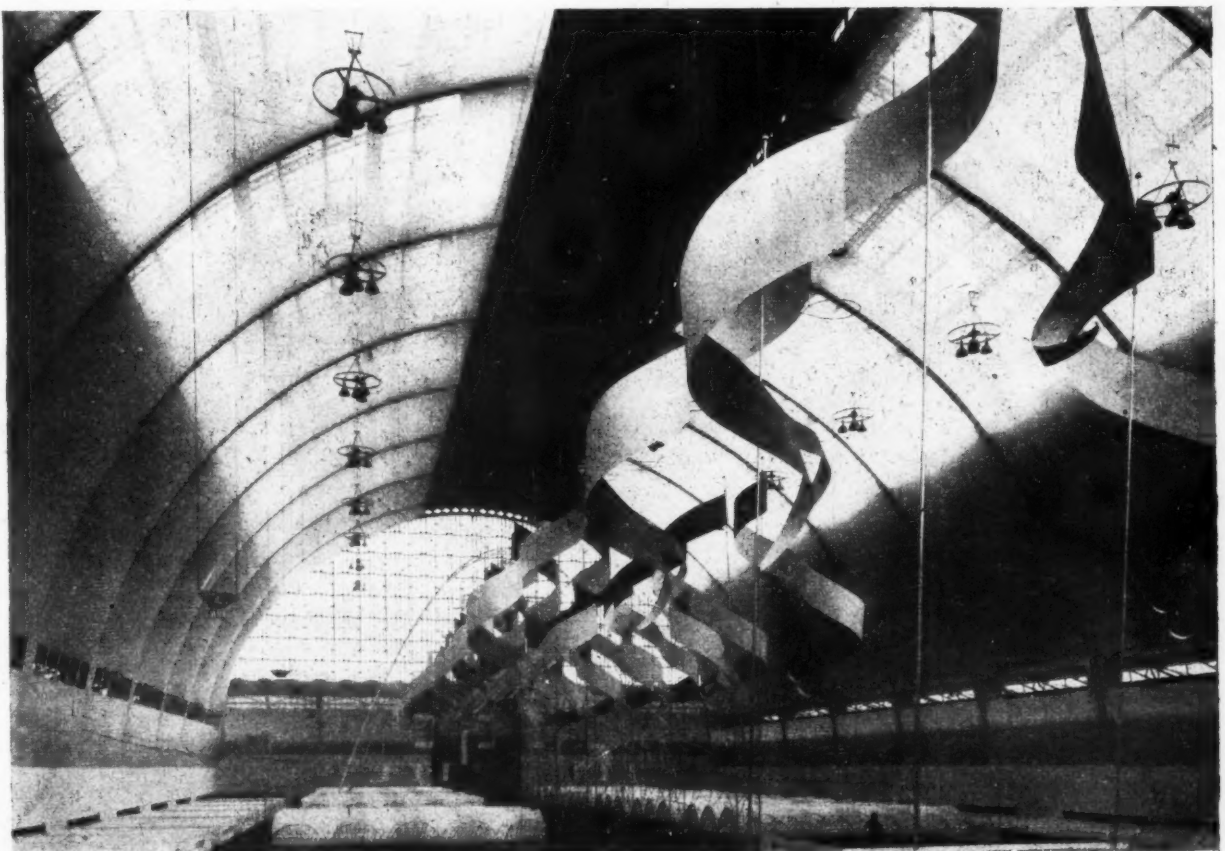
The decision, of course, is clearly in line with common sense, but one cannot help feeling that the real flaw in our law has been this absence of record of fact about rights of way. The 1949 Act does not prevent the owner of the land over which a declared right of way runs from closing the track and hoping that sufficient time will pass for his action, if unchallenged, to destroy the right of way in law. But it has two advantages. It gives the public information on what is a right of way and what is not. It also gives the landowner alternative means of applying for the closing of a right of way which is no longer used.

PRINCIPAL FEATURE

at the IDEAL HOME EXHIBITION

designed by SERGEI KADLEIGH

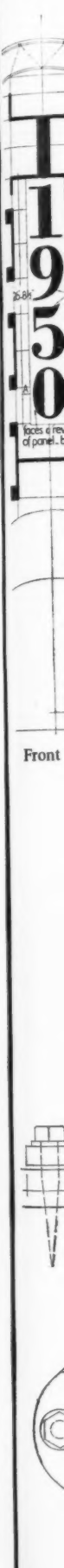
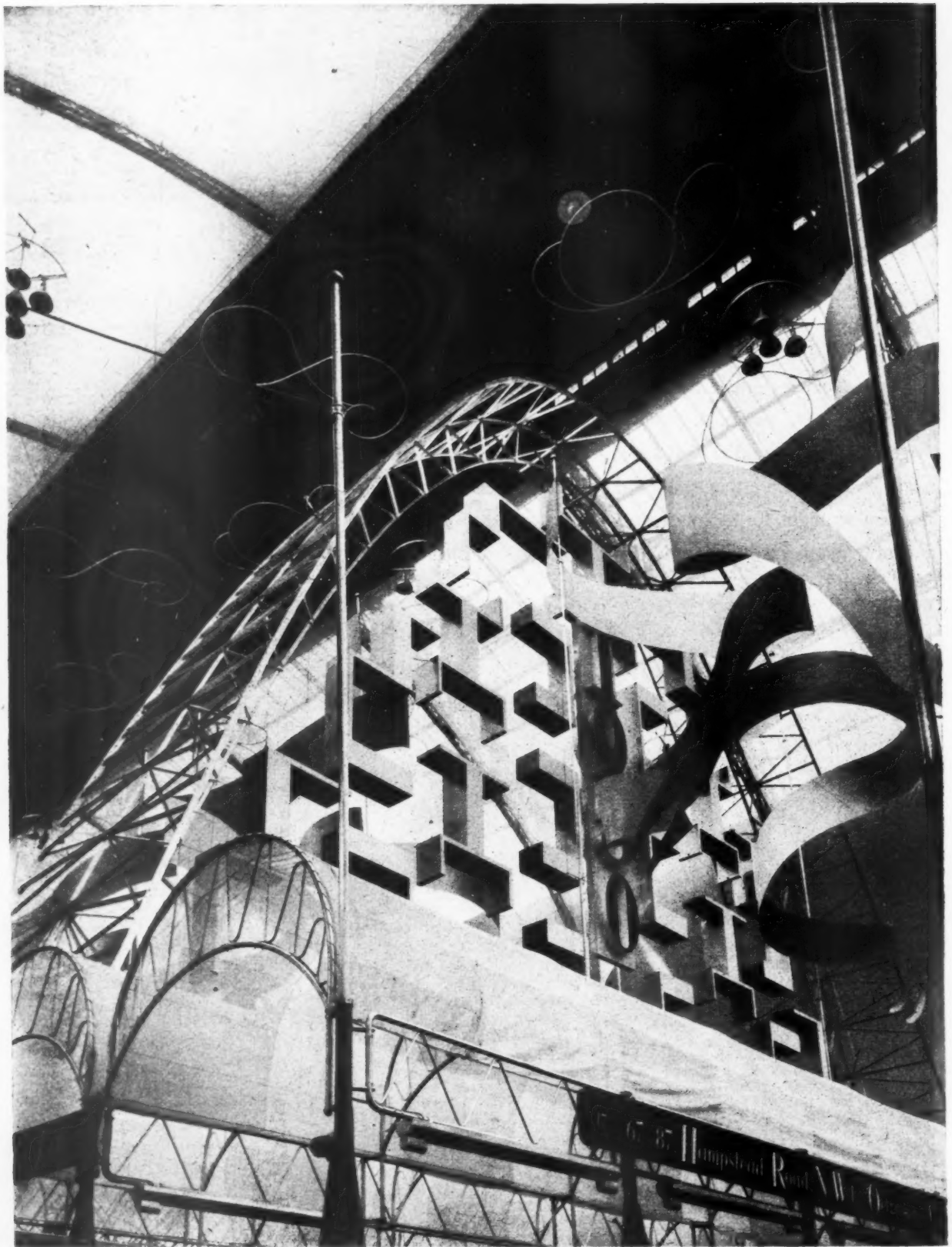
The principal feature in the Grand Hall at Olympia for the 1950 *Daily Mail* Ideal Home Exhibition consists of a tall parabola, standing 75 ft. from the floor to the crown, at the east end of the hall. A system of beams, arches and space frames for the construction of the stands forms a continuous roof over six stands on either side of the central aisle. The entire work is built in aluminium, used in all its semi-wrought forms as extrusions, drawn tubes, rolled sheets and also as castings. The whole assembly has been designed for rapid erection and dismantling.

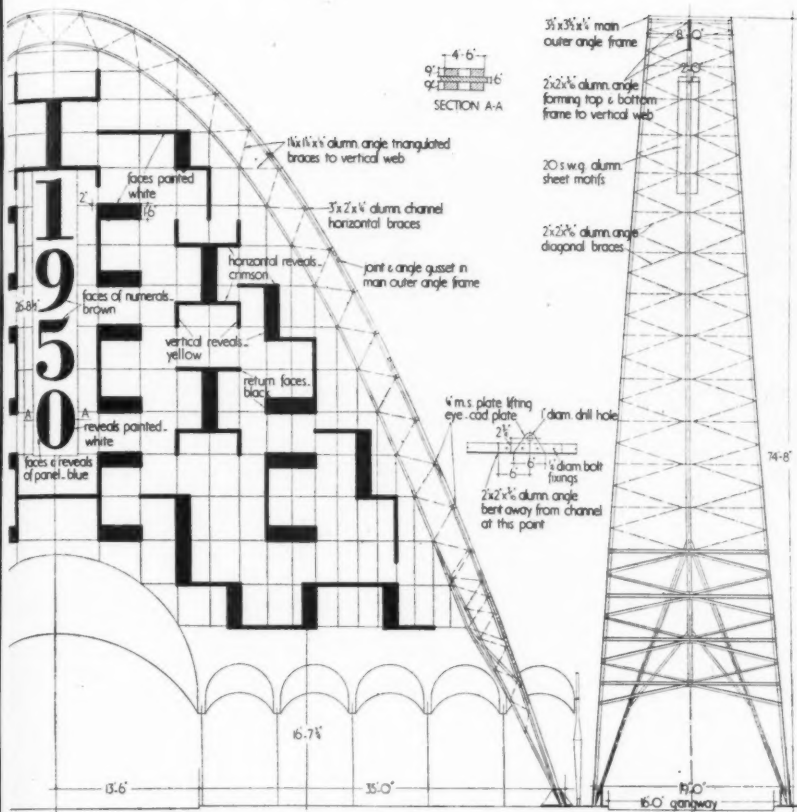


PRINCIPAL FEATURE

at the IDEAL HOME EXHIBITION
designed by SERGEI KADLEIGH

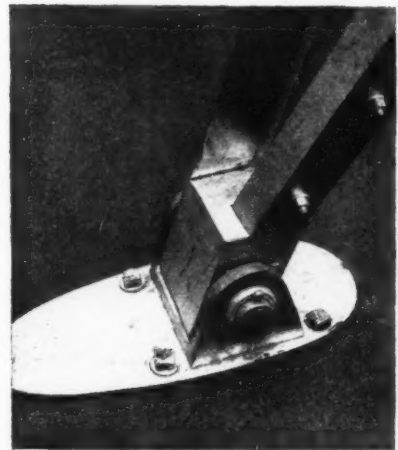
The 75-ft high parabola at the east end of the Grand Hall.



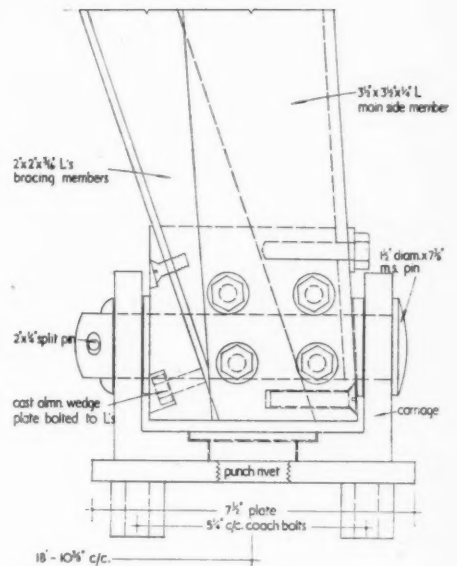
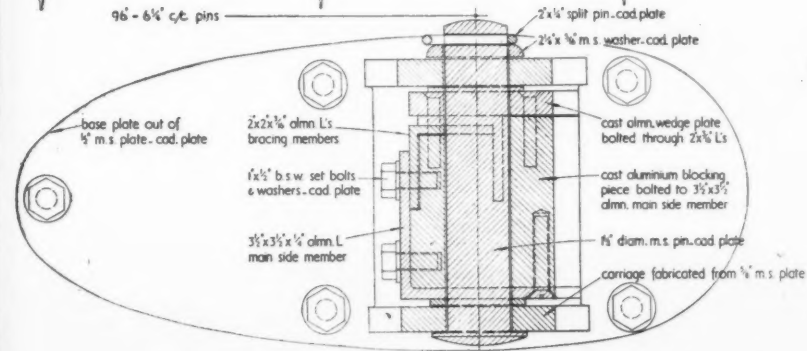
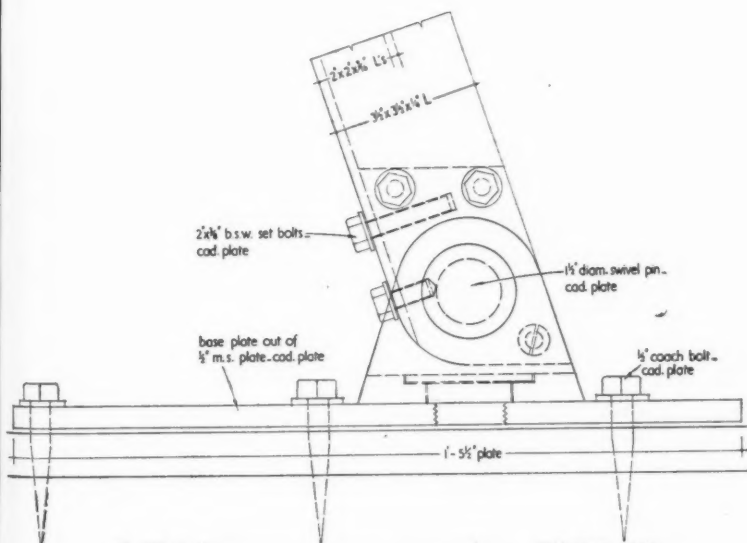


Front and side elevations of parabola

[Scale: 1/8" = 1' 0"]

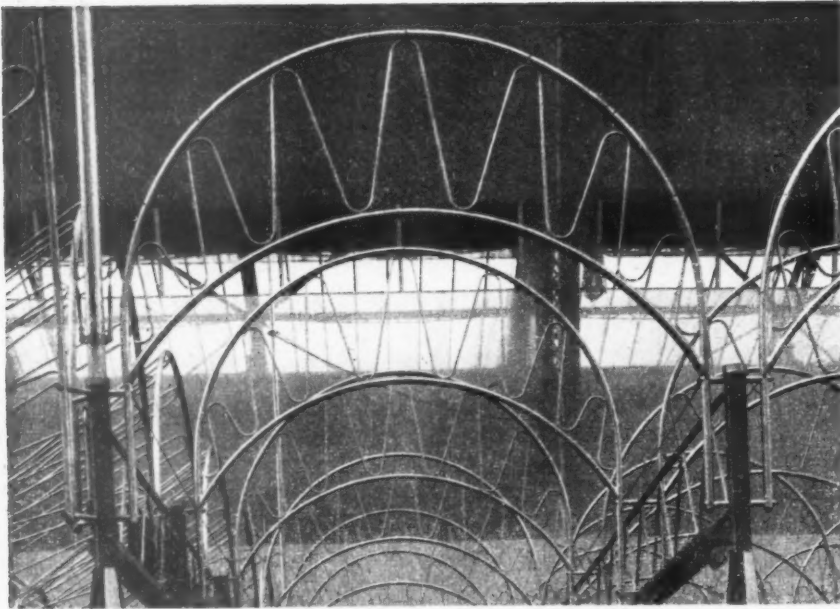


One of the four base plates to the 75-ft. parabola.



Plan and elevations of parabola base

[Scale: 3" = 1' 0"]

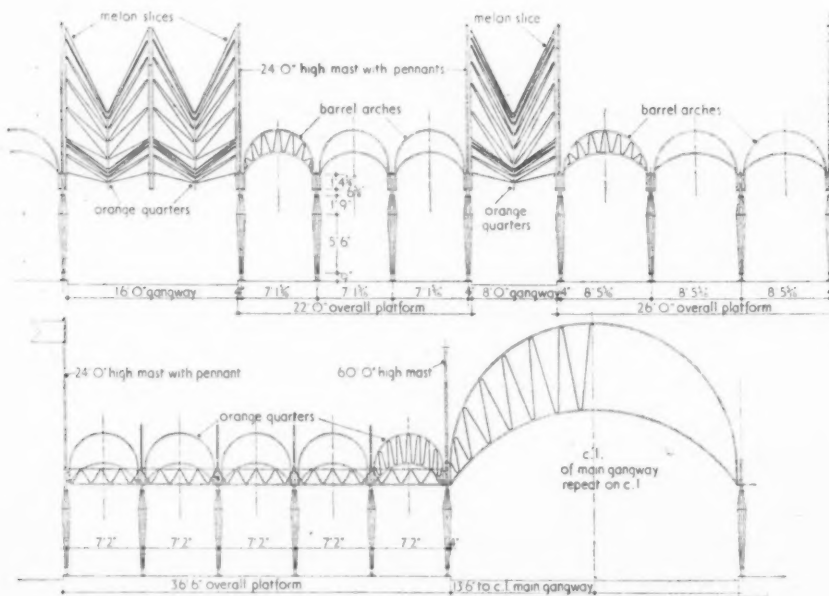
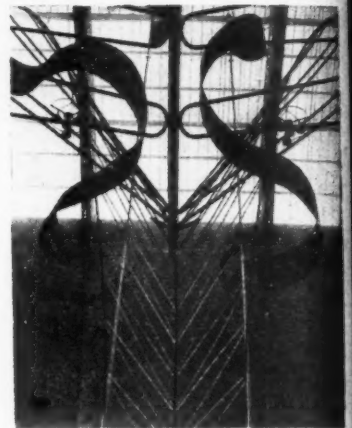


Left, the feature seen from the centre aisle, showing barrel arches and a melon slice on the left. Below, a melon slice with aluminium banners above.

PRINCIPAL FEATURE

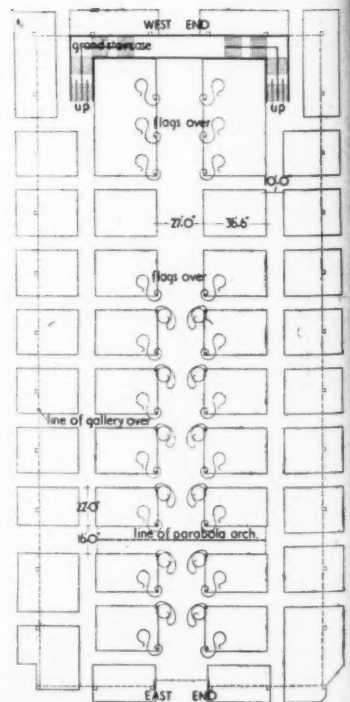
at the IDEAL HOME EXHIBITION
designed by SERGEI KADLEIGH

CONSTRUCTION.—Throughout the whole work low, medium and high strength aluminium alloys are used. Altogether 12 tons of aluminium in various alloys are used, including $8\frac{1}{2}$ miles of aluminium tube and 25,000 rivets. All the aluminium is stock material of which 50 per cent. can be used again in other constructions and the remainder as salvage. Full use has been made of the fact that aluminium can be easily obtained in all the forms required. The parabola is constructed of extruded aluminium sections in both solution-treated and fully heat-treated conditions. The crown of the



Elevations of stands

[Scale: $\frac{1}{4}$ " = 1'0"]



Plan of Grand Hall



COMPLETE STRUCTURES | PREFABRICATED LIGHT ALLOY

The Architects' Journal Library of Information Sheets 255. Editor: Cotterell Butler, A.R.I.B.A.

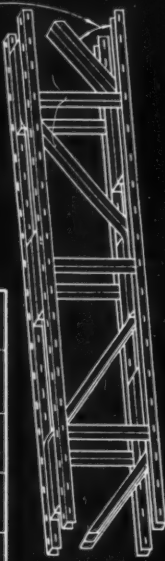
25.A6

25.A6

beam depth	basis of loading	safe loads in tons for effective spans in feet																								pitch of brace (see shear strength table on reverse)	
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28		29
25"	A	4.49	3.75	3.20	2.80	2.50	2.25	2.04	1.87	1.73	1.60	1.50	1.40	1.32	1.25	1.18	1.12	1.07	1.02	0.98	0.93	0.90	0.86	0.83	0.80	0.78	0.75
	B																							0.80	0.75	0.70	0.65
22"	A	3.93	3.26	2.80	2.46	2.19	1.96	1.78	1.63	1.51	1.40	1.31	1.22	1.15	1.09	1.03	0.98	0.93	0.89	0.85	0.82	0.79	0.75	0.72	0.70	0.67	0.65
	B																			0.85	0.78	0.72	0.66	0.62	0.57	0.54	0.50
19"	A	3.35	2.79	2.39	2.09	1.86	1.67	1.52	1.39	1.29	1.19	1.12	1.04	0.98	0.93	0.88	0.83	0.79	0.76	0.72	0.69	0.67	0.64	0.62	0.60	0.58	0.56
	B																0.83	0.75	0.68	0.62	0.57	0.53	0.49	0.45	0.42	0.39	0.37
16"	A	2.77	2.30	1.98	1.73	1.53	1.39	1.26	1.15	1.06	0.99	0.92	0.86	0.81	0.77	0.73	0.69	0.66	0.63	0.61	0.58	0.55					
	B														0.80	0.71	0.64	0.57	0.53	0.48	0.44	0.40	0.37				
13"	A	2.21	1.83	1.57	1.38	1.22	1.10	1.00	0.92	0.85	0.78	0.73	0.69	0.65	0.61	0.58	0.55	0.52	0.50	0.48	0.46	0.44					
	B												0.58	0.52	0.46	0.41	0.37	0.34	0.31	0.28	0.26	0.24					
10"	A	1.64	1.37	1.17	1.02	0.91	0.82	0.74	0.68	0.63	0.58	0.54															
	B							0.71	0.59	0.50	0.43	0.38															
7"	A	1.08	0.90	0.77	0.67	0.60	0.54	0.49	0.44	0.41	0.38	0.36															
	B				0.62	0.48	0.39	0.32	0.27	0.23	0.21	0.17															
4"	A	0.53	0.44	0.38	0.33	0.29	0.26	0.24	0.22	0.20	0.19	0.17															
	B	0.44	0.30	0.22	0.17	0.13	0.11	0.09	0.07	0.06	0.05	0.04															

A = loads based on maximum allowable extreme fibre stress

B = loads based on deflection not exceeding $\frac{1}{325}$ span




A = loads based on maximum allowable extreme fibre stress

B = loads based on deflection not exceeding $\frac{1}{325}$ span

pitch of brace (see shear strength table on reverse)

SIMPLE BEAMS: PUNCHED EXTRUSION.

beam depth	basis of loading	safe loads in tons for effective spans in feet																				pitch of brace (see shear strength table on reverse)					
		5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		25	26	27	28	29
25"	A	7.08	5.91	5.06	4.43	3.94	3.54	3.22	2.95	2.73	2.53	2.37	2.22	2.09	1.97	1.87	1.77	1.69	1.61	1.54	1.48	1.42	1.36	1.32	1.27	1.22	1.18
	B																							1.31	1.22	1.14	1.06
22"	A	6.21	5.17	4.44	3.88	3.45	3.10	2.82	2.58	2.39	2.22	2.08	1.94	1.83	1.73	1.64	1.53	1.48	1.41	1.35	1.29	1.24	1.19	1.15	1.11	1.07	1.03
	B																				1.28	1.18	1.08	1.01	0.94	0.88	0.81
19"	A	5.32	4.43	3.80	3.33	2.96	2.65	2.42	2.21	2.05	1.90	1.78	1.67	1.57	1.48	1.41	1.33	1.27	1.21	1.15	1.11	1.07	1.02	0.99	0.95	0.91	0.88
	B																	1.24	1.12	1.03	0.94	0.87	0.80	0.75	0.70	0.65	0.61
16"	A	4.45	3.72	3.18	2.78	2.47	2.22	2.01	1.85	1.72	1.59	1.49	1.39	1.31	1.24	1.17	1.11	1.06	1.01	0.96	0.93	0.89					
	B														1.19	1.07	0.96	0.87	0.79	0.73	0.67	0.62					
13"	A	3.57	2.98	2.55	2.23	1.99	1.78	1.62	1.49	1.37	1.27	1.19	1.12	1.05	0.99	0.94	0.89	0.85	0.81	0.77	0.74	0.71					
	B												1.27	1.13	0.97	0.87	0.77	0.69	0.62	0.57	0.52	0.47	0.43	0.40			
10"	A	2.71	2.26	1.93	1.69	1.51	1.35	1.23	1.13	1.04	0.97	0.91															
	B							1.21	1.01	0.86	0.74	0.65															
7"	A	1.83	1.52	1.31	1.14	1.02	0.91	0.83	0.76	0.70	0.65	0.61															
	B				1.07	0.85	0.69	0.57	0.48	0.41	0.35	0.32															
4"	A	0.96	0.80	0.68	0.60	0.53	0.48	0.43	0.40	0.37	0.34	0.32															
	B	0.83	0.58	0.42	0.32	0.25	0.21	0.17	0.14	0.12	0.11	0.09															



A = loads based on maximum allowable extreme fibre stress

B = loads based on deflection not exceeding $\frac{1}{325}$ span

A = loads based on maximum allowable extreme fibre stress

B = loads based on deflection not exceeding $\frac{1}{325}$ span

pitch of brace (see shear strength table on reverse)

SIMPLE BEAMS: SIDE PUNCHED FOR BRACINGS ONLY.

25.A6 · KEYLOCK · SYSTEM OF CONSTRUCTION : SIMPLE BEAMS : SAFE DISTRIBUTED LOADS

This Sheet is the sixth of a group describing the Keylock system of connecting standing structural elements to form a flexible range of building components. The tables on the face of this Sheet give the safe uniformly distributed loads for beams built up from standard elements.

Beams made from fully punched extrusion are used where connections to adjacent parts of a structure or fixings for floors and ceilings may be required at any point.

Beams made from extrusion which has been side punched for the fixing of bracings only are naturally stronger.

The tables below give the properties of the beam sections and the shear strength of various lattice systems.

Loading

The tables have been compiled for loads applied at each bracing point which have been considered sufficiently close together to assume that the load is uniformly distributed. The loads given in the tables are the total loads on the spans. Adjustment for other standard forms of loading can be made in the following manner:

Loading at $\frac{1}{4}$ and $\frac{3}{4}$ points = $\frac{3}{4}$ load shown in table.

Loading at centre point = $\frac{1}{2}$ load shown in table.

Bending Strength

The following table gives the moments of inertia and section moduli of the various sections to facilitate independent design. In the case of the beams side punched only, for fixing bracings the moment of resistance may be based on an extreme fibre stress of 13,500 lb./sq. in. In the case of the fully punched extrusion the stress should be limited to 11,200 lb./sq. in.

Properties of the sections are given in inch units.

Depth of section (In.)	Side punched only		Fully punched	
	I _{xx}	Min. Z _{xx}	I _{xx}	Z _{xx}
4	2.9	1.35	1.51	0.93
7	9.4	2.42	5.6	1.78
10	19.9	3.53	12.2	2.64
13	34.3	4.63	21.4	3.49
16	52.5	5.73	33.2	4.35
19	74.6	6.83	47.5	5.22
22	100.5	7.93	64.5	6.07
25	130.4	9.05	84.0	6.92

Shear Strength

The shear strength of the sections depend on the spacing and angle of the bracings. The following table gives maximum values of total shear in tons for standard systems with two channel diagonal and vertical bracings as shown in sketches on tables.

Pitch of brace	Max. shear force in tons
30°	1.278
37½°	1.346
45°	1.566

Weight of Beams

The weight per foot run naturally depends upon the system of bracing used.

The following are average weights for the 25 in. deep beam (the heaviest of those given in the table) which will facilitate estimation of weight of beams if required.

Fully punched, 2.33 lb./ft. run.

Side punched, 2.48 lb./ft. run.

This Series of Sheets covers the principles of the system, details of the locking system adopted, typical examples of structural and cladding details for domestic and similar single- and double-storey buildings, large-span single-storey buildings, such as warehouses and assembly halls, and loading tests on typical structural assemblies.

Compiled from information supplied by :

Packaged Buildings (Robert Building Inventions Limited).

Head Office : Indio House, Bovey Tracey, South Devon.

Telephone : Bovey Tracey 2261.

Registered Office : 63-65, Piccadilly, W.1.

Telephone : Regent 6580.

Copyright Reserved.

The Architects' Journal Library of Information Sheets.

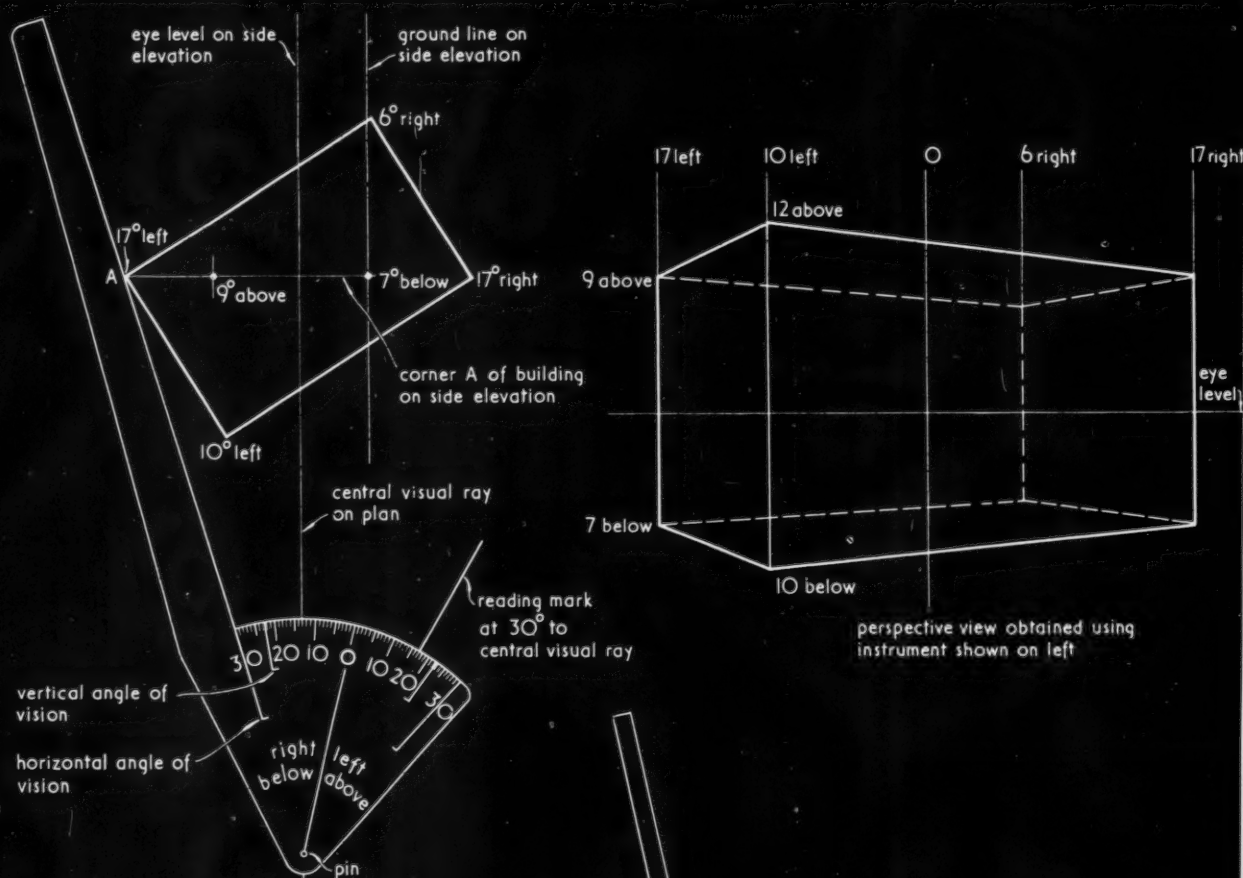
Editor : Cotterell Butler, A.R.I.B.A.

DRAUGHTSMANSHIP | PERSPECTIVE

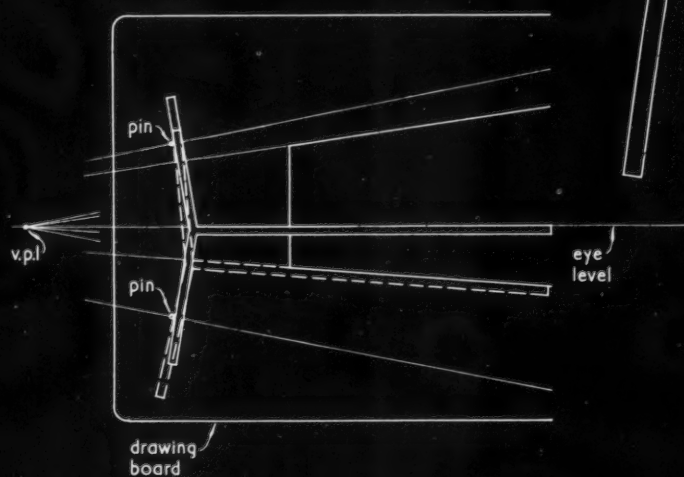
IB.41

18.41

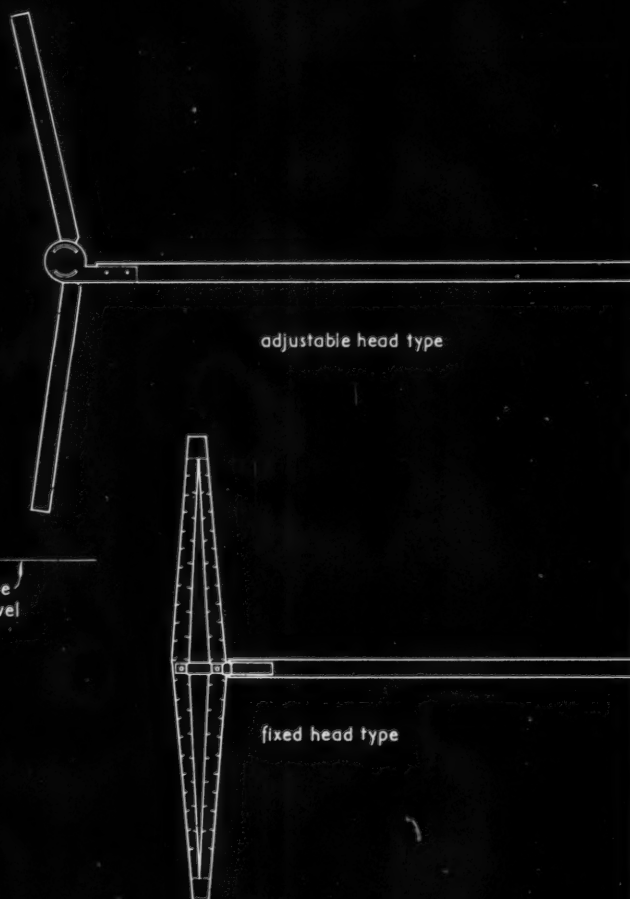
The Architects' Journal Library of Information Sheets 256. Editor: Cotterell Butler, A.R.I.B.A.



SIMPLE INSTRUMENT.



CENTROLINE HEADS.



INSTRUMENTS FOR SETTING UP PERSPECTIVES WITHOUT USING VANISHING POINTS.

Compiled by Leslie A. Lee, L.I.O.B., and H.N. Hoskings, A.R.I.B.A., for Eagle Pencil Company—Chemi-Sealed Turquoise pencils.

1B.41 PERSPECTIVE DRAWING : INSTRUMENTS FOR SETTING UP PERSPECTIVES WITHOUT USING VANISHING POINTS

This Sheet, one of the series on draughtsmanship, describes three instruments for setting up perspective drawings without using vanishing points.

Simple Instrument

The instrument illustrated at the top of the Sheet may be easily made from a piece of thin card or perspex. It consists of a long edge in alignment with a hole through which a pin may be inserted in the drawing board. To one side of this line are divisions marked off in degrees reading from 0 in the centre to 30 on each side, thus the complete angle gives the maximum horizontal angle of vision. Marks may be also made at $22\frac{1}{2}^\circ$ which will give the maximum vertical angle of vision.

Method of use: The eye position is chosen in relation to plan, the central visual ray is drawn and a line at 30° to it is drawn from the eye position on which readings on the protractor may be taken. A pin is placed through the hole in the instrument into the eye position so that if the long edge is on the central visual ray the reading on the protractor against the 30° line is zero. The horizontal location of a point is found by lining the long edge on to it and reading the angle of deviation of it to the left or right of the central visual ray. The plotting of the perspective may be carried out on a different board as no projection is necessary from the plan. The eye level line is drawn and the central visual point is marked with a vertical line through it. Using any suitable scale depending on the size of perspective required the reading from the protractor is plotted to the left or right of the central visual point and a vertical line is drawn through it.

The height of the point is found in a similar way to that described in method 3 on Sheet 1.B40. Considering the plan drawing as a side elevation the eye position remains the same and the central visual ray becomes the eye level line below which the ground line is drawn at the required height. From the chosen point on plan a line is drawn perpendicularly across the eye level line and ground line and the height of the point above the ground is marked up from the ground line on the perpendicular just drawn. The blade of the instrument is set on this point and the reading on the protractor gives the vertical deviation of it above or below the eye level line. This reading is then plotted on the perspective to the chosen scale to cut the line already drawn giving the perspective position of the point. Each point of the perspective is plotted in a similar way and by joining relevant points the perspective is set up.

To save scaling off readings on the perspective drawing this could be set up on tracing paper pinned over a sheet of graph paper and the readings plotted direct, using the graph paper as a scale to locate the position of the points. The advantages of this method are that the original plan of the building at whatever scale it is drawn may be used to obtain the readings, thus eliminating the necessity for setting up special views. Construction lines on the finished perspective

drawing are almost entirely eliminated, and the perspective drawing may be made to whatever size is desired merely by the choice of a suitable scale.

Centrolineads

Various types of this instrument are manufactured but they are basically composed of an instrument resembling a tee square the base of which has two arms slightly inclined to the vertical. The principle of use is, by keeping the two inclined arms in contact with two pins in the board whilst moving the instrument up and down, the long arm will always line through with a single point. The centrolinead and the pins are set up in such a way that this point coincides with the vanishing point. This principle allows for the centrolinead to be set up to one side of the drawing board although the vanishing point may be some distance off it.

The positions of the vanishing points have to be found by drawing the outline of the plan and related eye position and picture plane to such a scale that the vanishing points will fall on the board so that their distance from the central visual ray may be scaled off.

Adjustable head type: The centrolinead with an adjustable head can only be set up after calculations are made to find the position of the pins for a given vanishing point. This type of instrument may be used on only one vanishing point at a time as adjustment is necessary to the movable arms in resetting it for use on another vanishing point.

Fixed head type: The inclined arms of this instrument are marked off as scales each reading from zero at the centre. It is set up on the side of the drawing board clear of the drawing required with the long arm in line with the eye level line. If pins are placed against the readings x inches, then the centrolinead when moved up and down against them would always be in line with the vanishing point x inches away from the instrument.

The advantages of this type are that no calculations are involved in finding the position of the pins, the arms are fixed and cannot be accidentally knocked out of position and that the instrument may be used for vanishing points on either side of the perspective, without moving it from one side of the board to the other, merely by working the inclined arms on another set of pins.

This Series of Sheets covers geometrical drawing, orthographic, isometric and axonometric projections, perspective, rendering, lettering and draughtsmanship generally.

Compiled from information supplied by :
Eagle Pencil Company.

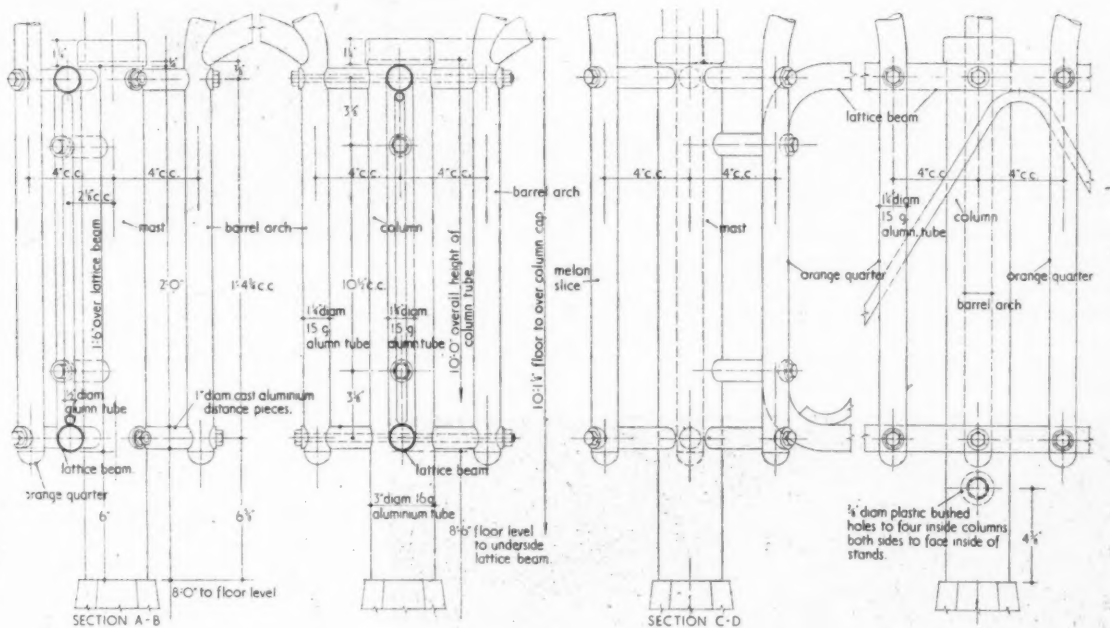
Address : Ashley Road, Tottenham, London, N.17.
Telephone : Tottenham 4435-6-7.
Telegrams : Octennial, London.

parabola will withstand a load of 4 tons provided this is applied at the two lattice junctions adjacent to and on both sides of the centre line, that is 1 ton on each of four junctions. As an alternative to this applied load, the construction is capable of sustaining a 1 ton load suspended from each of the lattice junctions totalling 29 points in all. Either of these alternative loads can be taken independently of the interior tensile steel wire lattice strainers and exterior cables. Within the parabola are painted sheet aluminium motifs hung on lengths of high tensile steel cable, each of which possesses a breaking stress of half a ton. The motifs are made up in 20-gauge aluminium sheet, pop-riveted to light skeleton aluminium construction. The pop-riveting method employed is similar to that used in aircraft construction.

The roofs of the stands are supported on 3-in. diameter aluminium tubes built up to form tapered hexagonal columns, sheathed in painted aluminium sheet. The hexagonal columns are fitted with cast aluminium bases and throughout the general construction cast aluminium is used for mast cappings, distance pieces and special washers. The arches and stalls are fitted into position by steel bolts and are interlocking.

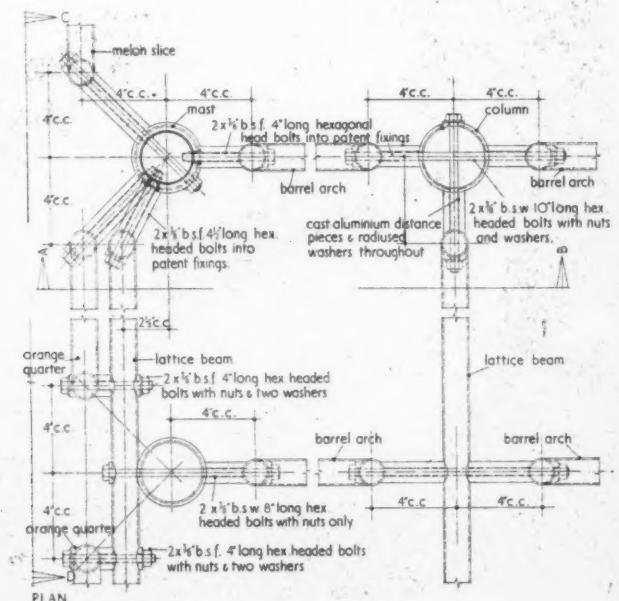
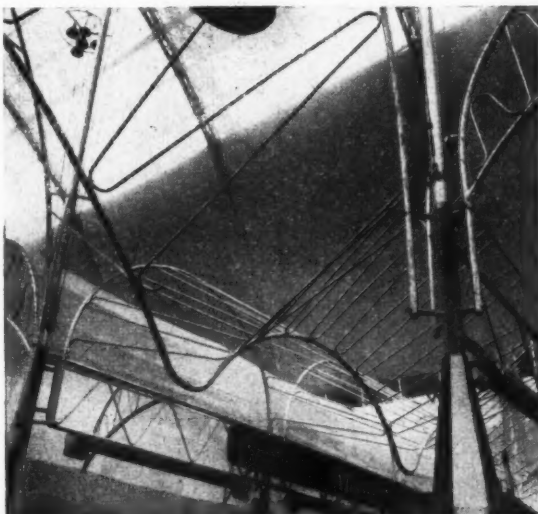
FINISHES.—The flowing banners are constructed from 24-gauge aluminium sheets, 60 ft. long and 4 ft. wide, painted vermilion and white. The parabola motifs are painted crimson, yellow, black and white and the hexagonal columns are also black and white.

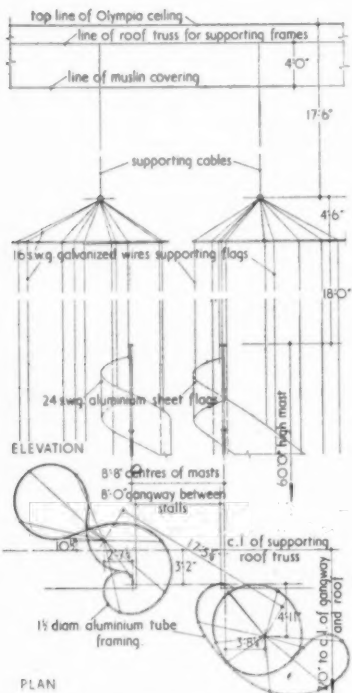
The general contractors were Olympia, Ltd. For list of sub-contractors see page 322.



Details of mast and stand joints

A melon slice linking two 60-ft. high masts.





Plans and elevations of banner supports
[Scale: 1/8" = 1'-0"]

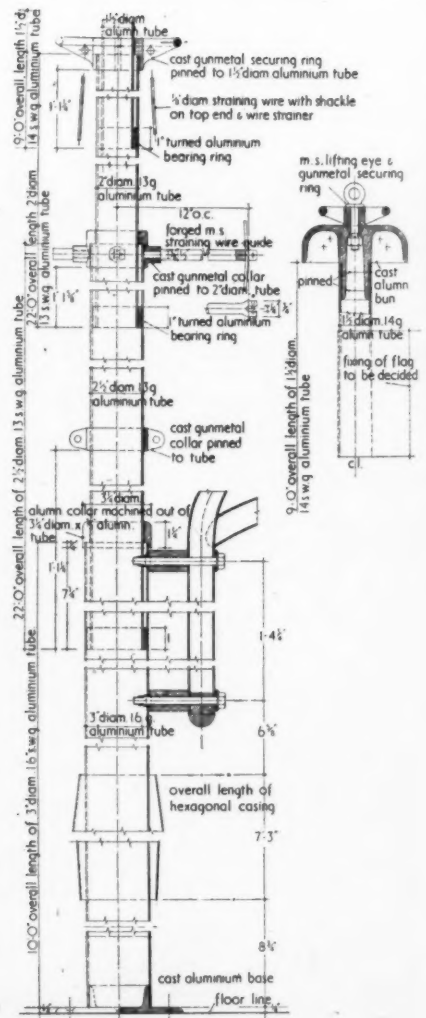
PRINCIPAL FEATURE

at the IDEAL HOME EXHIBITION
designed by SERGEI KADLEIGH

Right, a 60-ft. high mast rising from the top of a hexagonal column, showing method of jointing to orange quarters. Below, aluminium banners and masts seen from the gallery at the east end of the hall.



[Scale: 1/8" = 1'-0"]
Section of mast



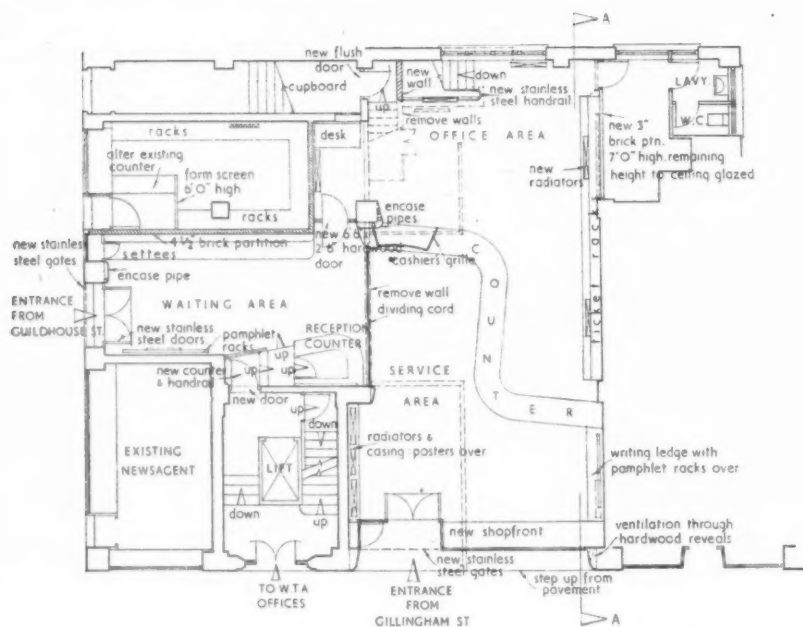
OFFICES

in GILLINGHAM STREET, S.W.1
designed by HUGH ROBERTS and DAVIES

The Workers Travel Association, having leased a six-storey office block known as Eccleston Court, wished to convert the north corner of the ground floor into a travel office with frontages on to Gillingham Street and Guildhouse Street. The small retail shop in the corner of the block is on a long lease, but it is hoped to incorporate this area into the travel bureau when the lease expires. In addition to the sale of tickets for all means of transport, there is a theatre ticket office and provision has been made for assembling coach parties at the rear of the premises.

View of main entrance and show window.





Plan

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

OFFICES

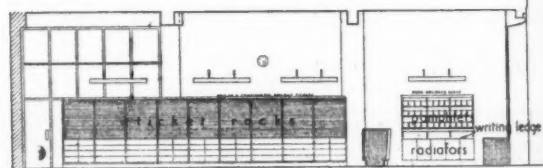
in GILLINGHAM STREET, S.W.1
designed by HUGH ROBERTS and DAVIES

CONSTRUCTION.—There is a new 3-in. brick partition wall between the back of the ticket rack and the cloakroom, which is glazed above 7 ft. height. A new 4½-in. brick partition wall divides the waiting space from a separate office opening on to Guildhouse Street. The construction of a false ceiling was not permitted by the authorities.

FINISHES.—Decoration generally is off-white with blue rubber flooring. Furniture and shop fittings are of Gaboon mahogany. The upholstery is covered with specially woven blue and white herring-bone tweed. The set-back main window surround conceals soil pipes and plumbing at the side and a fresh air intake at the top.

SERVICES.—Heating is by hot water radiators from the existing system, concentrated near the main entrance to guard against heat loss. A specially designed light fitting following the line of the counter incorporates a 5-ft. fluorescent tube and normal tungsten louvred fitting, alternately, which give a softer light than fluorescent tubes alone. The purpose-made poster display units are specially lit but no display lighting was allowed due to the restrictions at the time.

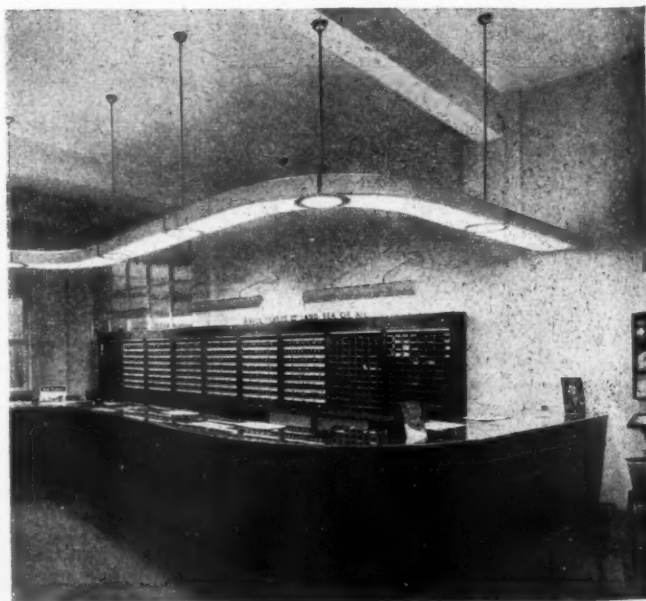
The general contractors were F. G. Minter (Decorations), Ltd. For sub-contractors see page 322.

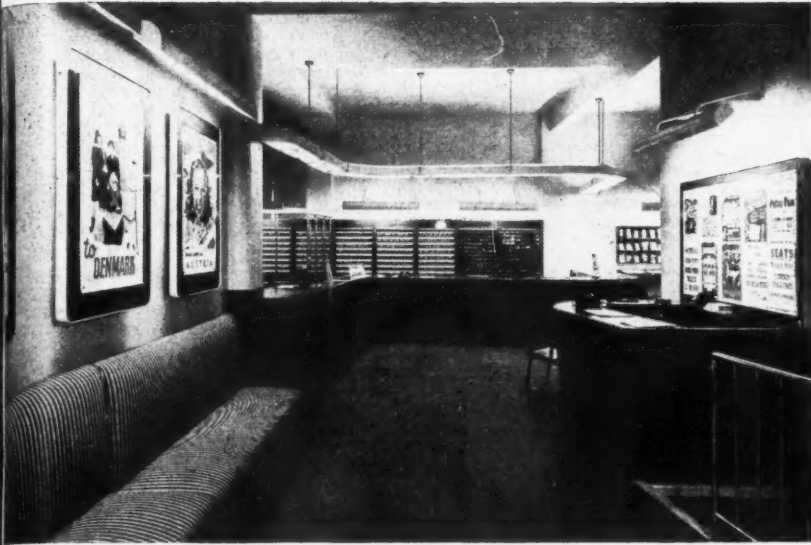


Section A-A

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

The main counter and ticket rack.

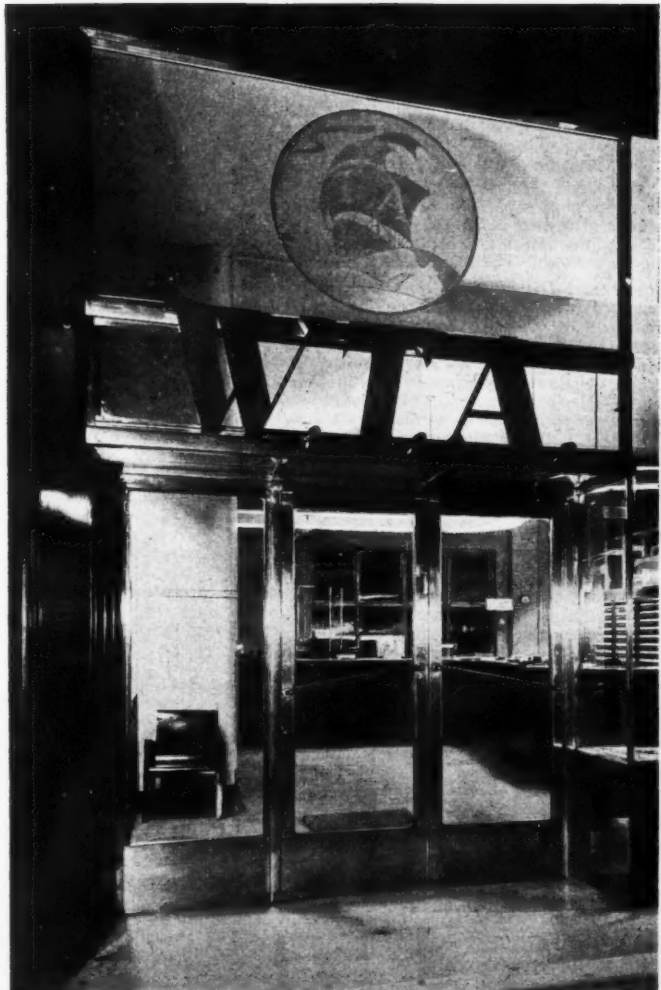
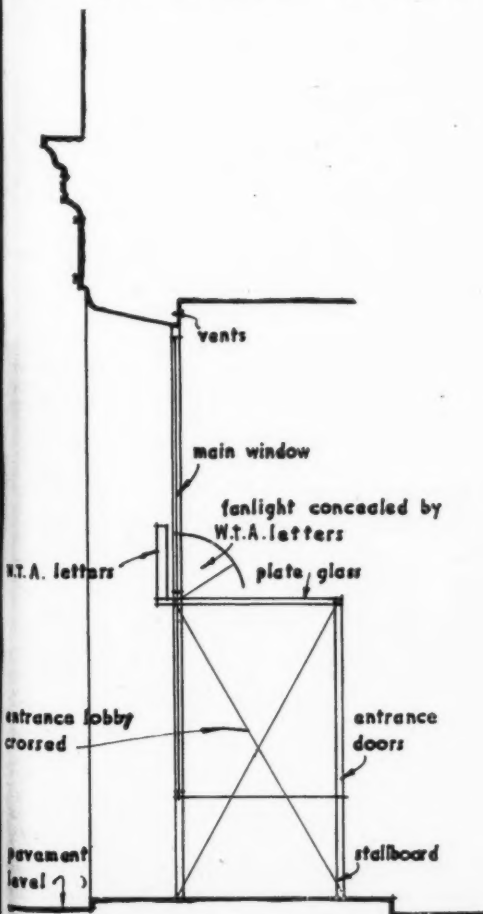




Left, the interior seen from the Guildhouse Street entrance. Below, the main doorway on to Gillingham Street.

Section through main show window

[Scale: 1/4" = 1'0"]



INFORMATION CENTRE · INFORMATION SHEETS
QUESTIONS AND ANSWERS · CURRENT TECHNIQUE
THE INDUSTRY · PRICES · TECHNICAL ARTICLES

TECHNICAL SECTION

The author of this article, who is head of the BRS Experimental Lighting Section, summarizes some of the conclusions reached as a result of experiments on lighting and glare carried out by the Building Research Station.

GLARE AND LIGHTING

By R. G. Hopkinson.

THE problem of glare is now receiving more attention from experimental workers than it has had for many years. Recent advances in the production of cheap artificial light have enabled higher levels of illumination to be provided in factories, offices, and other work places where ease of seeing has an effect on general efficiency. A revival of traditional knowledge of the advantages of adequate natural lighting in schools, hospitals and homes has not always been accompanied by a comparable revival of the traditional techniques of providing daylighting free of glare. The provision of large amounts of light by insensitive methods of lighting does not lead to as great an improvement in visual comfort as might be hoped for. The reason for this is almost always due to glare.

Glare is a term which is well understood in its general sense, but is not capable of a very successful definition in precise terms. It is more useful to analyse the effects of glare on vision. The major effects are:—

(a) *Direct Disability to Vision.* The presence of bright light sources in the field of view will often directly affect the ability to see. Objects near the window in a room often cannot be seen clearly, unless the bright window is screened from the eyes. The glare from oncoming headlights will prevent anything else being seen in the roadway. Such direct reduction in vision is due to the inability of the eye to adapt simultaneously to such widely differing conditions of brightness of the field of view. The attempt of the adaptation mechanism to cope with the bright light sources results in unfavourable adaptation to the darker parts of the scene.

(b) *Visual Discomfort.* Severe conditions of visual disability, such as the headlight case, are usually accompanied by considerable feelings of discomfort, or even pain. As a result, it has been assumed, incorrectly, that the glare which causes disability is a more severe form of that which causes discomfort. In fact, that is demonstrably not the case. Glare can cause severe discomfort without necessarily causing any direct reduction in the ability to see, and conversely conditions can arise where there is no discomfort, but a noticeable reduction in vision.

Consequently it is necessary, in order to design good lighting, whether natural or artificial, to have a working knowledge of the laws which govern both disability and discomfort glare. Recent experimental work has provided the background of this knowledge, but little of this work has so far become part of the routine knowledge either of the architect or the lighting engineer.

Lighting has so far been a branch of geometrical optics, the engineer being pre-occupied with the science of the redistribution of light to give the maximum possible illumination on the working plane with the meagre light sources available, while the architect has limited his attentions to the geometrical problems of sky factor and daylight penetration. The subjective problems of lighting, that is, the effects which lighting have on the occupant of the building, have been studied empirically or not at all. Reliance has been placed on collective experience, and where this experience has been wisely applied the lighting has been successful. This experience has not always proved sufficient for the growth of a reliable design tradition. The present purpose is to try to summarise the more important conclusions arising from recent experimental work on glare.

THE DISABLING EFFECTS OF GLARE

Recent work by Lythgoe, of the Medical Research Council, and others, has demonstrated that the eye works most efficiently when the brightness of the visual task is a little, but not much, brighter than that of the surroundings (Fig. 1). This rule gives a guide to the basic design of good lighting. It eliminates the dark desk top from the office, for example. With such ideal conditions of task in relation to surroundings, it is still necessary to provide adequate amounts of light. Indeed, Lythgoe has shown that, under such ideal conditions, a steady improvement in visual ability results from increasing the amount of light available up to levels corresponding to normal daylight. For most tasks, however, a reasonable standard of visual performance results when illumination levels above 10 ft. candles (or lumens per sq. ft.) are provided under the ideal conditions.

When these ideal conditions are not realised, and the task is made much brighter or much darker than the surroundings, the visual performance falls off; if the falling-off is readily noticeable, a condition of disability glare is said to exist. The work may be glaring, the surroundings being dark, or the surroundings may be glaring, the work being dark. It will be realised, therefore, that disability glare is an aggravated form of unfavourable

adaptation conditions. The disabling effect on vision is more troublesome if the surroundings are brighter than the work, than if the reverse is the case (Fig. 2).

Bright light sources in the field of view act in very much the same way as bright surroundings; the effect on visual performance is believed to be due to the same physiological mechanisms.

SOME LAWS GOVERNING DISABILITY GLARE

The disabling effect of a glare source has been found to be a direct function of the candlepower of the source in the direction of the eye. On the other hand, it has been shown that the disabling effect is independent of the brightness of the source.

These two results explain many of the discrepancies between the disability and the discomfort effects of glare, because, as will be seen later, the discomfort is definitely dependent on the brightness of the source. It also follows from the first law that a large source of low brightness will cause the same degree of disability as a small source of high brightness, since the candlepower of a source is the product of its area and its brightness in the direction of the eye. For example, a large window, 10 ft. square, exposed to a dull winter sky may have a candlepower equal to that of a 1,000-watt filament lamp. Such a glare source can obviously cause considerable disability to vision in unfavourable conditions.

The greater the displacement of the source from the direction in which the eye is looking when performing the visual task, the less is the disabling effect of a glare source. Consequently, a source placed well above the line of sight will cause less disability than one lower down. This argues in favour of high mounting of artificial light sources, but the placing of windows, which have other functions to perform as well as acting as light sources, must be governed by a balance of all the relevant factors.

Finally, the higher the brightness of the work and its surroundings the less is the effect of a glare source on the ability to see. A glare source which causes major disability in dark surroundings may cause little or none when the room is well lighted. Another way of expressing this is to say that disability glare is largely a function of contrast. Harsh contrasts of the work with its surroundings will lead to some form of reduced visual performance, which, in its worst form, will be described as glare.

THE EFFECT OF GLARE ON COMFORT

The pioneer work on the effect of glare on visual comfort was that of Holladay, who first demonstrated that the laws which govern discomfort are different from those

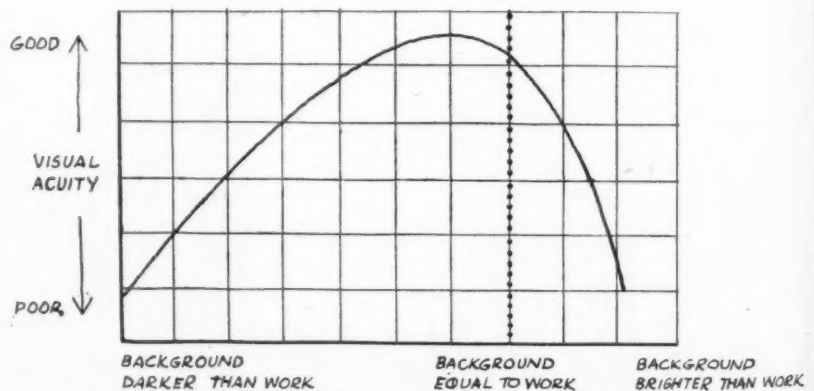


Figure 1. This graph illustrates Lythgoe's study of the effect of the brightness of the surroundings on visual acuity. Maximum acuity results when the work is a little brighter than the surroundings. Acuity falls off rapidly if the work is darker than the surroundings.

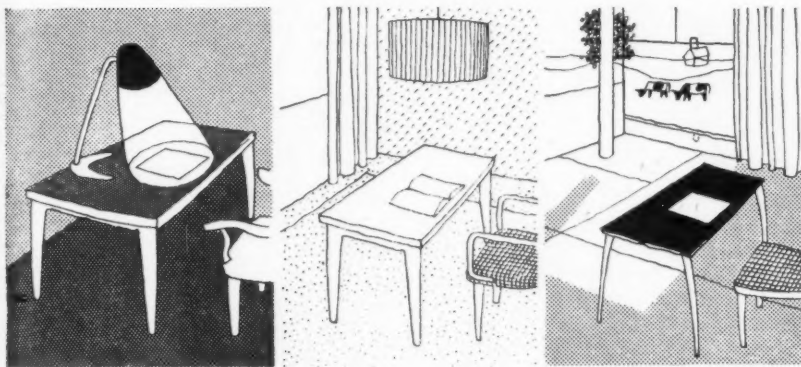


Figure 2. Bright work and dark surroundings (left) lead to reduced visual efficiency. Work should be a little brighter than the surroundings (centre). On no account should the surroundings be brighter than the work (right).

which govern disability glare. Subsequently these laws have been studied in greater detail, using new techniques of subjective appraisal, and it is now believed that the more important effects can be described.

These studies show that discomfort is influenced both by the candlepower and the brightness of the glare source, whereas disability is independent of the source brightness (Fig. 3). Displacement of the glare source from the direction of viewing will reduce the degree of discomfort (Fig. 4), but the effect may not be so marked as the effect on disability. Sources located beyond 50° to the direction of viewing will not, however, cause marked discomfort under normal conditions.

The degree of discomfort caused by a glare source will be reduced markedly by an increase in the brightness of the surroundings, as was also the case with the disability. The effect of the brightness of the surroundings on the degree of discomfort from a glare source tends to be complex. The brightness of the whole environment has to be changed to produce a major effect. The influence of the immediate surroundings to the glare source is less definite than in the case of the disability effect. A generalization, which is not strictly true, and therefore may be dangerous, is that discomfort is influenced chiefly by the brightness of the whole environment, while disability is influenced by the brightness of the work itself. Applied with caution, such a generalization is a useful working rule.

THE ADDITIVE NATURE OF GLARE

Both the disabling and the irritating effects of glare are additive, in the sense that the effects of a number of glare sources add up to give the effect produced by one larger source. Breaking down a glare source into a large number of small sources produces no beneficial results. It may be more pleasing architecturally, but the physiological effect is the same (Fig. 5).

Both the disability glare and discomfort glare have been shown to be a function of the relative brightness of the work and of the surroundings, these surroundings including the visible sources of light. Glare is a condition of unfavourable adaptation, which usually arises because the sources of light are much brighter than the work and its surroundings, but it can equally arise if the surroundings themselves are of a markedly different brightness than the work. Glare is therefore a function of contrast, or, more correctly, of the balance of brightness in the environment. Recognition of this fact leads to a realisation that good lighting requires equal attention to be paid to the lighting of the surroundings as to the lighting of the working plane. The lighting of the surroundings includes both the provision of

illumination and the choice of suitable reflection factors for the surfaces. The responsibilities of the architect in the lighting of buildings are thus seen to be more definite than may once have been thought.

The experimental data on glare which is now available to the architect can assist him to undertake these wider responsibilities.

THE AVOIDANCE OF GLARE

Some of the experimental work on the problems of glare is so recent that the applications to design problems have not yet been worked out. These new results demonstrate the means of reducing or avoiding glare in contemporary lighting installations, but they have not yet resulted in entirely new methods of lighting, as they must in time. The major impact of this new work is the shifting of the responsibility for the lighting of a building on to the architect, with, of course, the technical advice of the lighting engineer or the natural lighting specialist. Lighting is shown to be the combining of the problems of decoration, arrangement of furnishings, the design of lighting units, and the provision of light sources. It is the architect's work to co-ordinate all these functions.

The architect therefore needs to know more of the mechanics of lighting, in order that he may make the most of the advice of his specialists. The notes above on glare summarise some of the recent experimental work with this purpose in mind, and those below are drafted as an attempt to show how some of these new results can be applied to the reduction of glare.

It is necessary to recognize the conditions in which glare can occur in its various forms. Disability glare was shown to be influenced by the candlepower, but not by the brightness of a source. Disability will occur, therefore, under those conditions where the glare source has a high candlepower. When the brightness of the surroundings is high, the disability will not be so pronounced. Therefore, disability glare should be expected

to occur when there are sources of high candlepower, in surroundings of low brightness.

Such conditions arise most frequently in buildings during the winter months, when the candlepower from a large window of quite low brightness may be high, but the surroundings in the room are receiving only a poor light. Objects on the window wall may be only dimly discerned, unless the window is screened from the eyes. Under such circumstances, the only mitigation for the glare is to switch on the artificial lighting. Indeed, lights are switched on during the winter months at least as much to reduce disability glare as to add illumination on the work.

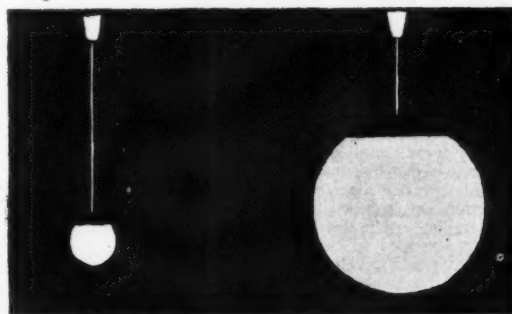
Discomfort glare occurs more frequently under bright conditions. The condition of the large window exposed to the dull winter sky is rarely recognized as a glare condition, chiefly because there is no discomfort associated with it, apart from any annoyance which may be caused by the inability to see. The eye can adapt quite comfortably to the dull winter sky and to the darker room simultaneously. If, however, the same window is exposed to bright white clouds on a brilliant summer day, a condition of acute discomfort will result. Although the room will be very well lighted, and there may be no noticeable interference with the ability to see, the high brightness of the window will not be balanced out by the brightnesses in the room, and discomfort will be experienced. A schoolroom, lighted artificially by un-screened filament lamps, may have ample light provided, but the bright light sources will cause discomfort, even though there is no perceptible interference with the ability to see. In general, therefore, discomfort from glare will arise in all conditions where there are bright light sources in the field of view, but this discomfort may not be accompanied by disability if the surroundings are bright.

In contemporary buildings, with their characteristic large windows, and with the more generous provision of artificial light, disability glare will not be as prevalent as discomfort glare. Where disability glare does occur, as in the example quoted above, the remedy is clearly and simply to provide a higher illumination on the objects which are being obscured by glare.

The reduction of discomfort glare calls for careful attention to matters of lighting design. Since discomfort is influenced both by the candlepower and by the brightness of the glare source, the designer is called upon to produce the necessary illumination for the visual task by providing light sources which have sufficient candlepower for their job, but which are not uncomfortably bright.

One way in which he can do this is to make them large. The same candlepower coming from a large low-brightness source will give the same illumination on the working plane or its surroundings as a small source of high brightness, but it will cause less discomfort glare.

Figure 3. On the left of the diagram is a small source of high brightness; on the right is a large source of low brightness. As the candlepower of each is equal, each will cause the same degree of disability glare, but as the larger source has the lower brightness it will cause less discomfort.



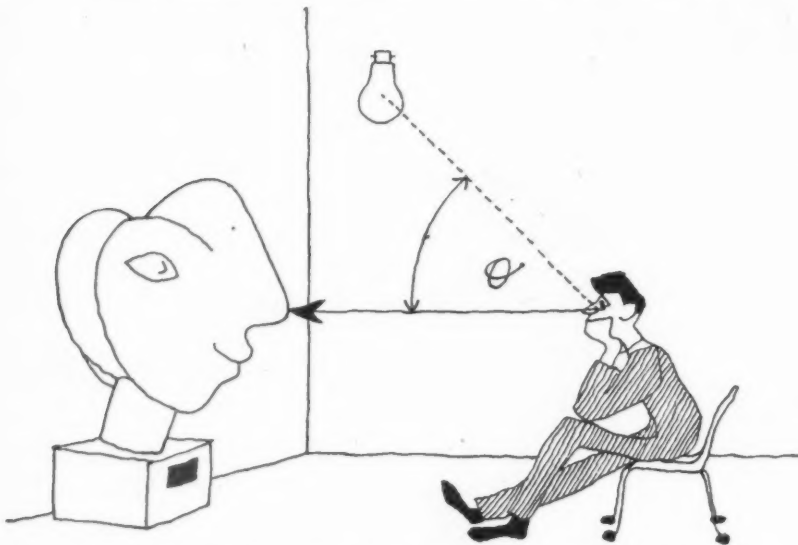


Figure 4. This diagram shows that glare is reduced when the source is displaced from the direction of viewing. The angle, as shown, should be 50 deg. or more.

Another method is to make use of the device known as "Contrast Grading." Recent experimental work has shown that, while the general brightness of the field of view has much more effect on the degree of discomfort caused by a glare source in that field, than has the brightness of the immediate surroundings to the glare source, nevertheless, less discomfort will be caused if the source brightness is graded, without harsh contrasts, into that of the surroundings. The laws which govern this mechanism are as yet imperfectly investigated, but it is known that they are complex. A lighting unit has, however, been designed, which employs a semi-diffusing plastic material to give the necessary contrast grading. Such a unit has to be used in rooms with high reflection factor decorations, since the brightness of the walls and ceiling has to form a comfortable balance with the brightness of the edge of the unit, which in turn forms a comfortable balance with the brightness of the bright centre of the unit. (Fig. 6.) Similarly, contrast grading of natural lighting is achieved by attention to the brightness of the surroundings to the window. (Fig. 7.) Such devices as this have long been part of the architect's tradition. The experimental work serves to put into design-figures the qualitative experience of this tradition.

REDUCING DISCOMFORT GLARE

A summary of the methods of reducing glare will also serve as an indication of the means of avoiding it in new designs. The most useful in practice are as follows:—

(1) The light sources, artificial or natural, should be screened without reducing the brightness of the general surroundings. This can be done by the provision of louvres or blinds. Some reduction in the brightness of the surroundings or of the working plane may, however, be unavoidable; if, however, the amount of illumination available is more than barely enough for the work, it is worth making some small reduction in this way to avoid major discomfort. The greater the size of the source, the less need be the reduction in source brightness. Quite a small reduction in the brightness of a large window exposed to the bright summer sky may have a marked effect on discomfort glare. It was observed during the course of some school studies that a film of dirt

over the window, which reduced the sky brightness by only 15 per cent, nevertheless made a noticeable reduction in glare.

(2) If it is not possible to afford any reduction in the amount of light in the room, the sources must be increased in area and reduced in brightness, in order to produce the same illumination, but less discomfort.

(3) The general brightness of the environment should be increased, for example, by attention to wall finishes, by better redirection of light from the sources, or by adding light from sources not seen by the observer. Major improvements can be effected in this way. The method is particularly to be studied where badly designed windows have resulted in glare. This can often be usefully reduced by lighting the surroundings to the windows by artificial sources of light.

(4) The sources can be raised up as far from the general direction of viewing as possible.

(5) The brightness of the immediate surroundings should be increased, even if it is not possible to increase that of the general environment. It is often possible to redecorate ceilings and the upper part of walls, or to paint window bars and their surrounds, where a general redecoration is not practicable.

PERMISSIBLE BRIGHTNESS

It is possible to draw up tables of permissible brightness of light sources, provided the tolerable degree of discomfort glare is known. This tolerable limit will be different for different types of building, and such tables will, therefore, be exceedingly complex in use. For the conditions experienced in offices, homes, schools, etc., the following table gives a rough indication of the effect on comfort of the brightness of the source. This table applies to the conditions of a room 12 ft. high, with one lighting unit for approximately every 100 sq. ft. of floor area, and of a size comparable with 14-in. diameter globe seen 20 ft. away. Such conditions are fairly typical of modern office and school practice.

THE INFLUENCE OF THE BRIGHTNESS OF THE LIGHTING UNIT ON THE DEGREE OF DISCOMFORT FROM GLARE.

Brightness of Unit (candles per sq. in.)	Corresponding Wattage of Lamp in 14-in. Diffusing Sphere.	Degree of Discomfort Glare.
0.5	60	Acceptable.
1.0	100	Somewhat distracting.
2.0	200	Borderline of comfort.
5.0	500	Definitely uncomfortable.
10.0	1,000	Very definitely uncomfortable.

Thus a fittings brightness of the order of 2.0 candles per sq. in. represents the maximum brightness which does not introduce definite discomfort. Even with a lower brightness there is some distraction, even if no real discomfort. It will also readily be

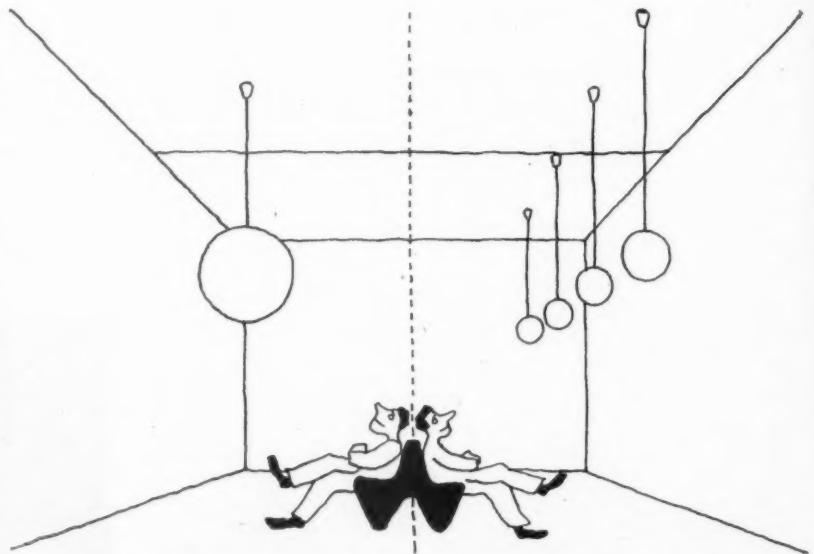


Figure 5. Glare is additive. The effects of small sources add up to equal those of a large source of the same apparent area.

seen that a fluorescent lamp, with an initial brightness of the order of 4.0 candles per sq. in., will lie beyond the border of comfort under the given conditions.

It is a further useful working rule that, under similar conditions to those detailed above, and with a specified illumination level of the order of 10 to 20 ft. candles (lumens per sq. ft.) the ratio of the brightness of the fitting to that of the general surround brightness should be less than 150:1, if definite discomfort is to be avoided, and should be less than 30:1 if the degree of glare is to be acceptable. These figures rule out opal diffusing spheres and bare fluorescent lamps.

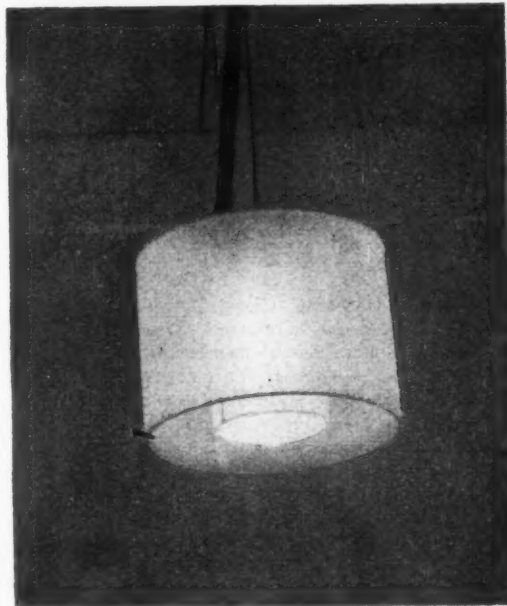
Tables of window brightness are of little practical value, since the sky brightness is not under control. The following table, which applies to conditions such as those in contemporary schools, with large windows and light coloured decorations, gives some rough guidance to the need for blinds, louvres, or curtains under conditions of bright sky.

SKY BRIGHTNESS AND GLARE IN ROOMS WITH LARGE WINDOWS.

Window Brightness (foot lamberts).	Typical Sky Conditions.	Degree of Glare.
100	Dull winter overcast sky	Acceptable.
500	Winter sky	Acceptable.
1,000	Blue summer sky	Distracting.
2,000	Bright winter or spring sky	Borderline of discomfort.
5,000	Overcast summer sky	Very uncomfortable to intolerable.
10,000	Summer haze and clouds, white clouds in sunshine	

The above table indicates that louvres or curtains are needed when the sky brightness

Figure 6. A lighting unit which employs a semi-diffusing plastic material to give contrast grading, thus causing less visual discomfort.



is no greater than 2,000 ft. lamberts. If the sky brightness is higher than this level, marked discomfort results.

A SUMMING UP

It is not possible, in the course of this article, to give a full idea of the scope of modern research on glare and lighting generally. There is an extensive literature which

the architect may find too specialised to be of much use to him. In time, however, it is to be hoped that the most useful of these experimental results will become part of the architect's design course, and when this happens a notable change in lighting practice should result.

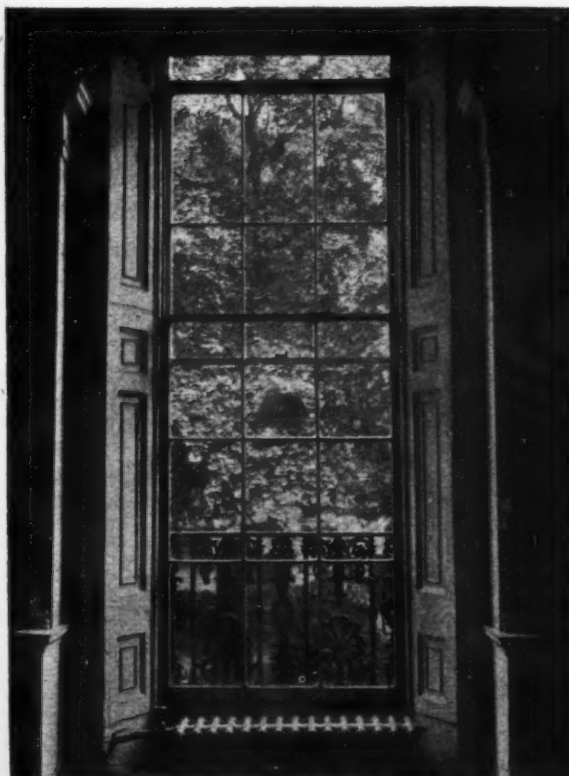
Very large windows, such as contemporary practice permits, raise problems of special importance. Their large area results in a very high candlepower, even when the sky is dull. They are thus powerful sources of disability glare, even though in winter they give rise to no discomfort. The absence of any accompanying feeling of discomfort does, in fact, reduce the awareness of the reduction in visual ability. The remedy is the judicious use of louvres or Venetian blinds to reduce the direct view of the sky, whilst retaining, as far as possible, the illumination on the working plane and the general surroundings. Supplementary artificial lighting may in some cases be needed.

In spring and summer, large cloud masses may constitute major sources of both discomfort and disability. White clouds in sunshine are so bright as to be beyond the limit to which the eye can adapt without acute discomfort. Blinds, louvres, or curtains are then essential. A further remedy worthy of consideration is the use of translucent curtains, or even of low-transmission glass.

At first thought, it may seem illogical to prescribe large windows with low-transmission glazing as a solution of the glare problem in buildings. It is, however, a perfectly reasonable expedient in countries where the sky remains bright for a large part of the year.

These, and other speculations derived from recent studies on lighting and glare, may not be entirely unfruitful in providing the foundations of a new approach to the lighting of buildings. The realization for the need for the lighting of the whole environment rather than merely of the working plane alone gives the architect new responsibilities and new opportunities.

Figure 7. Contrast grading of natural lighting can be achieved, as shown, by attention to the brightness of the surroundings to the windows.



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

INFORMATION CENTRE

1 SOCIOLOGY. 2 PLANNING: General. 3 PLANNING: Regional and National. 4 PLANNING: Urban and Rural. 5 PLANNING: Public Utilities. 6 PLANNING: Social and Recreational. 7 PRACTICE. 8 SURVEYING, SPECIFICATION. 9 DESIGN: General. 10 DESIGN: Building Types. 11 MATERIALS: General. 12 MATERIALS: Metal. 13 MATERIALS: Timber. 14 MATERIALS: Concrete. 15 MATERIALS: Applied Finishes, Treatments. 16 MATERIALS: Miscellaneous. 17 CONSTRUCTION: General. 18 CONSTRUCTION: Theory. 19 CONSTRUCTION: Details. 20 CONSTRUCTION: Complete Structures. 21 CONSTRUCTION: Miscellaneous. 22 SOUND INSULATION-ACOUSTICS. 23 HEATING, VENTILATION. 24 LIGHTING. 25 WATER SUPPLY, SANITATION. 26 SERVICES EQUIPMENT: Miscellaneous. 27 FURNITURE, FITTINGS. 28 MISCELLANEOUS.

10.70 design: building types FACTORY DESIGN

Industrial Buildings. A series of articles. (Architectural Record [USA], Nov., 1949, p. 92.)

Examples described of factory work by American and British architects. Interesting, illustrations.

This series of articles describes several large and small industrial establishments and the parts played by the architects in working them out. One is a plant processing grains into foodstuffs, another a factory, and a third a printing works.

One of the plants, the food factory, is very interesting. It lies in a hot part of the country, and instead of conventional buildings it is mostly layers of floors and roofs, with a restricted use of walls. Plant is exposed, ventilation is by nature, and protection from sun and rain the chief function of the structure.

More interesting are the implications. Here are big teams of designers, apparently not under the chairmanship of the clients' engineer, but under the architect, and handling not only the building as an envelope, but the buildings, equipment, services and plant visualized as a single system for production. The architect here is not a supervisor of experts, but in direct control. The central position is not nominal but actual. It must call for hard study because inside knowledge is required. Mentioned are light, heat, humidity, air conditioning, acoustics, safety controls, dietetics and cafeterias, lockers and rest rooms, medical facilities, space requirements and arrangement of plant, power distribution, waste disposal, traffic, maintenance, optimum column spacing, probable expansion, and quite a number of others. A few architects in this country might be able to tackle factory work this way, but if so, evidence of the kind found in these articles has not yet been given us.

15.69 materials: applied finishes and treatments STEEL PROTECTION

The Protection of Steel by the Powder Process of Flamespraying. C. A. Robiette. (Industrial Finishing, Oct., 1949.)

THE ARCHITECTS' JOURNAL for March 9, 1950

General article putting forward advantages of the Schori Powder Process of Metal and Plastic Spraying. Primarily for manufacturers, but of interest to architects. 8 pp., including photographs.

The Schori process of pistol spraying can be done with most metals and also with rubber, polythene, shellac mixtures, etc. For protection of iron and steel, zinc is normally used because of its "sacrificial" protection value. The thickness of the zinc coating is important, and this spraying process enables varying thicknesses to be built up quickly and easily. The coating has a fine grain, which forms an excellent base for paints, but it should be noted that lead primers are not advisable. Zinc chromate is recommended, and iron oxide can also be used. For special conditions, such as bad town atmosphere or where salt spray is present, it may be better to use a protection of aluminium instead of zinc, and the process is equally suitable for this. The article claims a number of advantages for this process, including: the grit blasting preparatory treatment which leaves a good key, the matt finished surface which is excellent for painting, greater life of paint finishes than over other metal finishes, ease of preparation for repainting, ease of application to fabricated steelwork, little risk of damage in handling treated articles.

17.66 construction: general SAVING TIMBER

Use of Timber in all Building Work. (MOW Economy Memorandum, Timber No. 2, Dec., 1949. HMSO, 6d.)

This memorandum replaces the first publication in February, 1947. The amount of softwood authorized for building work will

be based on the assumption that the economies as laid down in this pamphlet have been incorporated. Greater use is to be made of smaller size timber so as to permit higher output from available logs. Various kinds of hardwood can be used as a substitute for softwood. Details are also given of the maximum sizes for timber joists, floor-boards, rafters and purlins.

20.174 construction: complete structures HOUSING PROGRESS IN ITALY

Housing Progress in Italy. R. M. Lester (The Builder, Dec. 9, 1949. pp. 756-757.)

Construction of dwellings for workers, mainly blocks of flats in the big cities. 2 illustrations.

This report on reconstruction in various big towns of Italy deals with rehousing by blocks of flats for workers. Some of the buildings, known as Popular Flats, have reinforced concrete columns and walls of hollow bricks. Small frosted glass cubes about 4-in. square are placed into the cement of the exterior walls. Single room service flats furnished by the State for professional workers are under construction one of which, a 14-storey block 150 ft. high with 400 rooms, is just being completed in Milan. To distinguish individual ownership in one town houses are built of different height and colour. Special accommodation will be provided for trainees who change their residence every three months. For these buildings a soft type of limestone is used, a form of volcanic substance which needs no reinforcement as it hardens off immediately. Some interesting figures on building costs, financing, rent and workers' pay are also included.



REPRINTS

All Information Sheets published since the inception of the new series in October, 1947, have been reprinted. Specially designed binding cases to hold approximately 100 Sheets may be obtained at the

Oct., 1947-Nov., 1949

Oct., 1947-Dec., 1949

Oct., 1947-Feb., 1950

price of 4s. 6d. each. Individual Sheets may be ordered at the price of 3d. each. Readers requiring sets or individual Sheets should fill in the form below. Sets are available as follows:

.. .. £2 5s. 0d.

.. .. £2 7s. 6d.

.. .. £2 10s. 0d.

ORDER FORM

Please send me

Name

Address


THE LIBRARY OF
INFORMATION
SHEETS COM-
PLETE TO
FEBRUARY 23,
1950.

Branch
BIR
238-9,
Tel.
C
High
T
MA
10, C
Tel.
R
571-3
Te

To the order of H.M. OFFICE OF WORKS



Seven New Blocks of Toilets

Jaconite Hydraulically pressed 

Terrazzo Tiles

Pre-cast Terrazzo Partitions and Posts

Pre-cast Terrazzo Wall Linings

Sienna Marble Wash ranges

Supplied and fixed throughout



Branches at :

BIRMINGHAM

238-9, Monument Road,
Edgbaston.
Tel. Edgbaston 1178

CARDIFF

High Street Chambers,
17, High Street.
Tel. Cardiff 2491

MANCHESTER

10, Corporation Street,
Tel. Deansgate 5971

READING

571-3, Basingstoke Road.
Tel. Reading 81560

Jaconello LTD
"Doloment"
ASSOCIATED WITH
REG TRADE MARK

147 VICTORIA STREET
LONDON, S.W.1

Tel. Victoria 3043 (6 lines)

CUT OVERHEADS . . .



. . . Underfoot

APPROVED CONTRACTORS

ALBA FLOORING CO. LTD.,
West Arthurlie Works, Lochlibo Road,
Barrhead, Glasgow

J. A. HEWETSON & CO. LTD.,
Dansom Lane, Hull

HOLLIS BROS. LTD.,
Craven Hall, Hull

HOLLIS BROS. LTD.,
150 Holborn, London, E.C.1

HORSLEY SMITH & CO. (HAYES) LTD.,
Dawley Road, Hayes, Middlesex

PILKINGTON'S ASPHALTE CO. LTD.,
68 Northiam Street, Hackney, E.8

SEMTEX LTD.,
Head Office: 185-187-189 Finchley Road, London, N.W.3
Scottish Headquarters:
53 Kelvin Avenue, Hillington, Glasgow, S.W.2

THE LIMMER & TRINIDAD LAKE ASPHALT CO. LTD.,
Steel House, Tothill Street, Westminster, S.W.1

**THE PENMAENMAWR & TRINIDAD
LAKE ASPHALT CO. LTD.,**
National Bank Building, Fenwick Street, Liverpool, 2

THE WESTERN TRINIDAD LAKE ASPHALT CO. LTD.,
Asphalt House, St. Mary Street, Cardiff

SEMASTIC DECORATIVE TILES stand up to heavy foot traffic over a long period. They can be installed with the very minimum of dislocation to daily routine. They are as attractive as they are practical, too, and a great variety of bright and decorative design treatments is made possible by the wide colour range.

SEMASTIC

DECORATIVE TILES

A Product of
A COMPANY
in the
DUNLOP GROUP

20.175 construction: complete structures ALUMINIUM ARCH, CANADA

First Aluminium Arch Bridge Nears Completion. (Civil Engineering, [USA], Dec., 1949, p. 29.)

290 ft. span arches with 47 ft. 6 in. rise to centre line arch.

This bridge will carry a highway at Arvida, Quebec, Canada. The weight is only 43 per cent. of that for steel, which meant considerable saving in shipping and erection. It is interesting to note that no painting is required, but no reference is given to the type of alloy used. The main arches are of box section 54 in. by 32 in. Special problems were solved in riveting technique and in allowing for the higher thermal expansion of aluminium compared with steel.

20.176 construction: complete structures HOSPITAL, USA

Complex Hospital Goes Up Fast. R. Y. Taggart (Engineering News Record [USA], Dec. 8, 1949, pp. 39-41.)

High speed construction of 320-bed hospital at Wilmington, Del. Completed December, 1949, five months ahead of schedule.

13-storey building, irregular in plan, 430 ft. long by 250 ft. wide, on cast *in situ* concrete piles. Time was lost in piling but made up in part by rushing underground work to completion and immediately casting the ground floor slab to secure a firm base for shoring. The centre and east wings were quickly closed in to provide covered and easily heated space for all trades. Sub-contractors thus continued full time throughout the winter. Marine plywood forms were used for walls, beams and slabs, six times on the average.

23.121 heating and ventilation AIR PURIFICATION RESEARCH

Purifying Air with Glycol Vapour. (The Architectural Record [USA], Aug., 1949.)

Article describing recent research in purification of air by glycol vapour.

The discovery of the value of glycol vapour as a bactericide was accidental. In America, the use of triethylene glycol as a dehumidifying agent in an air-conditioning system in a New York bank was noted by doctors to have resulted in a remarkable decrease in colds and such complaints. In this country, doctors were achieving success in air purification for air-raid shelters, using hexylresorcinol dissolved in propylene glycol. The high cost of the former led to research, which showed that the latter was more successful without it. Dr. O. H. Robertson, of Chicago, who carried out the research, was appointed chairman of a US army commission on airborne diseases, and he and his team devised an apparatus to produce and distribute vapour.

The advantage of the glycols over other more potent germicides is that, being hygroscopic, they attack and destroy damp germs which non-hygroscopic materials will not touch. They are, conversely, ineffective when germs are dry. Thus, to be effective, relative humidity should be kept at 35 to 40 per cent. Destruction will then be 70 to 75 per cent. of pathogenic germs. If surfaces on which germs are likely to dry out are given ordinary dust-control treatment—oiling of floors, and oil-emulsion rinsing of bedclothes, for instance—control may be 95 per cent.; even with a relative humidity as low as 20 per cent., considerable mortality amongst germs will result. In most cases, death is instantaneous.

Glycol vapour must be effectively dispersed to be effective; to introduce it into an air-conditioning system is very convenient, otherwise a fan for dispersal is desirable. Small portable apparatus, without fan, has a very localized effect.

Cost of the material is small, as concentrations required are minute. In the case of propylene glycol, 1:8,000,000 will suffice; or triethylene glycol, 1:400,000,000. An air-conditioning plant, circulating 15,000 ft.³ of fresh air per minute, would need only 5 oz. of triethylene glycol per hour.

A temperature of 50 to 85° F. is desirable, with 20 to 65 per cent. relative humidity, and glycol saturation of 30 per cent. is desirable. 65 per cent. saturation is commonly used. The vapour may condense on cold window surfaces.

Vapourizing the glycol is the only critical part of the process; one equipment makes use of a glass fibre wick, with small electric heater. Air is circulated through it by pressure difference—not less than .10 in. W.G.—in different parts of a ventilating system, as, for instance, across a fan.

It has many applications: schools, offices, food processing plants, theatres, nurseries, pediatric and infectious disease wards, and pharmaceutical factories. It has aided in the production of penicillin and streptomycin. Results include reduction in cases of respiratory infections from 30 to 2 in untreated and treated children's wards, and from 130 to 13 in two similar cases. In an aircraft factory infections were reduced by half, and in a bank by two-thirds. The effect is not immediate; in the case of military barracks, personnel entering a treated area showed no improvement over those placed in an untreated one for the first three weeks. Thereafter, those in the treated area suffered 65 per cent. less infections.

The effect appears to persist after personnel have left the treated area; this is described as a "hangover" effect. It is thought that the vapours assist the production of "antibodies" in the bloodstream, and that the risk of infection is thereby reduced. If this is the case, the value of the treatment will be greatly enhanced. It has hitherto been felt, with germicidal treatment introduced by way of a ventilating system in, for instance, an office, that the value is so reduced as to make it not worthwhile if the personnel are to be subjected to intense infection in transport, or in their own homes, so that all the good is immediately undone. The suggestion has even been made that the resistance to infection will be lowered by long periods in a virtually germ-free atmosphere.

But here seems to be the answer: germs killed, and the resistance of the body against them improved, all with the one treatment. Trials in this country would seem well worth while.

24.129 lighting MUSEUM LIGHTING

Lighting in Museums. S. G. Turner. (Electrical Review. Jan. 6, 1949, p. 3.)

Fluorescent vs. tungsten; recommended values; character of fittings; show cases, statuary and wall displays. Useful, illus. 9 diagrams and photos.

This is a short but useful article. It is best in its discussion of showcase lighting, though like many engineers the author seems not sure enough of himself on design matters to suggest changing the design of showcases to suit good lighting, which at first glance some of his examples appear to require. Also his arguments on the architectural "character" of certain light fittings, while current in the IES world, would cause a good part of our profession to get rather heated, and ought to be open to considerable criticism on engineering grounds.

For instance, he commends some lighting boxes fixed to ceilings in preference to some pendants which he illustrates, but it is difficult to see how the boxes could avoid unhappy brightness contrasts in the ceiling which pendant fittings can easily be made to avoid.

There are interesting and useful ideas on the use of tungsten and fluorescent light and especially on mixing them; he mentions a ratio of 40:100 in light output as having given good results.

24.130 lighting WINDOWS

Windows—for Visibility, not Ventilation. Anon. (Architectural Forum [USA], Nov., 1949, p. 102.)

Four new window types. Interesting; illustrations, photographs and diagrams.

Here is a straight American left hook at the window problem. Air-conditioning is assumed, and the window problem is defined as a view, a good air-seal and an arrangement enabling both sides of a window to be washed from the inside. There are four techniques using pivoting and hinged arm arrangements. They are interesting, and obviously expensive. The advantages offered over traditional British solutions are not obvious either on first or second glance, except in the quality of the manufacture.

This feature answers any question connected with building confidentially and free of charge. Questions to the Technical Editor, The Architects' Journal, 9, 11 and 13, Queen Anne's Gate, S.W.1.

QUESTIONS AND ANSWERS

3015 RESPONSIBILITY FOR SUB-CONTRACTORS

Q Can you tell me if the general contractor has to take responsibility for work done and materials used by sub-contractors?

A Under clause 21 of the RIBA Contract the main contractor is responsible for the work of a nominated sub-contractor being carried out in accordance with the drawings and specification applying to the sub-contract work. If the work is not being so carried out the main contractor would require the sub-contractor to rectify it. Defects appearing during the Defects Liability Period arising from the work not being in accordance with the drawings and specification applying to the sub-contract work would be included in the list of defects sent to the main contractor by the architect under clause 12 of the Contract. Under clause 22 of the Contract the goods or materials of nominated suppliers are selected or approved by the architect. The main contractor is responsible for seeing that the goods or materials so supplied are in accordance with those selected or approved by the architect, and if they do not so accord he would reject them. Goods or materials not in accordance with the architect's selection or approval would be included in the list under clause 12 if defects arose from that cause.

DURESCO

certainly



BUT

we also make

SILCOLAC
Hard Gloss Paint

SILPACO
Flat Oil Paint

CHARLTON ENAMEL
Hygienic Porcelain Finish

ALKALI RESISTING PRIMER
For exterior application

CALDURO CEILINGWHITE
in paste form

SILKARDO
Washable Distemper

PETRIFYING LIQUID
For thinning and waterproofing

SILKAS VARNISH

CHARLTON WHITE
Flat Undercoating

DURESCO
Texture Paint

DURESCO PRODUCTS

DURESCO PRODUCTS LTD., CHARLTON, LONDON S.E.7. TEL: GRGreenwich 0035 (four lines)

This feature covers both the production and marketing of new materials and designs of equipment, as well as the general trend of developments within the Building Industry.

THE INDUSTRY

DEVELOPMENTS IN LIGHTING AND SOUND

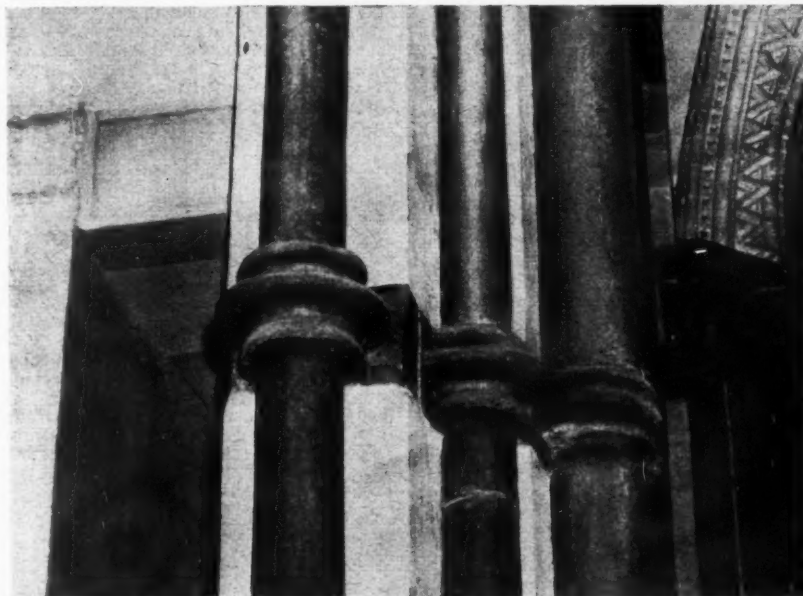
Philips Electrical have just sent me a lot of information about their recent activities. First of all, they have produced a new range of fluorescent fittings, and one or two for what must now, I suppose, be thought of as the old-fashioned tungsten lamp.

The fluorescent types are intended mainly for shops or offices and are good simple designs, while at the other end of the scale there are some pendant fittings. The one illustrated here is known as the Westbury and is made in two sizes, for 200- and 300-watt tungsten lamps, the prices being £9 and £9 2s. 6d., both figures inclusive of purchase tax. This is a semi-indirect fitting with the bowl and suspension finished in cream, the louvres in grey with polished aluminium bands.

Messrs. Philips have also just completed a very elaborate permanent sound reproduction system in Canterbury Cathedral. There the problem was to provide full audibility over a large area in a building with a reverberation period of 8½ seconds, the main difficulty being that microphones were to be used in different positions—at two altars, pulpit and lectern, and in the Precincts stalls. A system has been evolved which gives a uniform level of intelligibility throughout the Cathedral, irrespective of the microphone in use, as loudspeakers which might be likely to cause acoustic "feed back" are automatically muted when an adjacent microphone is brought into use. It is not, therefore, necessary to have an operator in charge of the amplifier controls during the service, the installation merely being switched on at the beginning of the service and thereafter controlling itself automatically.

Considerable care has been taken in the placing of the loudspeakers and microphones so that they are not obtrusive, the speakers all being designed and coloured to harmonise with the neighbouring stonework. As the photograph shows, no exception could well be taken to the result. Acoustically the speakers are all arranged to work at varying output levels, and it is claimed that every word of the services can be heard in any part of the cathedral: a total of over 100 loudspeakers is used.

The same firm has developed a sound reproducing system for hospitals which allows loudspeakers and headphones of the latest Pillotone under-pillow speakers to be interchanged at any point in a single 25-volt line from the control amplifier. This means that on the occasion of a special broadcast a loudspeaker may be plugged into any bedside point so as to cover the whole ward. The system is so designed that whatever number and combination of listening units are connected across the line, each unit receives the correct amount of current for optimum performance. Not only is this new system much more flexible than previous



This photograph of the stonework of Canterbury Cathedral shows, in the top left corner, one of the concealed microphones installed by Philips Electrical Ltd.

systems, but it simplifies and reduces the cost of hospital sound reproducing installations. (Philips Electrical Ltd., Century House, Shaftesbury Avenue, London, W.C.2.)

FACTS ABOUT LOCKS

A really informative little book on the design, manufacture and history of locks has just been issued by Josiah Parkes & Sons. Written by their chief designer, Mr. Butter, it starts off with the usual definitions of the branding of locks and the ordering of them, not only for the normal single-hinged doors, but for casements, pairs of folding doors, double-action swings and single and double sliding doors. This information, with an outline of the different types of lock available, is probably as much as the architect really needs, but there is also a glossary (properly illustrated) which is very informative, and at the end a series of lectures forming a sort of correspondence course in locks and lock-making which I found most interesting, particularly the section dealing with the less common types of lock which one would often use if only one knew they existed. Plenty of information which, in fact, one need not bother to remember, but which it is useful to have all together in a handy little reference book. Good. (Josiah Parkes & Sons Ltd., Union Lock Works, Willenhall, Staffs.)

A NEW FLUORESCENT LAMP COLOUR

After the first flush of current-saving enthusiasm, quite a lot of people seem to have taken something of a dislike to the rather cold colour of the standard daylight fluorescent lamp; hence the various other colours, notably "warm white," which is intended mainly for restaurants and other more domestic uses.

Adding to the available colour range the GEC have just evolved a new Osram colour which has been named Mellow, which is intended for use in hotels and restaurants. In an attempt to make allowances for personal illogicalities "specimen meals were displayed under Mellow and other colours, and viewers were invited first to

inspect the food and drink, then to study their own reflections in a mirror, and finally to state whether their combined impressions were conducive to good appetite and enjoyment." Professor Pavlov's dogs, you will remember, soon learned to drool at the ringing of the bell, even when there was no subsequent meat: I sincerely trust that the GEC's viewers were allowed at least one good meal at the end of their researches. In colour this mellow lighting is slightly less pink than "warm white," but pinker than "natural." Perhaps the only description would be off-pink. The new lamp shows a slight decrease in lighting efficiency compared with Natural and is available in a 5 ft. 80 watt length only, at the same price as other standard colours, and works, of course, with standard gear and fittings. (The General Electric Co. Ltd., Magnet House, Kingsway, London, W.C.2.)



A semi-indirect pendant light fitting produced by Philips Electrical Ltd.

Announcements

The Minister of Town and Country Planning has appointed the following four new members to Stevenage Development Corporation: Mr. C. T. Every, Mr. S. Gestetner, Mr. W. A. Winson, and Col. J. A. Davies. The Minister has reappointed Mr. P. T. Ireton, who has been a member of the Corporation since its establishment. The appointments are for a period of two years. These five members, together with the present chairman, Dr. Monica Felton, and the present vice-chairman, Mr. John Corina, now constitute the Corporation.

Pilkington Brothers Ltd., of St. Helens, Lancashire, announce that they have produced a new film strip which covers, both photographically and in diagram form, the system of glass block fixing. Copies of the new film strip have been circulated to all the firm's depots and offices in the country. Requests for a showing may be addressed to any of these, to the publicity department at St. Helens, or to the West End office and showrooms of the firm at Selwyn House, Cleveland Row, St. James's, S.W.1.

Courses on "Development of the Appreciation of the Arts" (London, Manchester and Wakefield, September 25 to October 14) and "The Museum, the Art Gallery and the Public" (London, November 2 to 16) are among new ventures in the British Council's course programme for 1950. Courses will also be held on "Housing and Town Planning" (Liverpool, May 11 to 31) and "Town and Country Planning in Scotland" (Edinburgh, October 6 to 20). The British Council's programme of courses for 1950, now being distributed in some 60 countries in all parts of the world, announces 48 new courses

to be held in more than 24 different centres in England, Scotland and Wales between March and November. Length of the courses averages two or three weeks; and individual fees, fixed at the most economic rate, range from £16 to £35 exclusive of fares to and from Great Britain. More than 1,000 specialists from overseas are expected to take part.

Buildings Illustrated

Ideal Homes Exhibition, Olympia, W.14. (Pages 305-310). Architect: Sergei Kadleigh. A.R.I.B.A. General contractors: Olympia Ltd. Special sub-contractors for all aluminium construction: J. Starkie Gardner Ltd. Suppliers of aluminium: British Aluminium Co. Ltd. (sheet), James Booth & Co. Ltd. (extruded sections), T. I. Aluminium Ltd. (light alloy tubes).

Offices in Gillingham Street, S.W.1 (pages 311-313). Architects: Hugh Roberts & Davies, F.A.R.I.B.A. General Contractor: F. G. Minter (Decorations), Ltd. Sub-contractors: Glass, Pilkington Bros. Ltd.; patent glazing, Haywards Ltd.; patent flooring, Dunlop Rubber Co. Ltd.; central heating, Deane & Veale Ltd.; electric wiring (installation), Barlow & Young Ltd.; (fittings), Troughton & Young Ltd.; door furniture, Comyn Ching & Co. Ltd.; folding gates, sunblinds, metalwork, marble, shop fittings, office fittings, signs, E. Pollard & Co. Ltd.; textiles, Dunn & Sons Ltd.

Readers requiring up-to-date information on building products and services may complete and post this form to *The Architects' Journal* 9, 11 and 13, Queen Anne's Gate, S.W.1.

ENQUIRY FORM

I am interested in the following advertisement appearing in this issue of "The Architects' Journal."

.....

Please ask manufacturers to send further particulars to:—

NAME.....

ADDRESS.....

..... A.J. 9.3.50
 BLOCK LETTERS Please



STORY-DESIGNED CONTEMPORARY FURNITURE

The Story-designed Contemporary Furniture will not become obsolete; it is designed for to-day—and to-morrow.

The illustration shows some of our finest quality work.

Walnut Desk 5ft. 9in. by 2ft. 9in. from the Story Unit Furniture Range.

Walnut Chair with arms: Spring back and seat (No. 849a). Also obtainable without arms.

Modern Walnut Wing Chair (No. 949 W.A.) with down cushion.

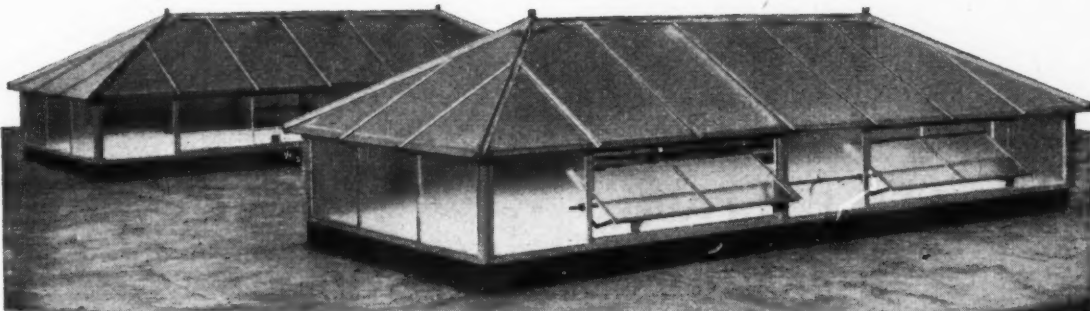
STORY'S of Kensington

Specialists in the finest English Traditional and Contemporary Furniture.

STORY & CO. LTD., (Contracts Dept.) 7 Kensington High Street, London, W.8.

Telephone: WEstern 0825

HILLS LANTERN LIGHTS



**LET IN NATURAL LIGHT
and reduce electricity costs**

“OVERHEADS” become assets when Hills Lantern Lights are installed in flat roofed buildings. Hills Lantern Lights are scientifically designed to provide maximum benefits of natural lighting, and controlled ventilation. Installation is simple and cost is quickly recovered by the saving in artificial lighting. Available in a wide range of standard sizes, or made to specific dimensions. All exposed steelwork can be rust-proofed by hot dip galvanising.

Our Technical experts are at your service on all lighting and ventilating problems. Architects, Builders and Factory Maintenance Managers are invited to write for fully descriptive literature.

HILLS [WEST BROMWICH]
LIMITED

ALBION ROAD · WEST BROMWICH · STAFFS · Telephone: WEST BROMWICH 1025 [7 lines]

LONDON OFFICE: 125, HIGH HOLBORN, W.C.1 Telephone: HOLBORN 8005-6

The Finlock Gutter



"We are very, very pleased with Finlock Gutters and are specifying them on the next 100 houses." (From Yorkshire).

£30 SAVED PER PAIR

Send for booklet to :

THE FINLOCK GUTTERS LTD.

20, ST. JOHN'S ROAD, TUNBRIDGE WELLS, KENT

Phone : Tunbridge Wells 21613

P. ro. Pat. 21231/48

OMISSIONS

9 yds. 11 in. Brickwork	160 ft. super of Roofing
160 ft. of 2 in. by 3 in.	80 ft. of Tile Fillet
80 ft. of Fascia	80 ft. of Soffit
80 ft. of C.I. Gutter	Beam Filling
2 Outlets	4 Stopped Ends
2 Offsets	2 Lead Slates
	Painting Gutters—Fascia—Soffit

ADDITIONS

FINLOCK PRE-CAST EAVES COMPLETE WITH ALL FITTINGS FIXED IN ONE DAY.

The above was sent to us enthusiastically by a firm in the North. Our claim is to save 4/- per foot run of eaves.

WE CAN GUARANTEE

- TEN YEARS FREE MAINTENANCE •
- THREE DAYS SITE LABOUR SAVED •
- A SAVING OF TIMBER AND STEEL •
- A TECHNICAL ADVANCE IN BUILDING CONSTRUCTION •



SOLE MANUFACTURERS

JAMES H. LAMONT & CO. LTD.

Engineers - Brassfounders

GYLEMUIR WORKS, CORSTORPHINE, EDINBURGH 12, SCOTLAND

Telephone : Corstorphine 66641-2

Telegrams : "Solderless, Edinburgh"

LONDON OFFICE : NORFOLK HOUSE, LAURENCE POUNTNEY HILL, E.C.4.

Telephone : Mansion House 5700

Telegrams : "Yutaka Cannon, London"

PIPES OF PEACE

With enthusiastic "Ughs" of approval these Noble Redmen forgot their tribal reserve and voted Mr. Alfred Leadbeater, that intrepid plumber, an honorary brave of the Chuckitups. The Hack-knife is buried and not for all the wampum in the U.S. Treasury would they return to the messy ways of their fathers. Sitting Duck said a heap of sooth when he intoned:—"Mighty medicine, Great Se-cu-rex, Swift as scalping, Tight as Tom-tom, holding fast the rushing waters in the best of Paleface lodges (quite the best of Palefaces dodges). Mighty plumber, Alf. Leadbeater, Mighty Totem, Great Se-cu-rex." "I tote 'em on every job" drawled Alf. (Slim) Leadbeater. "The finest Plumbers' Union in the World."

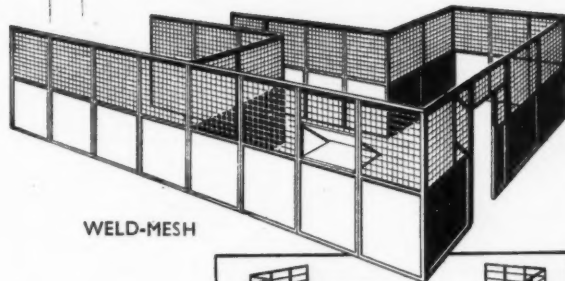
SECUREX

SOLDERLESS COMPRESSION JOINTS

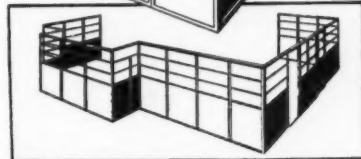
FROM BARE FLOOR TO COMPLETE OFFICE OR STORE *in a few hours*

Within a few hours of Timson Panel Partitioning arriving on site it can transform an empty floor into a busy office or store. Prompt Delivery—Glazed or Weld-Mesh. Built by craftsmen at practical prices—they can be enlarged as your business does likewise. Send for fully illustrated catalogue to—

TIMSON
Bros (ENGLAND) LTD



WELD-MESH



GLAZED

HEAD OFFICE:

MOOR ST., BIRMINGHAM 4. MID. 3301

Also at Jamaica St., Liverpool (Tel.: Royal 4307) and St. Mary's Place, Newcastle-on-Tyne (Tel.: 22278)

1122

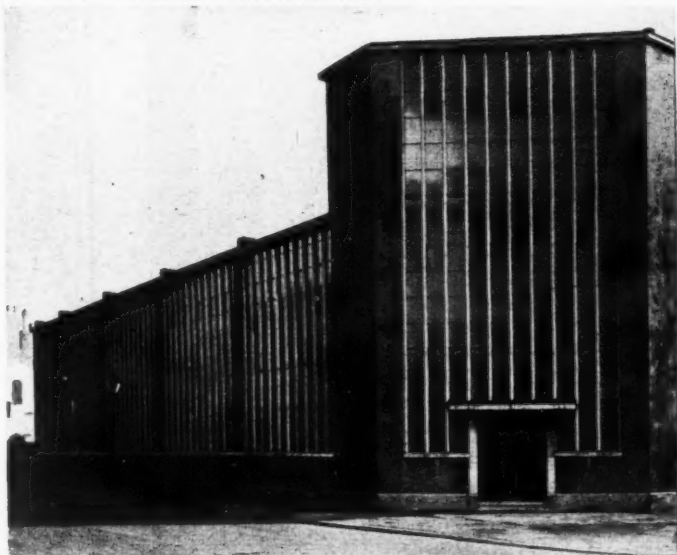
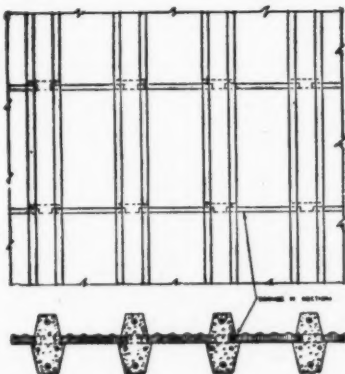
GLAS-CRETE WINDOWS

REINFORCED CONCRETE AND GLASS CONSTRUCTION

GLAS-CRETE patent Mullion Windows comprising vertical R.C. mullions, grooved and slotted to receive "H" bronze members, which in turn carry $\frac{1}{4}$ in. rough cast, figured cast, or sheet glass.

It is thus possible to construct windows continuously up to any desired height, as the weight of each glass is carried on the "H" members, which, in turn, transmit it to the mullions.

The mullions may be spaced at any centres up to 2ft. 9ins. but the "H" members should be at 1ft. 3ins. or multiples. Opening portions can be introduced where required.



G. H. Lawrence Ltd.
Sheffield.

Messrs. Hadfield Cawkwell & Davidson
Chartered Architects.

J. A. KING AND COMPANY LIMITED
181 QUEEN VICTORIA STREET, LONDON, E.C.4
TELEPHONE CENTRAL 5866 (6 LINES)
TELEGRAMS KINOVIQUE, CENT, LONDON



... but not
where Sugg
Emergency Lighting
is fitted

Confusion, loss or damage through light failure?

These dangers do not arise in Stores, Factories, Offices and Public Buildings where Sugg Emergency Gas Lighting Equipment is installed. If, in addition, the Sugg Automatic Gas Switch is fitted, immediately the electricity supply fails the gas 'stand-by' lights come into operation throughout the building, instantly and automatically.



**Compact, sturdy
and simple to
operate**

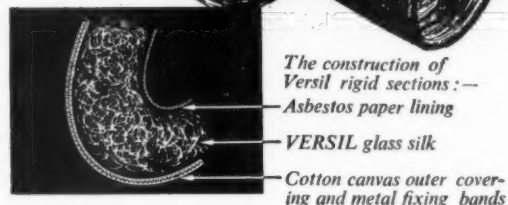
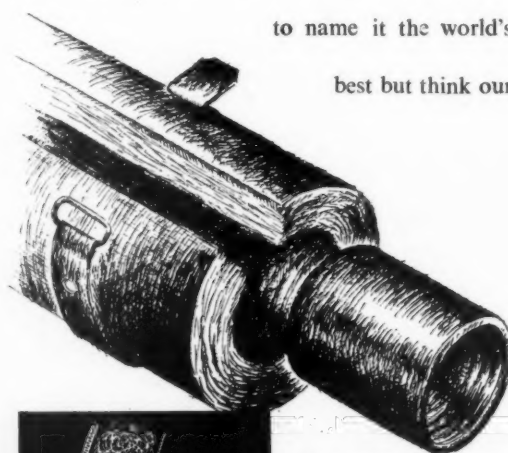
The Sugg Automatic Emergency Gas Switch has distinctive features. It is easy to set and completely reliable. The indicator is clearly marked—a feature particularly desirable when the switch is fixed far from the lights which it controls. The switch is suitable for A.C. or D.C. mains.

★ The Sugg Technical Department will advise on any point concerning the installation of auxiliary lighting. Write for illustrated brochure on Interior Lighting Fittings.



WILLIAM SUGG & CO. LTD
Chapter Street, Westminster, S.W.1

You shouldn't specify Versil unless you want a pipe insulation that's light, compact, robust and simple to fit; and, of course, removable so that all flange, valve and any other pipe inspections can be carried out easily and cheaply. Such is Versil. We quite modestly describe glass silk as one of the most efficient of all thermal insulators. We have confidence enough to name it the world's best but think our



*The construction of Versil rigid sections:—
Asbestos paper lining
VERSIL glass silk
Cotton canvas outer covering and metal fixing bands*

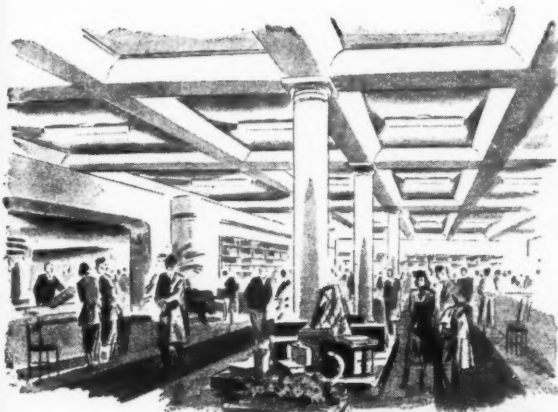
customers can judge this for themselves. To keep heat where it's wanted there is nothing else quite like Versil... pre-formed rigid sections are made for all standard size pipes...

V E R S I L
GLASS SILK

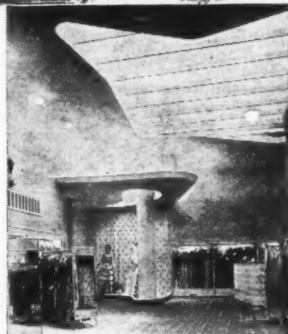
ALL-PURPOSE INSULATION

VERSIL LTD. RAYNER MILLS, LIVERSEDGE, YORKS
CPW

Brilliant Success of the new
"MAZDA-MELLOW"
Fluorescent Lamp



FIRST introduced in January, the new "Mazda-Mellow" fluorescent lamp has been hailed everywhere as a brilliant triumph of BTH research. It is ideal for restaurants, clubs, showrooms and wherever people desire a warm, friendly atmosphere. It adds new charm to beauty, new luxury to furnishings, new delight to food and provides the perfect finishing touch to any scheme of interior decoration.



"Mazda-Mellow" fluorescent lamps are at present available in 5 ft. 80 watt size, price 15/6 plus P.T. 4/-. Also available for use with instant-start gear, 16/6 plus P.T. 4/3.

For further details write to BTH Lighting Advisory Service, 44 Fitzroy Road, London, N.W.1 Tel: PRIMrose 7181/5, or to the BTH District Office in your area.

MAZDA

the outshining light



MAZDA LAMPS
AND LIGHTING EQUIPMENT

Made in England by



Leaders in Lighting

THE BRITISH THOMSON-HOUSTON COMPANY LIMITED
Crown House, Aldwych, London, W.C.2. Telephone: TEMple Bar 8040.

M4255

For the
Planning and
equipping of
Industrial
Canteens and
Hotels
Restaurants
Schools, etc.

consult

"Stotts & Oldham"

JAMES STOTT & CO. (ENGINEERS) LTD.
VERNON WORKS, OLDHAM, LANCs.

LONDON · GLASGOW · MANCHESTER

ROOFING FELTS, DAMP-PROOF COURSES, INSULATION

McNeill's

SERVE MODERN BUILDING FROM **3** CENTRES

• A complete service for all kinds of Bituminous Roofing Felts, [Damp-proof Courses, and Slagwool Insulation is available from each branch.

Head Office:
F. McNEILL & Co. Ltd., 10, Lower Grosvenor Place, London, S.W.1

Craftsmen

in

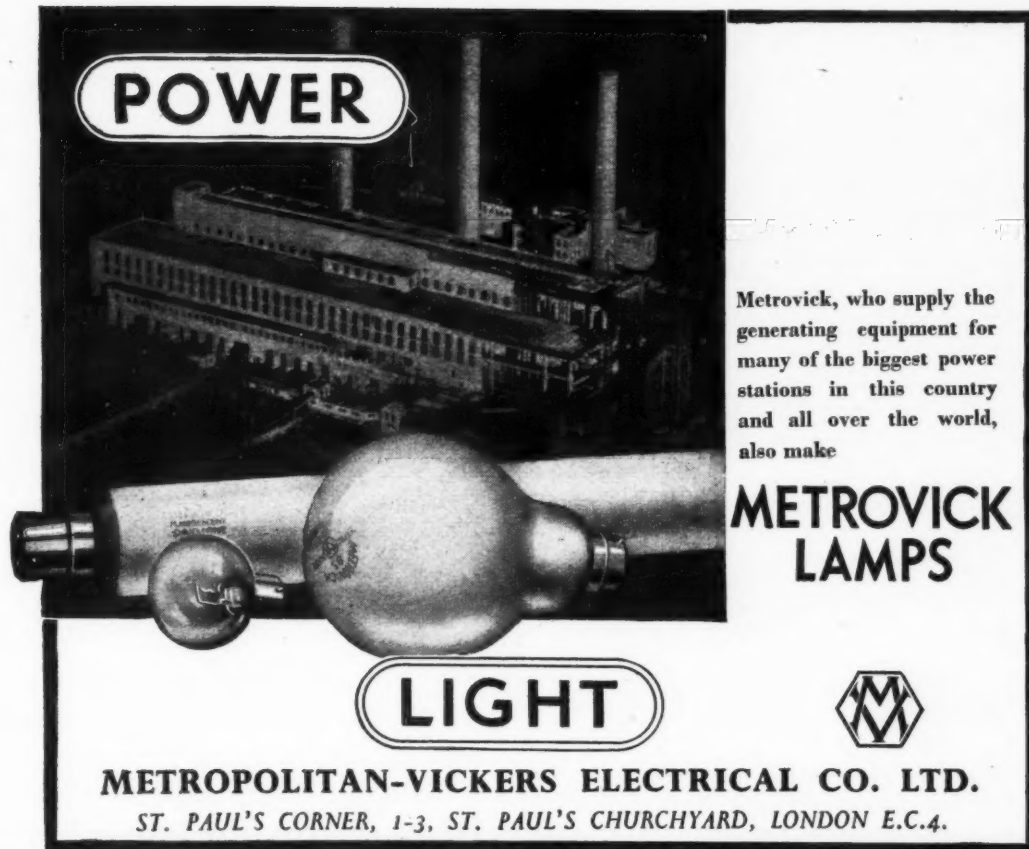
Ornamental and Solid Plasterwork

Interior Decoration

CLARK & FENN LTD

16 OLD TOWN. LONDON, S.W.4

MACAULAY 2455-6-7



POWER

Metrovick, who supply the generating equipment for many of the biggest power stations in this country and all over the world, also make

METROVICK LAMPS

LIGHT

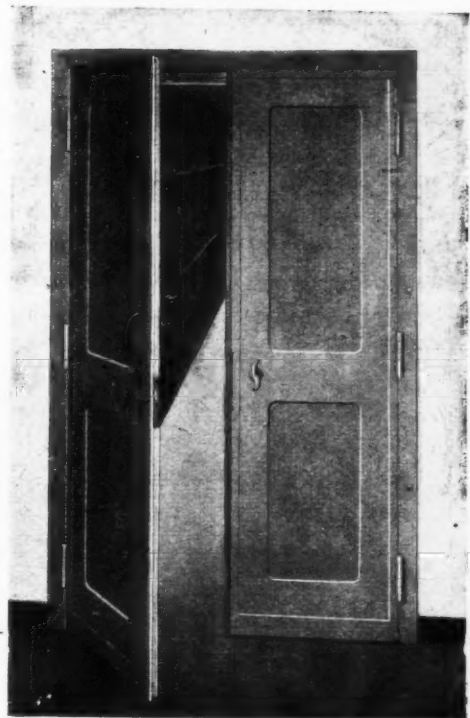
METROPOLITAN-VICKERS ELECTRICAL CO. LTD.
ST. PAUL'S CORNER, 1-3, ST. PAUL'S CHURCHYARD, LONDON E.C.4.

S/A 908

Fire Damage to Records Can Be The Worst of Losses

Protect documents, books, MSS, plans, art treasures, by installing DREADNOUGHT FIREPROOF DOORS.

These doors combine the highest degree of Fire Resistance with an adaptability to any style which makes them suitable for all kinds of public buildings, business houses or offices.

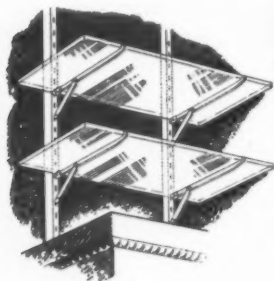


DREADNOUGHT

FIREPROOF DOORS (1930) LTD.

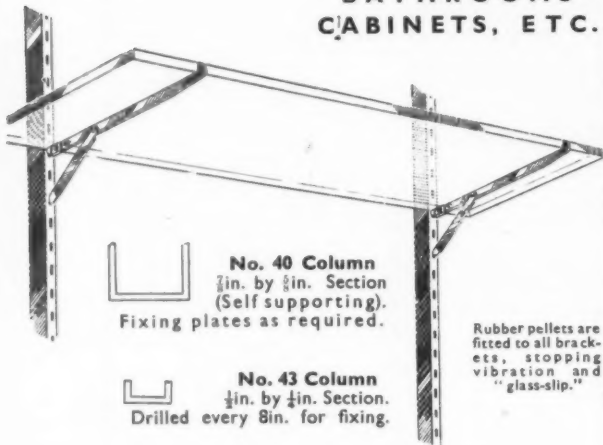
26 VICTORIA STREET, WESTMINSTER S.W.1

Telephone ABBEY 1411



HOKON

ADJUSTABLE
SHELVING
FITTINGS
for
SHOPS
COCKTAIL BARS
KITCHENS
BATHROOMS
CABINETS, ETC.



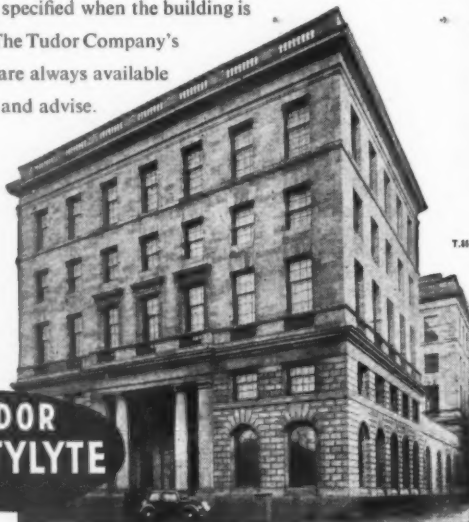
Send for descriptive Folder and Price List to—
CHURCH & CO. (Fittings) Ltd.
16 The Oracle, Minster Street, Reading

SAFETYLYTE guards the National Bank of Scotland

Tudor 'Safetylyte' emergency lighting equipment, instant in operation, automatic and notably easy on battery maintenance, is suitable for every type of building in which mains interruption can spell risk to life or property. It can be—and is being—fitted in many such buildings: but, ideally, should be specified when the building is planned. The Tudor Company's engineers are always available to discuss and advise.

Write for
Publication
No. 81/20

**TUDOR
SAFETYLYTE**



THE TUDOR ACCUMULATOR COMPANY LIMITED, 59 GROSVENOR GARDEN, LONDON SW1

STEELWORK

BY

R. W.

SHARMAN

LTD.

HEAD OFFICE: The Parade,
Sunbury, Middx.

Telephone : Sunbury 3210
Telegraphic address : Sharman, Sunbury

(all communications to be addressed to above)

WORKS: Swan Works,
Hanworth, Middx.
(and at Hayes, Middx.)

Telephone : Feltham 3007



Britannia rubber floors are the outcome of over 95 years practical experience in the manufacture of floor coverings. Durable and of distinctive appearance; easy to maintain and resilient; installed and guaranteed; these and other important advantages, coupled with a free planning and estimating service, combine to make Britannia Rubber Floors the complete answer to your problem.

CHOOSE WISELY — CHOOSE BRITANNIA

Britannia

See our exhibit at the Building Centre
9 Conduit Street, London, W.1.

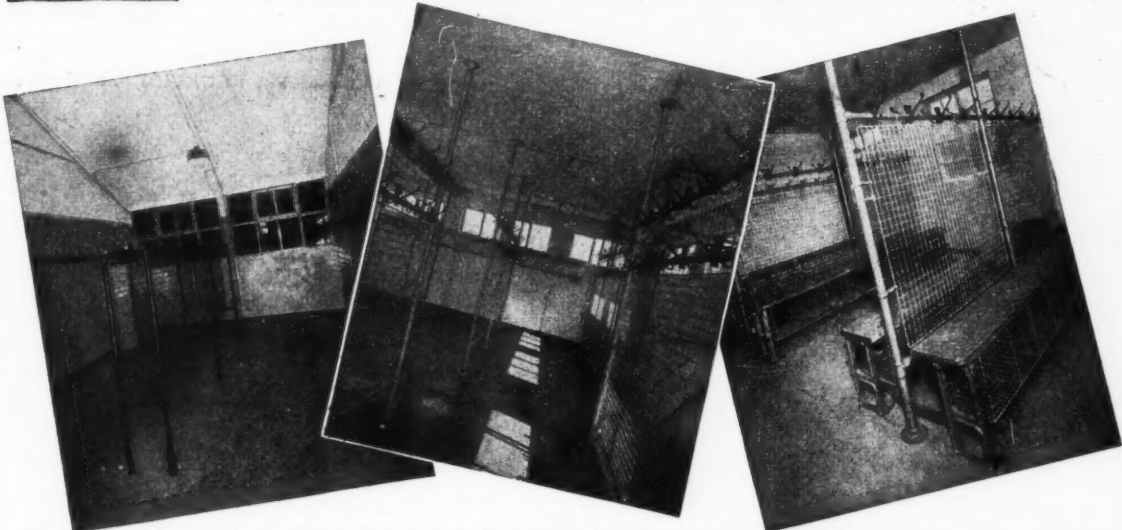
RUBBER & KAMPTULICON CO. LTD.
BRIDGEWATER ROAD, ALPERTON, WEMBLEY, MIDDX.
Established 1854

Telephone : Wembley 2961 (5 lines)

L7768



CLOAKROOM EQUIPMENT LIMITED IS CONCERNED SOLELY WITH THE MANUFACTURE, FABRICATION AND ERECTION OF CLOAKROOM AND CLOTHING STORAGE FACILITIES AND ALLIED EQUIPMENT FOR ALL PURPOSES.



Cloakroom Equipment Limited is unique in that it offers a specialist service fully qualified for the correct interpretation of architects' needs and anxious to explore, with them, all means of improving the standard of cloakroom fittings and clothing storage equipment generally.

CLOAKROOM EQUIPMENT LTD.,
STATION STREET, BROMSGROVE, WORCS.



INSTALL

CYCLONE

**FANS AND AIR CONDITIONING
EQUIPMENT**

AND INCREASE PRODUCTION!

CYCLONE SPECIALITIES

Multivane Fans—Forward and Reverse Curve • Patent Laminated Fan Casings for Super-silence Paddle Blade Fans • Air Propellers (Belt and Electric) • Copper Gilled-pipe Heaters • Unit Heaters • Air Filters • Air Washers (Water-Spray) • Cyclone Separators • Closed Circuit Motor Cooling

MATTHEWS & YATES LTD

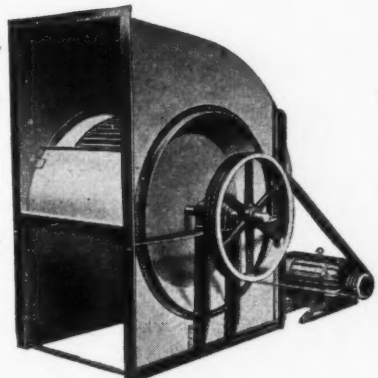
(Member of the Fan Manufacturers' Association Ltd.)

SWINTON (MANCHESTER) AND LONDON

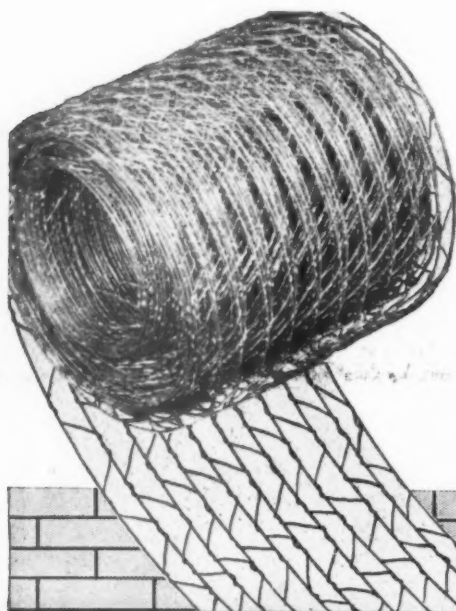
Telephones: SWinton 2273 (4 lines)

London, CHAncery 7823 (3 lines)

Also at GLASGOW • LEEDS • BIRMINGHAM • CARDIFF



Please write for illustrated
Brochures, quoting AJ/12



"BONDENN" BRICKWORK REINFORCEMENT

"BONDENN" Brickwork Reinforcement has two special features which are outstanding. It is manufactured from WIRE 40/45 TONS TENSILE and to prevent corrosion is PRE-GALVANIZED. Its inclusion in Brickwork gives a greater degree of STRENGTH AND SECURITY to the construction.

WE INVITE YOU TO WRITE FOR BROCHURE GIVING DETAILS, SPECIFICATION AND PRICES.



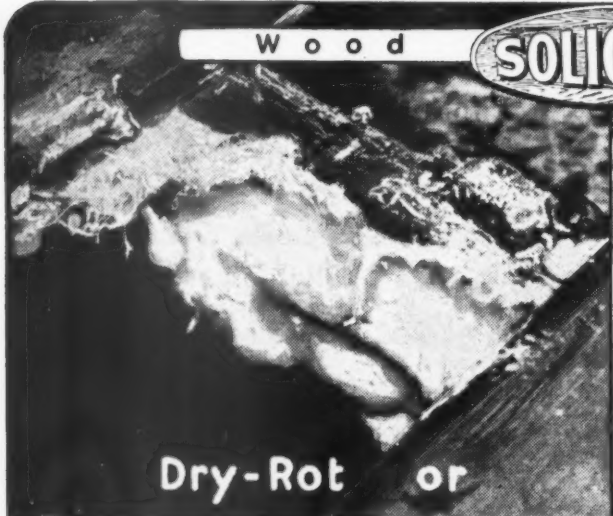
GALVO (WIRE NETTING) LIMITED

CONEYGRE ROAD · TIPTON STAFFS · PHONE TIPTON 1191

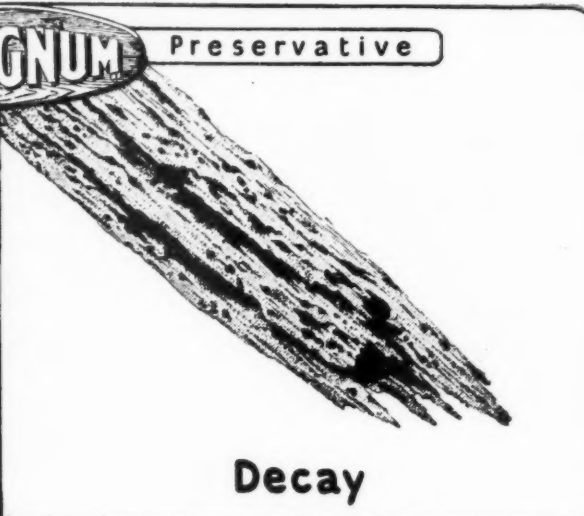
W o o d

SOLIGNUM

Preservative



Dry-Rot or



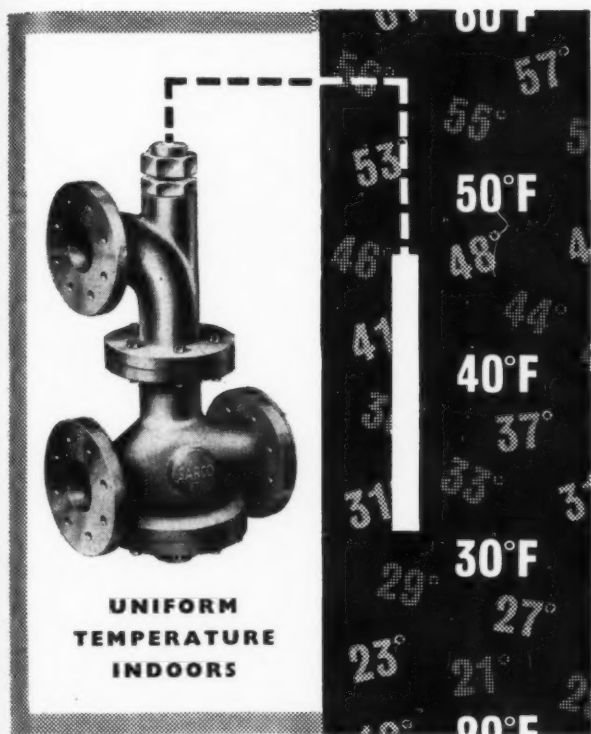
Decay

Wherever Timber is Used Solignum Protects it!

The preservation of timber has always been important, but its present shortage renders the need for Solignum even more imperative. For over 40 years Solignum has been used for the protection of woodwork against dry-rot and decay. It destroys the dry-rot fungus wherever brought into contact

with it and gives complete immunity against attack. Solignum is also used all over the world for the protection of timber against attack by white ant, wood borers and other destructive insects. But it must be Solignum—applied by brush coating, spray guns or by dipping.

SOLE MAKERS: Solignum Ltd., Donington House, Norfolk Street, Strand, W.C.2



External Temperature Operated

CONTROLLER FOR ACCELERATED HOT-WATER HEATING SYSTEMS

REGULATES TEMPERATURE on accelerated hot-water systems *in advance* of effect indoors of outdoor temperature changes.

Controls heat input at minimum required to balance heat losses, whatever the outside temperature conditions.

Can be designed to suit heat emission curves appropriate to type of heating surface.

After installation it can be corrected to allow for variation between design and site conditions.

Allows a boiler to operate at constant water temperature, putting less strain on boiler and reducing corrosion risks.

Entirely self-operating and quite independent of auxiliary sources of power.

Reasonable in cost; easy to install; easy on maintenance.

For details of the Sarco ETO Controller please send the request slip to SARCO THERMOSTATS LTD., Cheltenham, Glos.

Sarco
ETO
Controller



PLEASE SEND THIS ENQUIRY SLIP FOR DETAIL

NAME

ADDRESS

AR. 350



"... all window frames
and external
door frames
to be pointed with
SECOMASTIC..."

From a County Council's Specification



More and more architects are specifying SECOMASTIC for sealing window frames, because it possesses all the properties defined as necessary in a building mastic.

It is easy to apply, and adheres tenaciously to the surfaces of a joint or crack. It takes up all thermal, moisture or settling movements in joints without cracking or breaking away from the edges. It has high weathering properties and takes paint well.

SECOMASTIC is rapidly and easily applied by means of a SECO caulking gun as shown in the illustration. The mastic is supplied in kegs or in special extra-capacity cartridges.

For further details, 'phone or write to:

SECOMASTIC LIMITED

11 UPPER BROOK STREET · LONDON · W.1

Sales Section

Telephone: Mayfair 9080

S.3

MINIMISE RISKS OF FIRE

Sundeala Flameproof, a strong homogeneous permanently flame-proof medium Hard Board, is used extensively in all types of constructional work, including Transport, Exhibition Stands, Factories, Schools and Theatres—to meet the increasing demand for additional protection against spread of fire. Formerly known as Fyburstone, it is included on L.C.C. Official List. British Standards tests have placed Sundeala Flameproof Board in Class 2 (surface of low flame spread). Its pleasing selfcolour can be treated with any decorative finish where required.

SUNDEALA BOARD CO. LTD.
ALDWYCH HOUSE, LONDON, W.C.2
Telephone: CHAncery 8159
Works: Sunbury-on-Thames, Middx.
GLASGOW:
Baltic Chambers, 50 Wellington St., C.2
NEWCASTLE-UPON-TYNE:
Northumbria House, Portland Terrace, 2

SUNDEALA FLAMEPROOF MEDIUM HARDBOARD

(formerly known as "FYBURSTONE")



This is a Carron product made by modern Carron processes embodying the Carron tradition for fine workmanship begun in 1759

CARRON SOLID FUEL 'CABINET' COOKER MODEL 'B'

All enclosed and insulated • Shaker type bottom grate to fire box • Independent damper control to ovens • Concealed hinges to oven and hot chamber doors • Heat indicators to oven doors • Hinged heat conservers to insulated heat collector plates
• Burns continuously on bituminous and smokeless fuels Write for full details

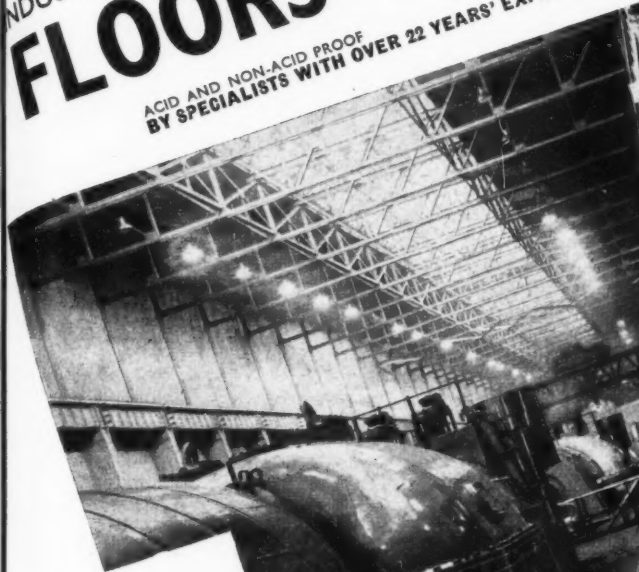


CARRON COMPANY • FALKIRK • SCOTLAND

Showrooms and Offices: 15 Upper Thames St., London, E.C.4 • 22-26 Redcross Street, Liverpool, 1 • 125 Buchanan St., Glasgow, C.1 • Office: 14 Ridgefield, Manchester, 2.

INDUSTRIAL FLOORS & WALL SURFACES

ACID AND NON-ACID PROOF
BY SPECIALISTS WITH OVER 22 YEARS' EXPERIENCE



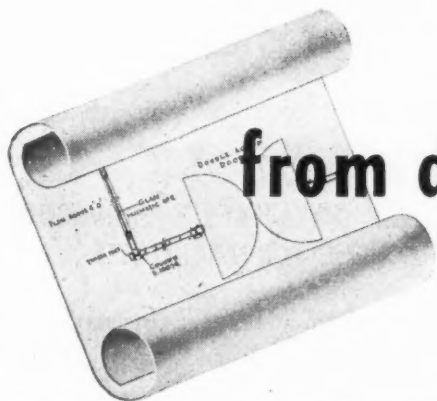
ALSO :—
Coloured Asphalt
Standard Asphalt
Flooring
"Accotile"
Flooring
Acid-proof Floors



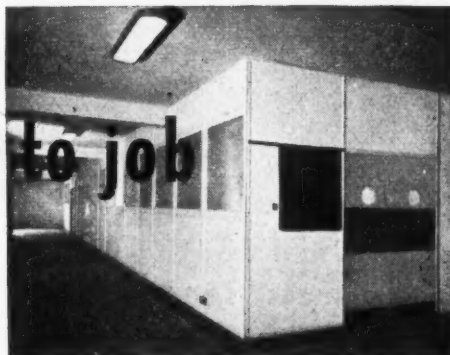
All Types
GRANOLITHIC Hardened Grano
"DIAMONITE" MACHINE FACED
"PRODORDUR" TILES
Coloured—Non-Slip—Hard-Wearing
"FERROGRAN" STEEL FACED
FLOOR FLAHS
Hydraulically pressed, surface
heavily impregnated with metal
for heavy duty
"CONSOL" STEEL ANCHOR
FLOOR PLATES
10 gauge steel
for very heavy
duty

HEAD OFFICE & WORKS :
WEDNESBURY, STAFFS.
Telephone : 0284 (five lines)
London Office : Artillery House, Artillery Row, S.W.1
Telephone : 1547-8 Abbey

PARTITIONING



from drawing to job



General view of corridor for a shipping company designed by R. W. Symonds, L.R.I.B.A. Partitioning and doors of "HOLOPLAST" with aluminium junctions and fittings.

Compactom are specialists in the fabrication and erection of licence-free Partitioning and offer an unrivalled service. By employing a measure of standardisation, time on the site is reduced to a minimum, costs are kept down, whilst still allowing considerable freedom in design and choice of materials. Photographs of recent contracts gladly sent on request.



PARTITIONING

COMPACTOM Ltd
OXGATE LANE, CRICKLEWOOD,
LONDON, N.W.2. Tel.: GLAdstone 2600

= FORESIGHT = PATENT - GRATES

The ROSSLYN

OVEN - OVER - FIRE
ALL - NIGHT - BURNING
COMBINATION GRATE



ON THE
GOVERNMENT LIST
OF APPROVED APPLIANCES
for the Housing Programme



Outstanding features are:—

CONTINUOUS BURNING at very low cost—normally 1 lb. of coke per hour ;

UNLIMITED HOT WATER, DAY AND NIGHT with minimum attention ;

UNIFORM OVEN TEMPERATURE makes the oven always available for immediate use ;

MAXIMUM EFFICIENCY and ACCURATE CONTROL by single Damper and Spin Wheel.

The ROSSLYN is a soundly constructed, self-contained, all-purpose cooker capable of amazing performance. Supplied in Porcelain finishes—SPRING GREEN, SANDRINGHAM, MOTTLE BROWN, BLACK. This model has recently undergone severe efficiency tests. Details, prices and sizes sent on request.

SAMUEL SMITH & SONS, LTD.,
BEEHIVE FOUNDRY, SMETHWICK 41 STAFFS

SPECIALISTS IN ALL
TYPES OF **WOOD FLOORINGS**



*Floors laid to Clients and
Architects specification*



DAVIS FLOORING CO.
GROVE HALL COURT
HALL RD., LONDON, N.W.8

Telephones: EUNningham 5616-3205

HEATING
VENTILATING
AIR CONDITIONING

H. W. DUTTON & Co. LTD.
25 Victoria St.,
Westminster, S.W. 1.

SINCE 1850 THE ARCHITECTS' BENEVOLENT SOCIETY

has assisted architects and their dependants
in time of need.

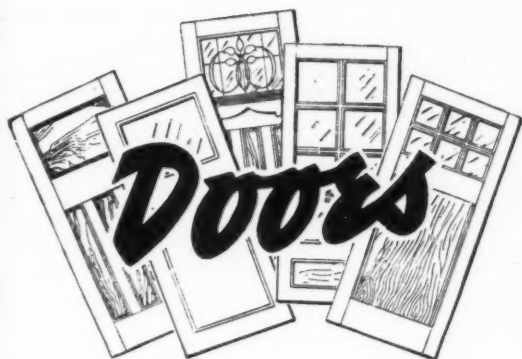
THE PENSION & FAMILY PROVISION SCHEME FOR ARCHITECTS

enables YOU to make provision now for
yourself in retirement and for dependants
in the event of your death.

Details will be sent without obligation
on request and giving your date of birth.

From :—

The Secretary, A.B.S. Insurance Dept.,
66, Portland Place, London, W.1.
(Tel. : WELbeck 5721.)



Our stocks of doors are large and the choice is wide—doors of traditional design, to B.S.S., and of every type. In addition we manufacture to your own special requirements. Fully illustrated details of Bryce White doors will be sent to you on receipt of your trade card or business heading.

You Buy **RIGHT** from

BRYCE WHITE & CO. LTD.

LANGLEY, SOUTHAMPTON, BRISTOL & LONDON

ESTABLISHED 1879

Head Office: **DESERONTO WHARF, LANGLEY, BUCKS**

Telephone: LANGLEY 232 & SOUTHALL 2231

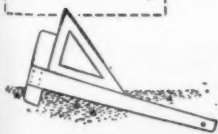


In 1948 a thirty-storey building was completed in America at an estimated financial saving of £84,000—or 10% of the total cost. This saving was made possible by the use of Vermiculite which, used as an aggregate in the production of lightweight concretes, building blocks and plaster, reduced the structural steel requirements by more than 1,000 tons.

A mineral of the Mica family, Vermiculite is fireproof, rodent proof and a non-conductor of electricity. It offers heat and sound insulation to a degree never before achieved.

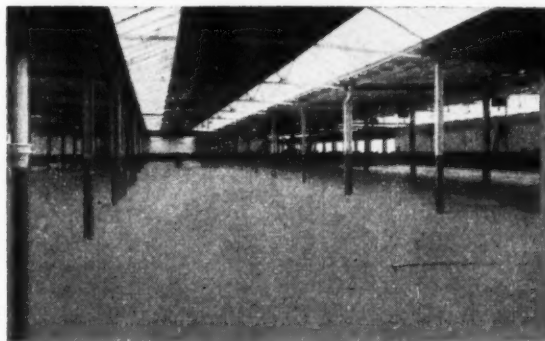
VERMICULITE

Vermiculite will open up new and exciting possibilities in your future plans. Write now for descriptive literature giving facts and figures about this outstanding discovery



PROCESSED BY
LOGAN
SONS & CO., LTD.

163, WEST GEORGE STREET, GLASGOW, C.2.
Telephone: **CENTRAL 0274.**



Industrial Estate, West Hartlepool.

PROVER II

PROTECTS AND PRESERVES OLD AND NEW
FLOORS

EVODE PROVER CRYSTALS—the effective hardening treatment for cement surfaces, concrete and granolithic floors. Eliminates dusting and resists the erosive action of oils, acids, etc. EVODE PROVER CRYSTALS have a silico base—scientifically prepared to obtain the maximum chemical reaction on the soft particles of concrete and transforming them into hard, flint-like compounds. The result is a permanent, hard-wearing, dustless floor. Does not contain silicate of soda. Send for folder giving details of treatment and price list.

ELIMINATES DUSTING • RESISTS CORROSION
HARDENS CEMENT FLOORS

EVODE LIMITED

GLOVER STREET, STAFFORD

Telephone: 1590 1591 1857

Grams: EVODE

**EXCEL
ASPHALTE**

Send us your Enquiries for

**Asphalte • Laminated Felt Roofings
Pitchmastic • Tar Paving**

ON APPROVED LIST OF ALL GOVERNMENT DEPARTMENTS

EXCEL SERVICE ENDURES

EXCEL ASPHALTE CO. LTD.

Broadway Chamber, Hammersmith, W.6

Telegrams: "CESLYM," LONDON. Telephone: RIVerside 6052 (5 lines)

NEW WAYS of BUILDING

edited by ERIC DE MARÉ, A.R.I.B.A.

Bound in full cloth boards
Size 9½ by 7½ ins., 236 pages, over
200 photographs, plans and drawings
30s. net. Postage inland 8d.

contributors

Dr. K. Hajnal-Konyi · concrete
O. Bondy · steel
Phillip O. Reece · timber
K. Cheeseman · glass
W. B. McKay · brickwork
Philip Scholberg · light metals and plastics
C. C. Handisyde · insulation

THIS IS A NEW KIND OF BOOK on building construction. Its purpose is to fill a gap by acting as an appendix, or post-graduate course, to the standard publications used by architectural and building students. As such it is designed to be of value to the practising architect and to all others interested in contemporary building, as well as to the student. The book is of a new kind in two other ways; first, in being written, not by one author, but by a group of men, each a specialist in his own subject, on whose knowledge the general practitioner can rely; second, in attempting to be something more than the usual dull textbook by illustrating examples of buildings at home and abroad selected not merely to inform on technique but to stimulate the designer's visual imagination.

The ARCHITECTURAL PRESS 9-13 Queen Anne's Gate, S.W.1



New Jam Factory at Artane
for Messrs. R. W. Scott &
Co. (Ireland) Ltd.

Structural Steelwork

FOR over half a century Smith & Pearson have occupied a foremost position in Structural Steelwork. During that time they have been responsible for the erection of numerous buildings and factories throughout Ireland, that stand to-day as proud monuments to the skill and efficiency of Irish craftsmen. If it's a Smith & Pearson structure—its heart is sound—and it will stand foursquare and firm for as long as man needs.

DESIGN • ERECTION • FABRICATION

Smith & Pearson

Smith & Pearson Ltd., Newcomen Iron Works, Dublin
STRUCTURAL STEELWORK • STEEL WINDOWS • WROUGHT IRON GATES

CLASS
Advertis
Manager
is. Queer
should
morning
paper.
Replies
care of
given ab
Availab
Control
Public
25s.
The Inc
Bavvov
architect
quiring
authorit
vacancie
Wass P.
There
Division
with rec
Successf
and elae
inga. inc
Establis
Housing
TANTS.
once in
and join
Salary
annum;
2005. pl
accordin
These
made in
Althou
of them
petition
vacancie
Apply
details
Chief
Abell H
Applic
tions of
to £700
ASSIST
the Ho
meacin
mined
ence. I
Govern
candida
appoint
securer
Succes
lake th
ing dra
multi-st
Housing
given
Iemions
Form
the Dir
minster
require
qualife
COM
Appli
of ASS
V. at
rising
maxim
ance of
Appli
Examin
tion of
of site
substanc
works.
The
visions
the su
a med
Appli
perien
recent
Archit
Kingst
March
Canv
disqua
The
housing
applic
arrang
Count
BOH
(a)
VII (C
(b)
A.P.T.
(c) J.
A.P.T.
Con
applic
24th
Munic

CLASSIFIED ADVERTISEMENTS

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

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

Available only to applicants excepted from the Control of Engagement Order, 1947.

Public and Official Announcement

25s. per inch; each additional line, 2s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: EMPLOYMENT REGISTER, WARR PARK, WHYTELAKE. Tel.: Uplands 0935. 991

MINISTRY OF WORKS.

There are vacancies in the Chief Architect's Division for ARCHITECTURAL ASSISTANTS, with recognized training and fair experience. Successful candidates will be employed in London and elsewhere on a wide variety of Public Buildings, including Atomic Energy and other Research Establishments, Telephone Exchanges, and Housing. Similar vacancies also exist for ASSISTANTS, with specialized knowledge and experience in stonemasonry, particularly in detailing and jointing of ashlar and carved stonework.

Salary: Architectural Assistants, £300-£525 per annum; Leading Architectural Assistants, £500-£625, plus overtime. Starting pay will be assessed according to age, qualifications and experience. These rates are for London; a deduction is made in the Provinces.

Although these are not established posts, some of them have long-term possibilities, and competitions are held periodically to fill established vacancies.

Apply in writing, stating age, nationality, full details of experience, and locality preferred, to Chief Architect, W.C.10/T, Ministry of Works, Abell House, London, S.W.1. 2055

LONDON COUNTY COUNCIL.

Applications are invited for unestablished positions of (i) ARCHITECT, Grade III (salaries up to £700 a year) and (ii) ARCHITECTURAL ASSISTANTS (salaries up to £580 a year), in the Housing and Valuation Department. Commencing salaries in either grade will be determined according to qualifications and experience. Engagement will be subject to the Local Government Superannuation Acts, and successful candidates will be eligible for consideration for appointment to the permanent staff on the occurrence of vacancies.

Successful candidates will be required to undertake the design, layout and preparation of working drawings for housing schemes (cottages and multi-storey flats), and will be employed in the Housing Architect's Division. Preference will be given to candidates holding a recognized professional qualification.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.W.1 (stamped addressed envelope required, and quote Ref. G.R.3). Canvassing disqualifies. (2259) 3046

SURREY COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT QUANTITY SURVEYOR, Grade V, at a commencing salary of £520 per annum, rising by annual increments of £15/£20 to a maximum of £570 per annum, plus London allowance of up to £30 per annum, according to age. Applicants should have passed the Intermediate Examination (Quantities) of the Royal Institution of Chartered Surveyors, and have experience of site measuring, abstracting and Billing on substantial contracts and taking off smaller works.

The appointment will be subject to the provisions of the Local Government Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 18th March, 1950.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

The Council will be unable to provide any housing accommodation, and the successful applicant will be expected to make his own arrangements in this direction.

DUDLEY AUKLAND,

Clerk of the Council.

County Hall, Kingston-upon-Thames. 3502

COUNTY BOROUGH OF PRESTON.

BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

(a) SENIOR QUANTITY SURVEYOR. A.P.T., VII (£635-£710).

(b) ASSISTANT ARCHITECT - HOUSING. A.P.T., V (£520-£570).

(c) ASSISTANT ARCHITECT - GENERAL. A.P.T., IV (£480-£525).

Conditions of the above appointments, and application forms, which must be returned by the 24th March, 1950, may be obtained from me.

W. E. E. LOCKLEY,

Town Clerk.

Municipal Building, Preston. 3663

BOROUGH OF SWINDON.
APPOINTMENT OF ASSISTANT BUILDING INSPECTOR.

Applications are invited for the above appointment in the Borough Architect and Planning Officer's Department, at a salary in accordance with Grade I of the National Scales (£390-£435).

Preference will be given to applicants who hold the Building Inspector's Certificate of the Institution of Municipal Engineers, and who have had a general experience in the building trade and the administration of Building Byelaws under a Local Authority.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination if required, and will be terminable on one month's notice on either side.

Applications, on forms obtainable from me, must be returned not later than 18th March, 1950.

Canvassing will be a disqualification.

D. MURRAY JOHN,

Town Clerk.

Civic Offices, Swindon.

22nd February, 1950.

3613

SALOP COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECTS, on A.P.T., Grades III-IV (£450 to £525 p.a.).

The appointments will be subject for their termination to one month's notice in writing on either side; to the terms of the National Joint Council's Scheme of Conditions of Service, and to the provisions of the Local Government Superannuation Act, 1937. The successful applicants will be required to pass a medical examination.

Application forms may be obtained from the County Architect, A. G. Chant, F.R.I.B.A., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of not more than three recent testimonials, not later than Tuesday, 21st March, 1950.

G. C. GODBER,

Clerk of the Council.

Shrewsbury.

February, 1950.

3623

AYCLIFFE DEVELOPMENT CORPORATION.
ARCHITECTURAL DEPARTMENT
APPOINTMENT OF ASSISTANT ARCHITECT FOR HOUSING WORK.

Applications are invited for the above appointment in the Department of the Chief Architect (G. A. Goldstraw, B.A.(Hons.), A.R.I.B.A.), at a salary in accordance with Grade A.P.T. V of the National Scheme of Conditions of Service, namely £520 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £570 per annum.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and housing accommodation will be available if necessary.

Applications, stating age, qualifications, previous experience and present appointment and salary, should be forwarded to the undersigned, to arrive not later than the 18th March, 1950.

A. W. THOMAS,

General Manager.

Newton Aycliffe, near Darlington.

1st March, 1950.

3634

CAMBRIDGESHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:-

(a) ONE QUANTITY SURVEYOR, Grade VIII, A.P.T. Division (£685 x £25-£760).

(b) ONE QUANTITY SURVEYOR, Grade VII, A.P.T. Division (£635 x £25-£710).

(c) ONE ENGINEERING ASSISTANT, Grade VIII, A.P.T. Division (£685 x £26-£760).

(d) ONE ARCHITECTURAL ASSISTANT, Grade VI, A.P.T. Division (£595 x £20 x £20-£660).

(e) ONE ARCHITECTURAL ASSISTANT, Grade IV, A.P.T. Division (£480 x £15-£525).

(a) and (b) Applicants should be Associate Members of the Royal Institute of Chartered Surveyors (Quantities Section), and have had considerable experience in taking off, abstracting and preparation of Bills of Quantities, specifications, detailed estimates, valuations for interim certificates, and the settlement of final accounts.

(c) Applicants should be fully qualified heating, ventilating and electrical Engineers, and have had experience in the preparation of schemes, including writing specifications and preparing estimates of costs.

(d) Applicants should be fully qualified Architects and Members of the Royal Institute of British Architects, and have had experience in design and construction of all types of public buildings.

(e) Applicants should be Student Members of the Royal Institute of British Architects, and have a good general knowledge of construction and detail, and be able to prepare drawings from preliminary sketches.

Applications, stating age, qualifications and experience, accompanied by one recent testimonial, and the names and addresses of two referees, should be sent to the Clerk of the County Council, Shire Hall, Cambridge, not later than Wednesday, 22nd March, 1950.

The appointments to be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937. The selected candidates will be required to pass a medical examination.

CHARLES PHYTHIAN,

Clerk of the County Council.

Shire Hall, Cambridge.

22nd February, 1950.

3622

COUNTY OF LINCOLN-PARTS OF

KESTEVEN.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of TWO ARCHITECTURAL ASSISTANTS.

(a) Salary on A.P.T., Grade V/VI, i.e., £520, rising by annual increments of £15, £20 and £25 to a maximum of £660 per annum. Previous experience in the Architect's Office of a Local Authority is desirable. Candidates should be Registered Architects, and preferably Associates of the R.I.B.A.

(b) Salary on A.P.T., Grade III, i.e., £450, rising by annual increments of £15 to a maximum of £495 per annum. Candidates should have had good general experience in the design and construction of buildings, and preference will be given to those who have passed the Intermediate examination of the R.I.B.A.

Commencing salary in either appointment will be in accordance with experience, and car and subsistence allowances will be paid on the National Scales.

The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, to satisfactory medical certificates, and to one month's notice in writing on either side.

Applications, stating which appointment is desired, and giving full particulars of age, experience, qualifications, and present appointment, together with copies of two recent testimonials or the names and addresses of two referees, should reach the undersigned not later than the 31st March, 1950. Canvassing, either directly or indirectly, will disqualify.

J. E. BLOW,

Clerk of the County Council.

County Offices, Sleaford, Lincs.

22nd February, 1950.

3606

COUNTY BOROUGH OF EAST HAM.

HOUSING DEPARTMENT.

Applications are invited for the following appointment:-

CHIEF TECHNICAL ASSISTANT, Grade A.P.T., VIII (£685-£760 per annum), at a commencing salary of £735 per annum, plus appropriate London weighting. Applicants should be Associate Members of the Royal Institute of British Architects, and have had experience in design of modern housing and areas of housing redevelopment. The possession of a Town Planning qualification will be an advantage.

Full particulars of the duties, terms and conditions of appointment and form of application, which must be returned by 31st March, 1950, can be obtained from the undersigned.

H. A. EDWARDS,

Town Clerk.

Town Hall, East Ham, E.6.

March, 1950.

3679

NORTH THAMES GAS BOARD.

APPLICATIONS are invited for the following appointment in the Architects' Section of the Chief Engineer's Department at Westminster: SENIOR ARCHITECTURAL ASSISTANT, minimum starting salary £650 per annum.

Applicants, who must be Registered Architects and should be studying for or have passed the Final Examination of the R.I.B.A., should be capable of preparing working and detailed drawings and specifications, and supervising and controlling the work on contracts. Experience in design and planning of industrial buildings would be an advantage.

The appointment is of a permanent nature, and pension arrangements will be discussed with short list candidates.

Applications, stating age, qualifications and particulars of previous appointments held, must be submitted to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, London, W.8, quoting reference 9757. 3543

LEEDS REGIONAL HOSPITAL BOARD.

Applications are invited for the post of ARCHITECTURAL ASSISTANT on the Headquarters Staff of the Board. Salary scale £450-£525. Commencing salary in accordance with experience.

Candidates must have experience of preparing details, working drawings and surveying buildings, and preferably have some experience of hospital construction.

The appointment will be subject to the National Health Service (Superannuation) Regulations, 1947/49, and in the case of a new entrant to the Service to the passing of a satisfactory medical examination.

Applications, stating age, qualifications, and details of experience, together with the names of three referees, should be forwarded to the Secretary to the Board, 29/31, Eastgate, Leeds, 2, not later than Thursday, the 16th March, 1950.

Canvassing in any form, either directly or indirectly, will disqualify. 3604

CITY OF OXFORD EDUCATION COMMITTEE.

SCHOOLS OF TECHNOLOGY, ART AND

COMMERCE.

SCHOOL OF ARCHITECTURE AND

BUILDING.

Applications are invited for the post of: Full-time INSTRUCTOR AND LECTURER IN BUILDING CONSTRUCTION AND ALLIED SUBJECTS.

Applicants must be suitably qualified in Architecture, Building or Civil Engineering. Salary in accordance with the Burnham Scale for Establishments for Further Education.

Forms of application and further particulars may be obtained on receipt of a stamped addressed envelope from the Chief Education Officer, 77-79, George Street, Oxford, to whom completed forms must be returned as soon as possible, and in any case not later than 14 days from the appearance of this advertisement. 3649

COUNTY BOROUGH OF HALIFAX.
BOROUGH ENGINEER'S DEPARTMENT.
Applications are invited for the appointment of a GRADUATE ASSISTANT ENGINEER. Salary in accordance with National Scales, A.P.T. I (£390-£435).

Candidates should possess an Engineering degree and will be required to pass a medical examination. The appointment will be subject to the conditions of service adopted by the Corporation and to the Local Government Superannuation Act, 1937.

Applications, stating age, qualifications, and any previous experience, accompanied by copies of three recent testimonials, should be endorsed "Graduate Assistant," and delivered to the undersigned not later than Saturday, 11th March, 1950.

RICHARD DE Z. HALL,

Town Hall, Halifax. 3615
21st February, 1950.

LONDON COUNTY COUNCIL.
ARCHITECT'S DEPARTMENT.
Architect to the Council: ROBERT H. MATTHEW.
Deputy Architect: J. L. MARTIN.

APPOINTMENT OF SCHOOLS ARCHITECT, ASSISTANT SCHOOLS ARCHITECT, AND PRINCIPAL ASSISTANT (PROFESSIONAL).
Applications are invited for the following positions in the Architect's Department:—

(1) SCHOOLS ARCHITECT. £1,500 × £100-£1,700.
Responsible to the Architect for the Schools Division.

(2) ASSISTANT SCHOOLS ARCHITECT. £1,250 × £75-£1,550.
To assist the Schools Architect, mainly in the sphere of design.

(3) PRINCIPAL ASSISTANT (PROFESSIONAL). £960 × £40-£1,000 × £50-£1,100.
To take charge of a group in the Schools Division.

No age limits. Experience of public architecture not essential.
Form of application obtainable from the Architect to the Council, The County Hall, Westminster Bridge, London, S.E.1. Stamped addressed foolscap envelope necessary. Letters should be marked AR/P/S. Application forms to be returned not later than 31st March, 1950.

Canvassing disqualifies. (257) 3655

BOROUGH OF HORNSEY.
ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the following temporary appointment:—
ARCHITECTURAL ASSISTANT, Grade I-III (A.P.T. Division of the National Scale), at a salary of £350-£496 per annum, plus appropriate London weighting allowance. Commencing salary according to experience.

Applications, stating age, present and previous appointments, technical training, qualifications, experience, etc., together with the names of three referees, must be delivered to Mr. J. H. McVillie Richards, A.M.I.C.E., M.I.Mun.E., Borough Engineer and Surveyor, Hornsey Town Hall, N.8, not later than the 20th March, 1950 (Monday).

Canvassing, either directly or indirectly, will disqualify.

H. BEDALE,

Town Clerk.
Town Hall, Hornsey, N.8.
26th February, 1950. 3662

BOROUGH OF TOTTENHAM.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

Applications are invited for the following established posts:—

ARCHITECTURAL SECTION:
(i) ARCHITECT, Grade A.P.T. VII, £635-£710.
(ii) ARCHITECT, Grade A.P.T. VI, £595-£660.
(iii) ARCHITECTURAL ASSISTANTS, Grades A.P.T. II-IV, £420-£525.

TOWN PLANNING AND BUILDING SURVEYING SECTION:
(iv) SENIOR TOWN PLANNING ASSISTANT, Grade VIII, £685-£760.
(v) TOWN PLANNING ASSISTANTS, Grades II-IV, £420-£525.

"London weighting" of £10 to £30 (according to age) will be added to all the above salaries.

QUALIFICATIONS REQUIRED:
Posts (i), (ii) and (iv): Applicants must hold an appropriate final professional qualification and have had considerable experience.

Posts (iii) and (v): The terms of the decisions of the National Joint Council for Local Authorities' Professional Services, dated 26th July, 1949, will apply, particulars of which will be forwarded with the application form.

The appointments will be subject to the provisions of the Scheme of Conditions of Service for Local Authorities' Administrative, Professional, Technical and Clerical Services; to the provisions of the Local Government Superannuation Act, 1937; and the successful candidates will be required to pass a medical examination.

The Council are unable to offer housing accommodation.

Forms of application may be obtained from the Borough Engineer, Town Hall, Tottenham, N.15, to whom they should be returned not later than 31st March, 1950.

M. LINDSAY TAYLOR,

Town Clerk.
Town Hall, Tottenham, London, N.15.
March, 1950. 3656

CITY OF WAKEFIELD.
CITY ENGINEER'S DEPARTMENT.
APPOINTMENT OF PRINCIPAL ARCHITECTURAL ASSISTANT (GRADE VII).

Applications are invited for the following appointment:—
Principal Architectural Assistant (Housing and General).

This appointment is on Grade VII (£635-£710), and the commencing salary will be decided according to the qualifications and experience of the successful applicant.

The appointment will be subject to the Local Government Superannuation Act and to the passing of a medical examination.

Candidates should state in writing whether to their knowledge they are related to any member or senior official of the Corporation. Canvassing will be a disqualification.

Applications, endorsed "Principal Architectural Assistant," stating age, qualifications, present and previous appointments, and details of experience, together with copies of two testimonials or name of two referees, should be sent to me not later than Friday, 17th March, 1950.

The Council will give consideration to the provision of a house for the successful candidate if required.

W. S. DES FORGES,

Town Clerk.
Town Hall, Wakefield.
24th February, 1950. 3654

BOROUGH OF ILFORD.
APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT (GRADE IV).

Applications are invited for the position of Temporary Architectural Assistant on the staff of the Borough Engineer.

Salary A.P.T., Grade IV, £490 × £15-£525, plus appropriate London weighting.

Candidates should possess approved qualifications and have general Architectural experience in Municipal Buildings, particularly with regard to the preparation of contracts and of working drawings.

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

Forms of application, obtainable from the Borough Engineer, Town Hall, Ilford, should be returned to the undersigned not later than 20th March, 1950.

K. F. B. NICHOLLS,

Town Clerk.
Town Hall, Ilford, Essex.
February, 1950. 3652

BOROUGH OF ILFORD.
BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

APPOINTMENT OF TEMPORARY CLERK OF WORKS.

Applications are invited for the position of temporary Clerk of Works. Salary A.P.T., Grade IV, £480 × £15-£525, plus appropriate London weighting.

Applicants must have had considerable experience in a similar capacity, have a sound knowledge of building construction, and be capable of supervising building work of all types, including Schools.

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

Forms of application obtainable from the Borough Engineer, Town Hall, Ilford, should be returned to the undersigned not later than 20th March, 1950.

K. F. B. NICHOLLS,

Town Clerk.
Town Hall, Ilford.
February, 1950. 3651

GLOUCESTERSHIRE COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the following appointments:—

(a) ASSISTANT ARCHITECTS.
Candidates should be qualified members of the R.I.B.A., with good general experience in design and construction of public buildings, including schools.

A.P. and T., Grade V, and eligible for promotion to A.P. and T., Grade VI, according to experience.

(b) ARCHITECTURAL ASSISTANTS.
Candidates should have passed the Intermediate Examination of the R.I.B.A., with general experience in design and construction.

A.P. and T., Grade IV.
Appointments will be subject to the Local Government Superannuation Act, 1937, and candidates, before appointment, will be required to pass a medical examination.

Applicants should state whether or not they possess a motor car and/or hold a driving licence. The appointments will be terminable by one month's notice on either side.

Applications, stating (1) name and address, (2) married or single, (3) age, (4) qualifications, (5) present position, salary, and date of appointment, (6) previous positions with dates and salaries, (7) particulars of experience, and accompanied by copies of three recent testimonials, should be sent to S. E. Urwin, F.R.I.B.A., County Architect, Shire Hall, Gloucester, not later than Thursday, 16th March, 1950.

GUY H. DAVIS,

Clerk of the County Council.
27th February, 1950. 3650

SURREY COUNTY COUNCIL.
COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, Grade IV, at a commencing salary of £480 per annum, rising by annual increments of £15 to a maximum of £525, plus London allowance of up to £30, according to age.

Applicants must be of good general training and give full details in their applications, and preference will be given to applicants who have passed the Intermediate Examination of the Royal Institute of British Architects.

The appointment will be subject to the provisions of the Local Government Act, 1937, and the successful applicant will be required to pass a medical examination.

Applications, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, should be sent to the County Architect, Surrey County Council, County Hall, Kingston-upon-Thames, not later than the 18th March, 1950.

Canvassing, either directly or indirectly, will disqualify a candidate from consideration.

The Council will be unable to provide any housing accommodation, and the successful applicant will be required to make his own arrangements in this direction.

DUDLEY AUKLAND,

Clerk of the Council.
County Hall, Kingston-upon-Thames. 3643

COUNTY BOROUGH OF BELFAST.
EDUCATION ARCHITECT'S DEPARTMENT.

Applications are invited for the posts of SENIOR ASSISTANT ARCHITECTS on the permanent staff of the Education Architect's Department.

Candidates should be fully qualified and be capable of taking charge of building schemes in connection with the design and erection of school buildings. Applicants must not be more than 45 years of age on the date of taking up the appointment.

The salary is £550 × £25-£650 per annum, plus cost-of-living bonus, at present £90 per annum. The commencing salary in each case will be determined in the light of the qualifications, ability and experience of the person appointed.

Preference will be given to suitably qualified ex-Service candidates.

Applications, endorsed "Appointment of Senior Assistant Architects," giving age and full particulars of education, qualifications and experience, accompanied by copies of three recent testimonials, must be lodged with the undersigned not later than 4 p.m. on Thursday, 16th March, 1950.

Canvassing in any form, oral or written, direct or indirect, will, if proved to the satisfaction of the Committee, disqualify a candidate for appointment.

JOHN DUNLOP,

Town Clerk.
City Hall, Belfast.
February, 1950. 3638

URBAN DISTRICT COUNCIL OF URMSTON.
ENGINEER AND SURVEYOR'S DEPARTMENT.

SENIOR ARCHITECTURAL ASSISTANT.

Applications are invited from men and women for the above permanent appointment, at a salary in accordance with Grade VI of the Administrative Professional and Technical Division of the National Joint Council Scales (£595-£660) per annum.

Applicants should have received training in Architecture, Planning and Surveying.

The appointment is subject to a medical examination, the Local Government Superannuation Act, 1937, the N.C. Conditions of Service, and one month's written notice on either side.

If necessary, consideration will be given to the provision of a house for the successful candidate.

Applications, stating age, qualifications and experience, and disclosing whether or not the applicant is related to any member or senior officer of the Council, should be accompanied by copies of two recent testimonials, be endorsed "Senior Architectural Assistant," and reach the undersigned not later than the 22nd March, 1950.

L. WATKINS,

Clerk of the Council.
Council Offices, Urmston.
27th February, 1950. 3665

STAFFORDSHIRE COUNTY COUNCIL.
SMALL HOLDINGS DEPARTMENT.

APPOINTMENT OF ARCHITECTURAL DRAUGHTSMAN.

Applications are invited for the above appointment at a salary in accordance with A.P.T. Grade V (£520-£570 per annum). Applicants should be registered Architects. The appointment is subject to the National Joint Council's Scheme of Conditions of Service: the successful applicant will be required to pass a medical examination, and to contribute under the Local Government Superannuation Act, 1937.

The post is terminable by one month's notice. Applications, stating age, experience, and qualifications, should be forwarded, together with copies of three recent testimonials, to reach the County Estate Agent, County Buildings, Stafford, not later than 18th March, 1950. Applicants must state whether or not they are related to any member of the County Council. Canvassing, directly or indirectly, will be a disqualification.

T. H. EVANS,

Clerk of the County Council.
27th February, 1950. 3661

COUNTY BOROUGH OF EAST HAM.
BOROUGH ENGINEER'S DEPARTMENT.
Applications are invited for the under-mentioned appointments:—
SENIOR ARCHITECTURAL ASSISTANT
(Grade A.P.T., VI). Salary £595 to £660 per annum.

ARCHITECTURAL ASSISTANT (Grade A.P.T., V). Salary £530 to £570 per annum.
ARCHITECTURAL ASSISTANT (Grade A.P.T., IV). Salary £480 to £525 per annum.
ENGINEERING ASSISTANT (Grade A.P.T., IV). Salary £480 to £525 per annum.

The appropriate London weighting is paid in addition to the above salaries, and salaries in excess of the minima of the grades may be paid according to the qualifications and experience of successful candidates.

The Council will be prepared to consider applications for a subsistence allowance in appropriate cases from persons appointed should they be unable to obtain suitable housing accommodation.

Full particulars of the duties, terms and conditions of appointment, and form of application (which must be returned by Monday, 20th March, 1950), may be obtained from the undersigned.

H. A. EDWARDS,
Town Clerk.

Town Hall, East Ham, E.6. 3678
2nd March, 1950.

CUMBERLAND COUNTY COUNCIL.
Applications are invited for the appointment of **CLERK OF WORKS**, to supervise the erection of a New Primary School at Seascale.
The inclusive wage will be £10 10s. per week. Applicants should have good practical knowledge of all trades and supervisory experience in the erection of steel frame buildings, and should be able to measure up work.

The appointment will be temporary and subject to four weeks' notice on either side.

The successful applicant will be expected to commence his duties on or about 17th April, 1950. Applications, stating age, present employment, qualifications and experience, together with copies of three testimonials, should be delivered to John H. Haughan, F.R.I.B.A., County Architect, 15, Portland Square, Carlisle not later than Tuesday, 21st March, 1950.

G. N. C. SWIFT,

Clerk of the County Council.

February, 1950. 3680

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH.
BUILDING RESEARCH STATION.

Applications are invited for three temporary posts of **ASSISTANT ARCHITECT** at the Building Research Station, Garsston, near Watford, Herts., of the Department of Scientific and Industrial Research. Salary will be on the range £448-£720 p.a. for men, somewhat lower for women. Candidates should have good architectural qualifications, and preferably some training in elementary science, and should be at least 25 years of age. The range of work for which architects are required at the Station covers the following aspects:—

(a) Work in close association with physicists on the study of the functional requirements of buildings, such as lighting, sound transmission and acoustics, heating and ventilation.

(b) General liaison work with the building industry, inspection of building practice, and examination of difficulties and failures. This group also would assist in dealing with the considerable volume of technical enquiries received from the building industry.

(c) Work in relation to experimental building and research in architectural design in the light of the results of work in the laboratory.

Forms of application are obtainable from Ministry of Labour and N.S. Technical and Scientific Register (K), York House, Kingsway, London, W.C.2.

The Reference Number J.9/50 should be quoted. 3684
21.2A30(12)

HAYDOCK URBAN DISTRICT COUNCIL.
ENGINEER & SURVEYOR'S DEPARTMENT.
ARCHITECTURAL ASSISTANT.

The Council invite applications for the above appointment, at a salary in accordance with Grade III, A.P.T. Division of the National Joint Council Scheme of Conditions of Service (£450 per annum, rising by annual increments of £15 per annum to a maximum of £495 per annum).

Applicants must have had experience in the carrying out of surveys, preparation of plans, specifications for architectural work usually undertaken by a Local Authority, and in particular Housing. Proficiency in the complete process of taking off and billing quantities for housing will be considered an advantage.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, the National Joint Council Scheme of Conditions of Service, and the person appointed will be required to pass a medical examination. The Council will be prepared to allocate a Council house to the successful applicant, if desired.

Applications, endorsed "Architectural Assistant," stating age, present, and previous appointments, and experience, together with names of two persons to whom reference may be made, should be received by the undersigned not later than Wednesday, the 22nd March, 1950.

C. LEDGER,

Clerk of the Council.

Council Offices, Church Road, Haydock. 3686
2nd March, 1950.

EAST RIDING OF YORKSHIRE COUNTY COUNCIL.

COUNTY PLANNING DEPARTMENT.
SENIOR PLANNING ASSISTANT.

Applications are invited for the undermentioned appointments:—

(a) **SENIOR PLANNING ASSISTANT** A.P.T., Grades V and VI. Salary scale £520-£660. The commencing salary will be fixed according to experience and qualifications. Candidates must be Associate Members of the Town Planning Institute who possess architectural experience, or Associates of the Royal Institute of British Architects. The Officer will be required to provide a car and travelling allowance will be paid in accordance with the scale adopted by the County Council.

(b) **CLERK (Male)**, Clerical Division. Salary scale £335-£440.

Applicants should have had experience in an appropriate department of a Local Authority.

Appointments will be to the permanent staff and subject to the National Joint Council's conditions of service as adopted by the County Council.

Appointments will be terminable by one month's notice on either side, and will be subject to the Local Government Superannuation Act, 1937. Selected candidates will be required to pass a medical examination to the satisfaction of the County Medical Officer of Health. Applications, stating age, qualifications and experience, should be received by the undersigned not later than 31st March, 1950, and should be accompanied by copies of two recent testimonials. Canvassing, either directly or indirectly, will be a disqualification, and relationship to any member or senior officer of the Council must be disclosed.

T. STEPHENSON,

Clerk of the County Council.

County Hall, Beverley. 3704

COUNTY OF ESSEX.

ILFORD COMMITTEE FOR EDUCATION.

The Essex County Council invite applications for a **SECTIONAL ASSISTANT ARCHITECT** in the Office of the Borough Engineer of Ilford.

Applicants should be Members of the Royal Institute of British Architects and have had considerable experience in the planning, designing, construction and supervision of School buildings and have had administrative experience.

The scale of salary will be in accordance with the National Joint Council, A.P.T. Division, Grade VII, £635 × £25 to £710, plus the appropriate London area allowance. There will also be paid such travelling and subsistence allowances as may from time to time be determined by the Council.

Applications should be made on a form to be obtained from, and returned to, the Borough Education Officer, Education Offices, Town Hall, Ilford, together with copies of not more than three recent testimonials, within 14 days of the appearance of this advertisement. 3702

NORTH RIDING EDUCATION COMMITTEE.

Applications are invited for the following permanent appointments:—(a) **ONE ASSISTANT ARCHITECT** (Grade A.P.T., VI) (salary £595, rising to £660). (b) **TWO ASSISTANT ARCHITECTS**, Grade A.P.T., V (salary £520, rising to £570). Preference will be given to Associate Members of the Royal Institute of British Architects.

(c) **ONE ASSISTANT QUANTITY SURVEYOR**, Grade A.P.T., I (salary £480 × £15 to £525). Preference will be given to Members of the Royal Institute of Chartered Surveyors.

(d) **ONE JUNIOR QUANTITY SURVEYING ASSISTANT**, Grade A.P.T., I (salary £390 × £15 to £435). Previous experience will be taken into account in fixing the commencing salaries.

The posts are subject to the Local Government Superannuation Act, and the successful applicants will be required to pass a medical examination by the County Medical Officer. The posts are exempt from the Control of Engagement Order. For further particulars and application form, send stamped addressed envelope. Completed applications required by Saturday, 1st April, 1950. Canvassing disqualifies.

F. BARRACLOUGH,

Secretary for Education.

Education Offices, County Hall, Northallerton. 3700

SOUTHERN ELECTRICITY BOARD.

NO. 1 (SOUTHALL) SUB-AREA.

CIVIL ENGINEERING DRAUGHTSMAN.

Applications are invited for the position of Civil Engineering Draughtsman, at Sub-Area Engineering Headquarters, Waterloo Road, Uxbridge, Middlesex.

Applicants should have a sound knowledge of building construction, and experience in the design of reinforced concrete structures and steel frame buildings.

Salary within the range of £475 to £525 per annum, which is provisional and subject to adjustment by the appropriate negotiating machinery. The successful applicant will be required to join the B.E.A. and Area Boards' Superannuation Scheme, if eligible. Applications should be made to the Sub-Area Secretary, No. 1 (Southall) Sub-Area, Southern Electricity Board, 2/6, Windmill Lane, Southall, Middlesex, on forms obtainable from him, and should be returned to him not later than 14 days from the date of the appearance of this advertisement.

E. C. T. OLDCORN,

Sub-Area Manager.

2/6, Windmill Lane, Southall, Middlesex. 3709

CITY OF BIRMINGHAM EDUCATION COMMITTEE.

APPOINTMENT OF STAFF TO ARCHITECT'S BRANCH.

Applications are invited for the following appointments in the Architect's Branch of the Birmingham Education Department (Architect to the Committee: Mr. Alex. Steer, A.R.I.B.A.).

(a) **SENIOR ASSISTANT ARCHITECT**. Salary: A.P.T., VI (£595 × £20-£660).

Applicants should have had a good general experience in the preparation of schemes and working drawings for educational buildings.

(b) **THREE ARCHITECTURAL ASSISTANTS**. Salary: One A.P.T., III (£480 × £15-£525).

One A.P.T., IV (£450 × £15-£495).

One A.P.T., I (£390 × £15-£435).

Applicants should have had a good general experience in the preparation of working drawings and details.

(c) **TECHNICAL ASSISTANT**. Salary: General Division (£135-£385).

Applicants should be good draughtsmen, with some experience in the preparation of drawings in an Architect's office.

(d) **ASSISTANT CLERK OF WORKS**. Salary: Miscellaneous II (£276 × £15-£330).

Applicants should have had a good technical training and experience in building construction and materials.

Application forms, which may be obtained from the undersigned on receipt of a stamped addressed envelope, must be returned not later than three weeks after the appearance of this advertisement.

E. L. RUSSELL,

Chief Education Officer.

Education Office, Margaret Street, Birmingham, 3. 3705

COUNTY BOROUGH OF BURTON-UPON-TRENT.

Applications are invited for the following appointments in the Architectural Office of the Borough Surveyor:—

(1) **ONE QUANTITY SURVEYOR**, Grade VII, A.P.T. Division (£635-£710).

(2) **ONE ARCHITECTURAL ASSISTANT**, Grade VI, A.P.T. Division (£595-£660).

Preference will be given to candidates who are Associate Members of the appropriate Institute. The appointments will be subject to the provisions of the Local Government Superannuation Act, 1937, to determination by one month's written notice on either side, and to the successful candidates passing a medical examination by the Medical Officer of Health.

Applications in sealed envelopes, stating age, qualifications and experience, and accompanied by copies of three recent testimonials, must be delivered to the Borough Surveyor, Town Hall, Burton-upon-Trent, not later than 10 a.m. on Wednesday, the 22nd March, 1950.

H. BAILEY CHAPMAN,

Town Clerk.

Town Hall, Burton-upon-Trent. 3692

2nd March, 1950.

NORFOLK COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the permanent appointment of **ASSISTANT ARCHITECT**, at a salary in accordance with National Grade VI (£595-£660 per annum). Candidates must be registered architects, and must hold a recognised architectural qualification; they must have had a good general architectural experience and have a sound knowledge of design, construction, and specifications. The appointment will be subject to the Local Government Officers' Superannuation Act, to a satisfactory medical certificate, and to one month's notice on either side. National Scheme of Conditions of Service will apply.

Applications must state clearly age, qualifications, full details of training, experience, and previous appointments with dates, salaries, and designations; the names and addresses of three persons to whom reference may be made must be stated. Application must be delivered to C. H. Thurston, L.R.I.B.A., F.R.I.C.S., County Architect, 25, Thorpe Road, Norwich, by not later than Wednesday, 15th March, 1950.

H. OSWALD BROWN,

Clerk of the Council.

County Offices, Thorpe Road, Norwich. 3668

CORPORATION OF DUBLIN.

VACANCIES FOR

NOT LESS THAN THREE

TEMPORARY GRADE II ARCHITECTS.

It is proposed to make appointments to the above-mentioned temporary posts. Applications on the Official form are invited from qualified persons desirous of being appointed.

Salary scale: £10 × 12s. 6d.—£13 13s. per week (inclusive).

Application forms and particulars as to qualifications, etc., may be obtained from the Establishment Department, City Hall, Dublin, where applications should be lodged not later than 12 noon on 27th March, 1950.

P. J. HERNON,

City Manager and Town Clerk.

City Hall, Dublin. 3rd March, 1950. 3703

LONDON COUNTY COUNCIL.

VACANCIES FOR TEMPORARY CLERKS OF WORKS IN ARCHITECT'S DEPARTMENT.

Applications are invited for Temporary Clerks of Works to supervise the work of painting and cleaning contracts at Council schools for a period of 6 months from 1st April, 1950.

Rate of pay—up to £9 5s. a week.

Application forms from the Architect (AR/P/C/W), County Hall, Westminster Bridge, S.E.1, enclosing stamped addressed foolscap envelope. Canvassing disqualifies. (266) 3698

SOUTH-EASTERN REGIONAL HOSPITAL BOARD, SCOTLAND.
Applications are invited for the under-mentioned permanent and supernumerary appointment to the staff of the Chief Architect's Section of the Regional Board Headquarters in Edinburgh.
ENGINEER. Salary scale £750×£25 to £900 per annum.
Applicants should be Corporate Members of the Institute of Civil Engineers, Institute of Mechanical Engineers, or Institute of Electrical Engineers, or possess equivalent qualifications, and should have experience in all branches of hospital engineering.
Applications, stating age, qualifications, experience, and salary scale in present post, together with the names and addresses of three referees, should reach the Secretary, South-Eastern Regional Hospital Board, Scotland, 11, Drumsheugh Gardens, Edinburgh, 3, not later than 22nd March, 1950. 3695

KENT EDUCATION COMMITTEE. GRAVESEND TECHNICAL COLLEGE. DEPARTMENT OF BUILDING.
Required in September next a **TEACHER** of Building Construction for the Ordinary and Higher National Courses in Building. Ability to teach Builders' Quantities will be an advantage. Applicants must be well qualified and have had either professional or industrial experience. Previous teaching experience or teacher training is desirable.
Applications, accompanied by copies of recent testimonials, should be sent to the Principal within a fortnight of the appearance of this advertisement. 3697

MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPARTMENT.
SURVEYING ASSISTANTS required for County Council's School Building Programme. Candidates must be thoroughly experienced in preparation of specifications and duties in connection with the management of contracts during progress of works.
Salaries according to experience and qualifications up to a maximum of £12 p.w. inclusive. Unestablished staff for period not exceeding 2 years. Written applications, giving full details of age, qualifications, experience, etc., to County Architect, 10, Great George Street, S.W.1, to be returned by 25th March, 1950 (quoting G.718 A.J.). Canvassing disqualifies. 3707

C. W. RADCLIFFE.
Clerk of the County Council.
Middlesex Guildhall, Westminster, S.W.1. 3707
MIDDLESEX COUNTY COUNCIL—COUNTY ARCHITECT'S DEPARTMENT.
SURVEYING ASSISTANTS required for County Council's School Building Programme.
(a) **SURVEYING ASSISTANT.** A.P.T. Div., Grades II and V (combined) (£480 to £500 p.a. inclusive).
(b) **SURVEYING ASSISTANT.** A.P.T. Div., Grade IV (£510 to £555 p.a. inclusive).
Salaries £10 less if under 25. Candidates for appointments (a) and (b) should be experienced in site inspection and surveys, drafting of specifications and variation orders and all general surveying duties incidental to management of building contracts. Established, pensionable, subject to medical fitness.
Application forms (stamped addressed foolscap envelope) from County Architect, 10, Great George Street, S.W.1, to be returned by 25th March, 1950 (quoting G.717 A.J.). Canvassing disqualifies. 3706

C. W. RADCLIFFE.
Clerk of the County Council.
Middlesex Guildhall, Westminster, S.W.1. 3706
BOROUGH OF DOVER. ARCHITECTURAL ASSISTANT.
Applications are invited for the above appointment. Salary A.P.T., II, III or IV, of the National Scales, according to experience.
Applicants should have passed the R.I.B.A. Intermediate Examination, and have had experience in housing and general building construction.
Applications, stating age, qualifications and experience, accompanied by copies of three recent testimonials, must reach the Borough Engineer, Brook House, Dover, not later than Monday, 27th March, 1950. 3701

JAMES A. JOHNSON.
Town Clerk.
New Bridge House, Dover. 3701
6th March, 1950.

LONDON COUNTY COUNCIL. PARKS DEPARTMENT.
Vacancies for **ARCHITECTURAL, SURVEYING, and LANDSCAPE ASSISTANTS** for work in connection with the preparation of surveys, sketch schemes, working drawings and specifications for buildings at parks and open spaces and laying out of new parks, sports grounds, gardens and ground at housing estates, schools, etc. Positions subject to Local Government Superannuation Acts.
Rates of pay up to £580 according to qualifications and experience.
Application forms from Chief Officer of the Parks Department, The Old County Hall, Spring Gardens, S.W.1. Canvassing disqualifies. (270) 3699

Practice for Sale
4 lines or under, 7s. 6d.; each additional line, 2s.
ARCHITECT'S General Practice in Essex country town for Disposal, including Small House. Box 3660.

Competitions
6 lines or under, 12s. 6d.; each additional line, 2s.
BOROUGH OF NUNEATON. COMPETITION—MEMORIAL GARDENS.
The Borough of Nuneaton invite the submission of designs from competitors who must be professional members of the Institute of Landscape Architects, or student members of this Institute, for the laying out of gardens in the central area of Nuneaton. Mr. H. F. Clark, A.I.L.A., has been appointed to advise as Assessor. Premiums of £150, £75, £25, and two supplementary awards of £25 each for highly commended designs will be made in consequence of his decision. The conditions of the Competition and all the necessary particulars may be obtained from the undersigned on payment of a deposit of £1 ls., which will be refunded on receipt of a bona fide design or on return of the documents. 3691

T. OLDROYD.
Town Clerk.
Council House, Nuneaton. 2nd March, 1950.

Architectural Appointments Vacant
4 lines or under, 7s. 6d.; each additional line, 2s.

ASSISTANT required in busy Berkshire office, with work in all parts of the country; an opportunity for a man with initiative and drive to show his capabilities; good prospects for a capable man. Apply, with full particulars of experience and salary required, to Box 3342.
ARCHITECTURAL ASSISTANT required in Maidenhead for large Practice of London and Provincial work; applicants must be capable of supervising work and conversant with by-laws. Reply, with particulars of experience and salary required, to Box 3343.

REQUIRED, as SERVICE INSPECTOR, an active Structural or Civil Engineer, who has had considerable experience in responsible supervising capacity in the erection of reinforced concrete structures, preferably with some design experience; will be required to travel extensively in the British Isles, but must live in the London area; attributes required are agreeable personality, sound judgment on erection problems, and able to write concise factual reports. Write, giving full details and salary required, to Managing Director, The Trussed Concrete Steel Company, Limited, 35/41, Lower Marsh, S.W.1. 3396

ARCHITECTURAL ASSISTANT. Inter. standard, neat and efficient draughtsman essential, in small office, W.C.2 district; permanency and good prospects for suitable applicant. Apply, stating age, experience, and salary required, to Box 3503.

NORTH THAMES GAS BOARD—A WOMAN TRACER is required in the Board's Estate Department, Kensington, to work on General Architectural and Building Plans, salary according to age and experience, and there are good prospects for advancement; hours 9 a.m. to 5 p.m. Mondays to Fridays, and 9 a.m. to 12.30 p.m. Saturdays, with one Saturday morning in four granted as leave with pay; staff canteen is available. Candidates, preferably not more than 25 years of age, should apply to the Staff Controller, North Thames Gas Board, 30, Kensington Church Street, W.8, quoting reference 9758. 3544

ARCHITECTURAL ASSISTANTS required immediately; intermediate standard or above; office experience; salaries up to £550 p.a.; permanency; housing, hospital, hotel, factory and general work; busy office. Write Ruddle & Wilkinson, F./L.R.I.B.A., Long Causeway Chambers, Peterborough. Telephone: Peterborough 2166. 3523

ARCHITECT'S SENIOR ASSISTANT required in Welwyn Garden City, fully qualified; possibilities of eventual partnership will be considered. 3565

SENIOR ARCHITECTURAL ASSISTANT urgently required; capable of running office, visiting works in progress, seeing clients, council officers and builders when necessary; state age, experience, and salary. Reply first to G. H. Goldsmith, 26, Neville Court, St. John's Wood, N.W.8. 3566

PERMANENT positions available for competent **SENIOR ASSISTANTS** in established London office; salary according to experience up to £650 per annum. Box 3593.

ARCHITECTURAL ASSISTANT required, at about R.I.B.A. Intermediate standard; with some office experience. Welch & Lander, F.F./R.I.B.A., 38 Gloucester Place, Portman Square, W.1. Welbeck 6551. 3549

MIDLANDS.—ARCHITECTURAL ASSISTANTS wanted for Private Office, one Senior or Semi-Senior, with experience of Industrial Buildings; one Junior, preferably with same, but not essential; good salaries. Please write Box 3561.

ARCHITECTURAL ASSISTANT (fully qualified) required for progressive appointment with firm of private Architects; must have had good office experience; age 25-35; salary £650 per annum. Apply, with full particulars of qualifications and experience, to Box 3560.

SENIOR ARCHITECTURAL ASSISTANTS required by United Dairies, Limited; applicants to state age and experience in the preparation of surveys, sketch plans and working drawings, and be able to supervise work in progress. Apply in writing, stating qualifications and salary required, to Chief Architect, 31, St. Petersburg Place, London, W.2. 3576

ARCHITECT'S ASSISTANT required at end of April. Write in confidence, stating age, experience, and salary, to W. Leslie Jones, L.R.I.B.A., 87, High Street, Great Missenden, Bucks. 3583

SOUTH BANK RESTAURANT, 1951.—EXPERIENCED ASSISTANT required immediately to assist in preparation of working drawings; ability to detail rapidly essential. Apply, giving particulars, telephone number, salary required, to Leonard Manasseh, A.R.I.B.A., 20, Buckingham Street, Strand, W.C.2. Tel.: Temple Bar 0658. 3581

ARCHITECT'S ASSISTANT required; Intermediate or Final R.I.B.A.; interesting work; good prospects to suitable man; salary by arrangement. Apply with full particulars to G. H. Herring, L.R.I.B.A., 21, Milton Road, Harpenden, Herts. 3690

SENIOR ASSISTANT, Inter. R.I.B.A. standard, with good all round experience, required for small but busy country practice (probability of Flatlet if for immediate occupation); salary £450, with prospects. Apply Orrell H. Nuttall, F.R.I.B.A., 46a, High Street, Banbury, Oxon. 3689

LEADING Manufacturing Company, with several branches in all parts of the U.K., has vacancy for first-class Architect and member of the R.I.B.A., to take charge of all building repairs and maintenance work, deal with building contractors and new construction work for the Company.
Age limit: 28-37 years.
Salary: approximately £600-£1,000 per annum.
Only men with considerable experience should apply.
Replies to Box 3693.

WEST END ARCHITECT'S Office requires experienced **ARCHITECTURAL ASSISTANT**, also **JUNIOR or IMPROVER.** Apply Box 3629.

ARCHITECTURAL ASSISTANT required; a wide general knowledge of work in London an advantage; high scale of salary, according to ability and experience; five-day week. Apply to Ley, Colbeck & Partners, Chartered Architects and Surveyors. Telephone: London Wall 2917. 3633

ARCHITECT'S ASSISTANT for working drawings, specifications, supervision; Inter. standard or approaching Final; good salary suitable applicant. Watson, Johnson & Stokes, Victoria Square, Birmingham, 2. 3638

ARCHITECTURAL DRAUGHTSMAN.—Young man required as Designer by an old-established firm of Church craftsmen; must be a practising member of the C. of E.; good salary to a suitable man; staff canteen. Apply Box 3645.

ARCHITECTURAL ASSISTANT required for General Practice; surveys, working drawings and specifications. Write, stating age, previous experience and salary required, Henry C. Smart & Partners, L.R.I.B.A., 120, Moorgate, E.C.2. 3639

PROMINENT firm of London Architects requires qualified **ARCHITECTURAL ASSISTANTS and JUNIOR ASSISTANTS** of intermediate standard for varied practice; salary by arrangement; West End office. Box 3640.

GENERAL ASSISTANT required immediately; experienced in the preparation of working drawings for housing alterations and other classes of work, also capable of supervising, levelling and specification writing. Apply, stating age, experience, and salary required, D. Ward & Son, 11, The Crescent, Plymouth. 3644

ARCHITECT'S SENIOR ASSISTANT required immediately; good prospects. Reply with references, stating experience, salary required, and when available, to Clifford Smith & Newenham, 75, O'Connell Street, Limerick. 3646

ASSISTANT required; capable of dealing with supervision of building works, specification writing, final accounts, etc.; salary in accordance with experience. Apply to Rainger, Rogers & Smithson, Chartered Architects, 29, Rodney Road, Cheltenham. 3647

ASSISTANT required for general practice; varied and interesting work over large area in North-West; able to take entire charge of contracts.—J. H. Martindale & Son, F./R.I.B.A., Architects, Cathedral Chambers, Castle Street, Carlisle. 3648

CHIEF ARCHITECT, with commercial experience, required for executive position in prominent industrial concern (London) manufacturing specialised products for the Building Trade; applicants must be of the highest integrity and possess personality, tact and initiative, be accustomed to the control of staff, and able to negotiate contracts on own responsibility. Write in first instance to Box 3661.

LONDON ELECTRICITY BOARD.

DRAUGHTSMEN.

APPLICATIONS are invited for positions as Draughtsmen in Sub-Area Drawing Offices at the following addresses:—

- (1) 84, Romford Road, E.15.
- (2) 38, Aybrook Street, W.1.
- (3) 25, Eccleston Place, S.W.1.
- (4) South Eden Park Road, Beckenham, Kent.
- (5) 45, East Hill, Wandsworth, S.W.18.

Applicants should have a good general experience of drawing office work, particularly in the design and detailing of small sub-station buildings, calculations for reinforced concrete structures, preparation of building specifications and work associated therewith.

The commencing salary will be from £500 per annum, according to qualifications and experience. This salary is provisional and subject to adjustment through the appropriate negotiating machinery.

Application forms, obtainable from the Establishments Officer, 46/47, New Broad Street, E.C.2, on receipt of an addressed foolscap envelope, should be returned duly completed, stating district preferred, not later than 13th March, 1950. Please mark envelope EST/V/667/A. 3653

LONDON firm, now engaged on large building schemes for medical and scientific purposes, requires **ARCHITECTURAL ASSISTANT**, qualified A.R.I.B.A., with office experience of surveys and the preparation of working drawings. Write stating qualifications, etc., and salary required. Box 3657, or telephone Welbeck 8962.

ARCHITECTURAL ASSISTANT required, with at least 3 years' general office experience; sound knowledge of construction and neat draughtsmanship essential; superannuation and five-day week operated. Send full details of past experience and salary required, to Box 3659.

KENYA COLONY.—E. May, Architect and Town Planner, requires experienced Architectural **DRAUGHTSMAN**, preferably single; initial salary £480; free passage out. Write for London interview, stating age, qualifications, experience, and past serious illness, with three references, to Box No. 2308. 3676

ARCHITECTURAL ASSISTANT required in Westminster office; aged 20-25; knowledge of building construction, neat and accurate draughtsmanship, and capable of making surveys of existing buildings. Write, stating age, experience, and salary required. Box 3683.

ARCHITECTURAL ASSISTANT required, of Inter. standard or above; interested in Contemporary Design. Apply Chamberlain Ind., Ltd., Staffa Road, E.10, or Tel. LEY. 3675. 3687

THE CO-OPERATIVE WHOLESALE SOCIETY, LTD., invite applications for the following appointments on the Staff of the Manchester Architects' Department:—

THREE ASSISTANT ARCHITECTS. Salary range £470-£535 per annum. Applicants should have a sound knowledge of building construction and architectural design, and be able to produce working drawings and details, under supervision, from sketch plans.

THREE ASSISTANT ARCHITECTS. Salary range £400-£465 per annum. Applicants should be good draughtsmen and possess a sound knowledge of construction and some general architectural experience.

The above appointments are permanent and offer prospects of upgrading to competent Assistants. Successful candidates will be required to undergo a medical examination for entry into compulsory superannuation scheme.

Applications, stating age, experience, and qualifications, to be addressed to:—The Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester, 4. 3694

ARCHITECTURAL ASSISTANTS required in Bank's Premises Department in Birmingham, age 30-35, preferably Inter. or Final R.I.B.A. standard, experienced in preparation of specifications and supervision of alterations; excellent opportunity for keen men to obtain permanent progressive and pensionable appointments. Write with full particulars for interview to Box 3685.

A FIRM of Industrial Architects has a vacancy for an **ARCHITECTURAL ASSISTANT**, experienced in surveying and levelling and of working drawings, details, etc., in connection with large industrial undertakings. Applicants are asked to give particulars of their age, experience, and salary required, to Box 3666.

ARCHITECTURAL ASSISTANT required for general practice in Westminster; at least Intermediate standard; office experience essential, and capable of preparing working drawings, details, and supervision; opportunity to take responsibility and exercise initiative. Please apply to Box 3670.

ARCHITECTURAL ASSISTANT required; R.I.B.A. Intermediate or Final standard; basic salary scale equivalent Local Authority; staff superannuation scheme and profits sharing scheme. Apply first place stating age, experience, qualifications and salary required, to The Grenfell Baines Group, Newton Aycliffe Planning Office, Simpasture, near Darlington. 3672

ARCHITECTURAL ASSISTANTS required; salaries £8, £10 and £12 per week. Yorke, Rosenberg and Marshall, 2, Hyde Park Place, W.2. 3669

LONDON ELECTRICITY BOARD.

APPLICATIONS are invited for the following appointments in the Architect's Section of the Chief Engineer's Department in Central London:—

(a) **ARCHITECTURAL ASSISTANTS.** Commencing salary will be from £500 per annum, dependent upon qualifications and experience.

Applicants should be studying for or have passed the Intermediate examination of the R.I.B.A., be capable draughtsmen, and have had several years' experience in an Architect's office.

(b) **DRAUGHTSMEN.** Commencing salary will be from £350 per annum, dependent upon ability and experience.

Applicants should be neat draughtsmen, and preferably have had several years' experience in an Architect's office.

The salaries for the above posts are provisional, and the salaries and conditions of employment will be in accordance with those laid down from time to time by the appropriate negotiating body.

Application forms obtainable from Establishments Officer, 46/47, New Broad Street, E.C.2, on receipt of an addressed foolscap envelope, to be returned duly completed not later than 25th March, 1950. Please mark envelope EST/V/670/A. 3674

ARCHITECTURAL ASSISTANT required in the Swansea office of Sir Percy Thomas & Son, 2, Northampton Gardens; point of entry on salary according to experience. Write, stating details of qualifications and experience. 3673

QUALIFIED OR EXPERIENCED ASSISTANT required in Architect's Department of multiple company in the Midlands. Conversant with design, alteration and maintenance of retail shop premises, working drawings, specifications and surveys. Salary offered, £600/£750 per annum according to ability. Five-day week and pension scheme in operation. Applicants are requested to furnish full details of training, age and experience. Box 3708.

Architectural Appointments Wanted

CHARTERED ARCHITECT (43), University qualified, desires change; seeks responsible position with scope in London; extensive first-class experience in large-scale modern Housing, Commercial and Industrial schemes; complete charge. Box 3294.

A. R.I.B.A. (24), school trained, with 9 months' office experience, requires post in Bristol, commencing April. Box 475.



PARAGON

LANTERN LIGHTS

Maximum strength, minimum obscuration of light, extreme durability and attractive neatness of design are four outstanding characteristics of "Paragon" Lantern Lights and Skylights, whether of standard pattern (24 sizes), or purpose-made to suit any curb-trimming. They are manufactured outright by us at our Deptford Works from materials of pre-war quality. All opening sashes are double-weathered and hung on brass cup-pivots. The steel glazing bars are, of course, of the well-known "Paragon" type and standard, being of completely lead-clothed steel.

SIZES OF STANDARD LANTERN LIGHTS & SKYLIGHTS

8x4ft.	10x4ft.	12x4ft.	6x6ft.	8x6ft.	10x6ft.	12x6ft.
8x8ft.	10x8ft.	12x8ft.	10x10ft.	12x10ft.	12x12ft.	

Our Brochure "A" will be sent you on request.

PARAGON GLAZING CO. LTD

1 • VICTORIA ST. • WESTMINSTER • S.W.1

Telephone: ABBey 2348. Telegrams: "Eclairage, Sowest", London.
Pte. Br. Each.

A.R.I.B.A., age 34, 10 years' general experience in various types of building, car owner, requires position of responsibility, with possibility of advancement; southern county town preferred; salary by arrangement. Tel.: Haslemere 138. 477

ASSISTANT seeks position to work directly under Principal; Articled pre-war; post-war experience covering factories, housing, estate layout, licensed premises, store and exhibition work; surveys, design, detail and working drawings, site supervision, correspondence, accounts, etc. Box 476.

ARCHITECTURAL ASSISTANT seeks temporary or permanent post. London; interested modern design; spent 5 years' Polish School of Architecture; University qualifications; 15 months' experience this country; 4 years' Assistant Architect abroad. Box 3480.

JUNIOR DRAUGHTSMAN, age 18, requires position in drawing office, London area; neat draughtsman, studying for Inter-R.I.B.A.; one year's office experience. Box 478.

Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

INTELLIGENT and enthusiastic, young man, with some knowledge of building construction and materials, wanted for unusually interesting selling job, mainly in London (full-time). Write, with full particulars of age, training, experience, salary required, to Box 366.

ESTIMATORS wanted; used to Brakepress work. Apply personally or by letter to Morris Singer Co., Ferry Lane Works, Forest Road, Walthamstow, E.17. 2143

ARCHITECTURAL Metalworkers require a **DESIGNER-DRAUGHTSMAN** of considerable merit; top salaried position for skilled man. Apply The Morris Singer Company, Hope House, 61, Peter Street, Westminster, S.W.1. 3564

N East Anglian Brewery requires the services of a **SURVEYOR**, to take charge of their Building and Maintenance Department, which serves a large number of Licensed Premises.

Candidates should be about 45 years of age, and should be Members of the R.I.B.A. or R.I.C.S. and experience in the alteration and maintenance of licensed premises would be an advantage.

There is a Contributory Pensions Scheme in operation.

Applications, which will be treated in confidence, should state fully experience, qualifications, age and salary required, and should be submitted not later than the 25th March, 1950. Box 3600.

CONTRACTS MANAGER required by well-known Specialist Building Firm to organise and build up Contract Department; experience estimating and control essential; excellent opportunity for man of technical and administrative ability. Apply in first instance to Box 2778.

SETTER-OUT wanted for Architectural Metalwork; good wages and ideal working conditions. Apply: The Morris Singer Co., Ltd., Ferry Lane, Forest Road, Walthamstow, E.17. 3524

SENIOR ESTIMATOR required for Factory producing pre-cast concrete products; good practical previous experience essential; good salary to the right man. Apply in writing, giving details of age, experience, and salary required, to Box 3632.

SHORTHAND/TYPEST required for Architect's office; able to assist in colouring and tracing. Apply Chamberlain Ind., Ltd., Staffa Road, E.10, or Tel. LET. 3678. 3688

EXPERIENCED SENIOR ASSISTANT QUANTITY SURVEYOR required immediately; good prospects and salary for right man. Write or 'phone Jennings, Homer and Lynch, 3 and 5, Church Street, Brierley Hill. 'Phone Brierley Hill 7545/6. 3641

WORKER-UP required immediately in quantity surveying section; progressive appointment and good salary and conditions. Write or 'phone Jennings, Homer and Lynch, 3 and 5, Church Street, Brierley Hill. 'Phone Brierley Hill 7545/6. 3642

Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

MANUFACTURERS of exclusive hand-made Lampshades; architects' contracts carried out. J. & M. Beagley, 51, Great Ormond Street, London, W.C.1. CHANCERY 8964. 2397

ARCHITECTURAL MODELS and Dioramas. Edward J. Ashenden, A.R.C.A., 15, Chenil Studios, 183, Kings Road, S.W.3. Tel.: FLAX 6103. 2566

COMPLETE Full-time Architectural Assistance offered by two competent Seniors (30); own office and car. S. C. Hahn & R. D. Edwards, 5, Station Parade, Elmers End, Beckenham, Kent. Tel. BEC. 1277. 3193

ARCHITECTURAL and **CIVIL ENGINEER** combine to offer their services for the Design of all types of Structures in steel and reinforced concrete. Box 3296.

WINDOWS, Wrought Ironwork, and Light Structures designed and fabricated by "New" Services, 85, Heath Street, Birmingham, 18; designs and estimates free. 3297

EXPERIENCED Lady Secretary, fully conversant with Architectural procedure and practice, seeks position as **PERSONAL SECRETARY** to Architect. Apply Box 3586.

YOUNG Group of keen and efficient **BUILDING AND DECORATING WORKMEN** would appreciate the opportunity to quote for work; Renovations, Conversions, W.D. Repairs, etc.; offices week-end; highest references. Box 3450.

SAVE TIMBER—Designs prepared for Softwood or Hardwood Structures, also Welded Steelwork and Light Alloys; Detailed Drawings. Tel.: FLA. 9861. 3536

BUILDING and Measuring Surveyor (20 years' experience) offers services to Architects, Surveyors and Builders, in the preparation of surveys, specifications, estimates, W.D. claims, measurement of work in progress, certificates, and final accounts; fees based on hourly, weekly, or contract terms. Box 3540.

ARCHITECTS' and Surveyors' Design Service for Heating, Hot Water Services, Steam and Ventilation Schemes, carried out by experienced Engineers, A.M.I.H.V.E., M.R.San.I., A.M.I.San.E.; reasonable terms. 'Phone: Popesgrove 2015. 3585

BRISTOL—WEST OF ENGLAND AREA—Part-time Assistance offered by Group of Qualified Architects (A.R.I.B.A.) in the Preparation of Designs, Competition and Working drawings, Perspectives, Surveys, etc. Box 3618.

SENIOR ARCHITECTURAL ASSISTANT offers part-time service: Surveying, Industrial and Housing Design, Interiors and Exhibition Work, Working Drawings; London area. Box 3677.

NOTTS., DERBYS., and LINCOLN—Architect's Practice, Nottingham, offers assistance other Architects, owing to lack of work. Box 3675.

HEATING ENGINEER, A.M.I.Mech.E., A.M.I.H.V.E., prepares schemes for all classes of work; good service and reasonable charges. Box 3636.

QUANTITY SURVEYOR offers assistance to Architects in preparation of Bills of Quantities, etc., on fee sharing basis. Box 3637.

STRUCTURAL ENGINEERS (5), with considerable experience in R.C. and structural steelwork design and detailing, are available for part-time work. Box 3664.

REINFORCED CONCRETE ENGINEERS offer services for the complete design and detailing of reinforced concrete structures of all types; estimates and bending lists prepared. Enquiries to Box 3681.

ARCHITECTURAL ASSISTANT (Inter-standard) requires Evenings and Week-end Work at home; Hertfordshire area. Box 3696.

For Sale or Wanted

4 lines or under, 7s. 6d.; each additional line, 2s.

FOR SALE—Architect's gem, 16½ miles of Marble Arch; 4½ acres Park and Woodland; site for five houses or small estate; laid out drive; two electrically-heated greenhouses, flowering shrubberies, 100 ft. 3 ft. by 9 in. peach wall facing south, rabbit-proof fencing, fruit cage 8 ft. by 60 ft., young orchard, extensive cultivations, live hedges; claims £2,950 under Act; one mile "The Bear," Esher, Surrey; sacrifice £4,150 or offer, owner moving; sold house with one other acre. Apply Box 3568.

WANTED—"Information Book of Sir John Burnet Tate and Lorne," and Lorne's "Architectural Office Administration"; willing to pay good prices. Please write Box 3562.

TO CLEAR

SECOND-HAND STEEL TUBULAR SCAFFOLDING, PUTLOGS, and **NEW ALUMINIUM TUBULAR SCAFFOLDING**, complete with FITTINGS. Can be used for Scaffolding, Cow Pens, Fencing, Railings, Grand Stands, Sports Grounds, Racking and the like. **TILED FIREPLACES**, **FENCING STAKES**, **TIMBER** and **ASBESTOS HUTS**, **TIMBER HUTS**, **NISSEN HUTS** and other **HUTS**. **STEEL BUILDINGS**, **TARPAULINS** all types, light and heavy. **SCAFFOLD BOARDS**, **SCAFFOLD POLES**, **DECORATORS' STEPS** and **TRESTLES**, **POLE** and **EXTENSION LADDERS**, **PAINT** (Hard Gloss and Undercoat), all shades. **WIRE ROPE**, ½ in., on Drums of 6 cwt. **KIMOLO BOARD**, **ASBESTOS SHEETS** (Flat, 3 in. corrugated, and "Big Six"). **PLASTERBOARD**, **BEDSTEADS**—divan type, folding type, hospital type. **IRON** and **STEEL** Rods, Flats, R.S.'s, Angle Iron, Bars—all sizes. **GALVANISED IRON SHEETS** (flat and corrugated). **ALUMINIUM SHEETS** (flat and corrugated). **TUBING**, all sizes, from ½ in. to 2 in. **CONCRETE MIXER**, 7½. **FORD VAN**, **CANTEN TABLES** and **FORMS**, **CHAIN LINK FENCING**, **TRUSSES**, **CARPETS**, **DONKEY COATS**, **OILSKIN COATS** and **SUITS**, **DUST SHEETS** (new unbleached calico), **MATTRESSES**, **BOILER SUITS**, **PROTECTIVE CLOTHING** of all descriptions. **WRITE FOR PRICE LISTS** to Norda (Great Britain), Limited, 162-166, Broadway, Southall, Middlesex. Telephone: Southall 3755 and 3227/8. "Grams": "Norda," Southall. 3630

"FOSALSIL"

AGGREGATES FOR INSULATING CONCRETE

FLUE BRICKS POWDERS PARTITION BLOCKS

"FOSALSIL"

FLUE BRICKS & SETTING POWDER

MOLER PRODUCTS LIMITED

HYTHE WORKS COLCHESTER
Telephone COLCHESTER 3191

TO BE CLEARED OWING TO REMOVAL TO NEW PREMISES.
500 POLES; 2 CONCRETE MIXERS; 3 LORRIES; 50 TONS WIRE; 300 TONS IRON AND STEEL FLATS, various sizes; 100 TONS SHIPS' PLATE; 3 HUTS; 500 TONS BODS, 3/16 in. to 2 in.; 500 DRAIN PIPES; 50,000 ft. TUBING, various sizes. All lying at our Hayes Depot. For further details apply to Nords (Gt. Britain), Limited, 162-166, Broadway, Southall, Middlesex. Telephone: Southall 3755 and 3227/8. 'Grams': "Nords," Southall. 3631

A.D.J. DESK; take D.E. board with adj. light fitting, instrument cabinet and stool; almost new; £14. 'Phone: Elnbridge 6260. 3682

A.C./D.C. Ruther Stat No. 3 Machine, in first-class condition, for photographic and drawing reproduction; complete with white enamel developing trays, 2 electric dryers, plate glass squeegee table; price £80; can be inspected North London. Reply Box G.A.113, 4/7, Salisbury Court, Fleet Street, E.C.4. 3671

Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s.

J. BINNS, LTD., Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works, 99-101, St. Pauls Road, N.I. Canonbury 2061.

CURRIE (BUILDERS' SERVICES), LTD., estimate for and undertake Property and War Damage Repairs and Building Construction to Surveyors' Specification, 258, Romford Road, E7 (Mar. 3663). 3495

BOOK BARGAINS—Secondhand; leading books on Building, stamp for list; Fowler Circular Calculator for Architects, Box 3582.

EXCELLENT OFFICES to Let, London, W.1. Write Box G932, c/o Streets, 110, Old Broad Street, E.C.2. 3658

FLOORS OF DISTINCTION Laid; in wood, rubber, composition, cork, mosaic; existing floors repaired, resurfaced and polished; also sanding restored. Davis Floorings, Grove Hall Court, Hall Road, N.W.8. CUN. 3205/6 and 5616. 600

ALL Kinds of Fencing supplied and erected; established over 100 years. Parker, Winder & Ashchurch, Ltd., 80, Broad Street, Birmingham, 1.

Educational Announcements

4 lines or under, 7s. 6d.; each additional line, 2s.

R.I.B.A. EXAMS—Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I., Dist. in T.E. (Tutor in the Sch. of Arch., Lond. Univ.), prepares Students by correspondence tuition. 11, North Road, N.6. MOU. 8104.

R I B A INTER, FINAL & SPECIAL FINAL

Postal Courses in all subjects of the examination syllabus (including Professional Practice) are conducted by **THE ELLIS SCHOOL OF ARCHITECTURE** Principal: A. B. Waters, M.B.E., G.M., F.R.I.B.A. 113, OLD BROMPTON RD., LONDON, S.W.7 Telephone: KENington 8641

BOOKS

A new catalogue of books on architecture, planning and building practice will be sent on application to the Manager:—

THE ARCHITECTURAL PRESS

9, Queen Anne's Gate, Westminster

ILFORD LIMITED

The following vacancies have arisen in the Chief Staff Architect's Department.

ARCHITECTURAL ASSISTANTS

Applicants should have reached intermediate standard of R.I.B.A.

ASSISTANT ARCHITECT

Preference will be given to Associates of R.I.B.A.

The work of the Department is both varied and interesting and is concerned with factories, offices and laboratories of the Company located in the Home Counties. The Department's Offices are situated in a Country House at Havering within easy reach of main transport services in Romford. A pension and life assurance scheme is in operation and meal facilities are available. Suitable applicants may qualify for staff appointment.

Applications in writing, stating age, and salary required to: Chief Staff Architect, Ilford Limited, ROMFORD, Essex.

FIBROUS PLASTERWORK OF EVERY DESCRIPTION

ALLIED GUILDS

King Edward Square, SUTTON COLDFIELD. Tel.: Sut 3809

Mastic Asphalt of all types. Coloured & Acid-resisting Asphalt Flooring

Contractors to Admiralty, Ministry of Works, War Office, Air Ministry, L.C.C., British Railways, &c.

NATURAL ROCK ASPHALTE LTD.

Bank Chambers, 361-363 Goswell Road, E.C.1. Telephone: TERMINUS 9344 (2 lines) Telegrams: Naturalte, Barb, London

TILYARD TILES LIMITED

WALL & FLOOR TILING TILED FIREPLACES

APPROVED SPECIALISTS FOR **ARMSTRONG'S "ACCOTILE" FLOORING.**

182 EARL'S COURT ROAD, S.W.5
 Phone: Frobisher 3479—6762
SHOWROOMS: 1-5 CHILD'S PL. EARL'S COURT

Technical Literature?

CONSULT



Specialists in technical development and educational propaganda for the building and allied industries

Building Industries Services Ltd

25 LOWER BELGRAVE ST., LONDON, SW1
 Telephone: Sloane 0474

THE ARCHITECTURAL RECORD

giving each month exclusive plans, photographs & data on current American architecture & building practice, is obtainable by annual subscription:

46s. - 0d.

through

STOBART & SON LTD

9, Victoria Street, London, S.W.1

A specimen section of "TIME-SAVER STANDARDS" is being sent free to all new subscribers.

LINOLEUM

Information Sheets

19/GI, 2, 3 & 4

Reprints available on application to:—

Linoleum Manufacturers' Association, 273/287, Regent Street, London, W.1.

CONSULT RANDALL PAGE STUDIOS FOR

—MODELS—

EVERY OF DESCRIPTION

Estimates on request Tel: Southend 45145

7A ROYAL MEWS SOUTHEAST-ON-SEA ESSEX

WHITE FACING BRICKS

(S. P. W. BRAND)

TELEPHONE & TELEGRAMS BULWELL 78237-8

M. McCARTHY & SONS, LTD

BULWELL • NOTTINGHAM

DURAC

the WORKABLE building board

DENNY MOTT & DICKSON LTD. (Dapt. 7) Adelaide House, King William St., London, E.C.4. Phone: MAN 7961

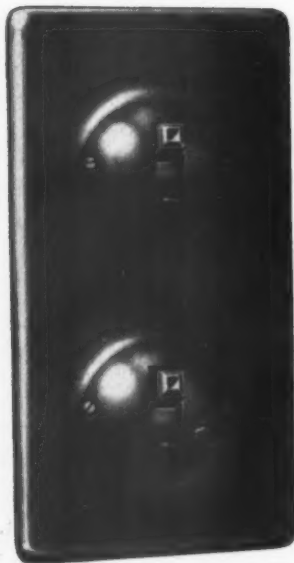
● Licence free, strong, durable. It looks attractive distempered or painted. Can be sawn, nailed or scored. when it breaks cleanly. Bends to form easy curves. Obtainable in handy sizes 8ft. x 4ft., 8ft. x 2ft. 6in., 6ft. x 2ft. 6in. Thickness $\frac{3}{8}$ in. Weight $1\frac{1}{2}$ lbs. per sq. ft. approx.

Alphabetical Index to Advertisers

	PAGE		PAGE		PAGE
Adams, Robt. (Victor), Ltd.	lxxix	English Joinery Manufacturers' Associa-	—	Merchant Adventurers of London, Ltd.	—
Allied Guilds.	lxxvii	tion (Inc.)	—	Metropolitan Vickers Electrical Co., Ltd.	lxi
Allied Ironfounders, Ltd.	—	Esavian, Ltd.	—	Midland Joinery Works, Ltd.	—
Anderson Construction Co., Ltd.	—	Exode, Ltd.	lxix	Midland Woodworking Co., Ltd.	xxx
Architects' Benevolent Society, The.	lxviii	Excel Asphalt Co., Ltd.	lxix	Mills Scaffold Co., Ltd.	—
Architectural Press, The.	lxix	Farmiloe, T. W., Ltd.	—	M.K. Electric, Ltd.	v
Austin Hall Group of Companies.	iv	Farodo, Ltd.	—	Moler Products, Ltd.	lxxvi
Baillister, Walton & Co., Ltd.	xxxvi	Fibreglass, Ltd.	—	National Federation of Clay Industries,	—
Bath Cabinet Makers & Artcraft Ltd.	—	Finch, B., & Co., Ltd.	xxxvi	The.	vi
Berry, Z. D., & Sons, Ltd.	—	Finlock Gutters, Ltd.	lvi	Natural Rock Asphalt, Ltd.	lxxvii
Bigwood Bros. (Birmingham), Ltd.	xxv	Fitzpatrick & Sons (Contractors), Ltd.	—	Newalls Insulation Co., Ltd.	xi
Birmid Rain-Water Goods.	—	Fleetwood Paints, Ltd.	—	Ohmrite Installations, Ltd.	—
Blackburn, Thos., & Sons, Ltd.	xxxvii	Fordham Pressings, Ltd.	—	Parkinson Stove Co., Ltd.	lxviii
Booth, James, & Co., Ltd.	—	French, Thos., & Sons, Ltd.	lxix	Paragon Glazing Co., Ltd.	lxxv
Booth, John, & Sons (Bolton), Ltd.	—	Galvo (Wirenetting), Ltd.	lxiv	Pilkington Bros, Ltd.	—
Boulton & Paul, Ltd.	—	Gas Council, The.	—	Prodorite, Ltd.	lxvii
Bowler, S. O., Ltd.	lxxviii	Gaskell & Chambers, Ltd.	xxx	Radiation, Ltd.	xxvii, xlv
Briggs, Wm., & Sons, Ltd.	xv	Glow Worm Boilers, Ltd.	xxxiv	Randall Page.	lxxvii
British Aluminium Co., Ltd.	—	Greenwood's & Alvac Ventilating Co.,	—	Range Boilers, Ltd.	—
British Celanese, Ltd.	—	Ltd.	ii	Roller Shutters, Ltd.	iii
British Constructional Steelwork Associa-	—	Hall, John, & Sons (Bristol & London),	xxxviii	Rolyat Tank Co., Ltd.	—
tion.	xi	Ltd.	—	Rubeloid Co., Ltd.	xxviii
British Insulated Cables, Ltd.	—	Hammer, Geo. M., Ltd.	—	Sadd, John, & Sons, Ltd.	—
British Mouldex Rubber Co., Ltd.	lxxix	Harper, John, & Co., Ltd.	—	Sankey, J. H., & Son, Ltd.	—
British Thomson-Houston Co., Ltd., The.	lix	Harvey, G. A. (London), Ltd.	—	Sarco Thermostats, Ltd.	lxv
Britmac Electrical Co., Ltd.	—	Helliwell & Co., Ltd.	—	Scaffolding (Great Britain), Ltd.	—
Britannia Rubber & Kampulicou, Ltd.	lxii	Henderson, P. C., Ltd.	—	Sealocrete Products, Ltd.	—
Broad & Co., Ltd.	—	Heywood, W. H., & Co., Ltd.	xxiv	Secomastic, Ltd.	lxv
Bryce, White & Co., Ltd.	lxix	Higgs & Hill, Ltd.	xxi	Semtex, Ltd.	lii
Buildings Industries Services, Ltd.	lxxvii	Hills (West Bromwich), Ltd.	iv	Sharman, R. W., Ltd.	lxii
Cape Asbestos Co., Ltd.	—	Hollway, W. F., & Brother, Ltd.	—	Sieghart Floor Co., Ltd.	xli
Carron Co., Ltd.	lxvi	Hope, Henry, & Sons, Ltd.	l	Smith's English Clocks, Ltd.	xlii
Church & Co. (Fittings), Ltd.	lxii	Hoff, Ltd.	lxxvii	Smith, Sml., & Sons, Ltd.	lxxviii
Clark & Fenn, Ltd.	lx	Imperial Chemical Industries, Ltd.	vii	Smith & Pearson, Ltd.	lxx
Clarke & Eaton, James, Ltd.	xlv	Industrial Engineering, Ltd.	xxii	Solignum, Ltd.	lxiv
Clarke Ellard Engineering Co., Ltd.	lxiv	Jaconello, Ltd.	ii	Stelcon (Industrial Floors), Ltd.	—
Cloakroom Equipment, Ltd.	lxiii	Jenson & Nicholson, Ltd.	xxvi	Stobart & Son, Ltd.	lxxvii
Colt, W. H. (London), Ltd.	ii	Johnson & Phillips, Ltd.	xxxv	Story & Co., Ltd.	liv
Compactum, Ltd.	lxxvii	Jointless Flooring (Oxychloride) Assoc.	—	Stott, James, & Co. (Engineer), Ltd.	lix
Copper Development Association.	—	King, J. A., & Co., Ltd.	lvii	Sugg, Wm., & Co., Ltd.	lviii
Costain, Richard, Ltd.	xii	Kingsher, Ltd.	xiii	Sundale Board Co., Ltd.	lxxvi
Courtesy, Pope, Ltd.	—	Korkoid Decorative Floors.	xxviii, xxix	Tentest Fibre Board Co., Ltd.	—
Crane, Ltd.	ix	Kwikform, Ltd.	—	Thomas & Baldwins, Ltd., Rich., Ltd.	—
Crittall, Richard, & Co., Ltd.	xxiii	Laing, John, & Son, Ltd.	—	Tilyard Tiles, Ltd.	lxxvii
Davis Flooring Co.	lxxviii	Lamont, James H., & Co., Ltd.	lvi	Thorn Electrical Industries, Ltd.	x
Dawnays, Ltd.	xxxix	Lead Industries Development Council.	—	Timson Bros. (England), Ltd.	lvii
De La Rue & Co., Ltd., Thomas.	—	Leatherfor, Ltd.	—	T.M.C. Harwell (Sales), Ltd.	—
Denny, Mott & Dickson, Ltd.	lxxvii	Lindsays Paddington Ironworks, Ltd.	—	Troughton & Young (Lighting), Ltd.	—
Doulton & Co.	—	Linoleum Manufacturers' Association.	lxxvii	Tudor Accumulator Co., Ltd.	lxvi
Dreadnought Fireproof Doors (1930),	—	Logan, Sons, & Co., Ltd.	lxix	United Steel Co., Ltd., The.	viii
Ltd.	lxi	Mallinson, Wm., & Sons, Ltd.	—	Val de Travers Asphalt Paving Co., Ltd.	—
Drytone Joinery Ltd.	xvi	Marley Tile Co., Ltd., The.	lxvii	Versil, Ltd.	lviii
Dunbrik, Ltd.	lxix	Martyn Bruce, Ltd.	xiv	Wales Dove Bitumastic, Ltd.	—
Dutton, H. W., & Co., Ltd.	lxviii	Matthews & Yates, Ltd.	lxiii	Walker Crossweller & Co., Ltd.	xxxiii
Duresco Products, Ltd.	liii	Mavitta Drafting Machines, Ltd., The.	lxxix	Wardle (Engineering) Co., Ltd.	—
Edison Swan Electric Co., Ltd., The.	—	McCarthy & Sons, Ltd.	lxxvii	Wellington Tube Works, Ltd.	—
Ellis School of Architecture.	lxxvii	McNeill, F., & Co., Ltd.	lx	Williams & Williams, Ltd.	—
Empire Stone Co., Ltd.	—	Mellows & Co., Ltd.	—	Zinc Alloy Rust Proofing Co., Ltd.	—

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property, Land and Sales, see lxxi, lxxii, lxxiii, lxxiv, lxxv, lxxvi, lxxvii

Tenby ELECTRICAL ACCESSORIES

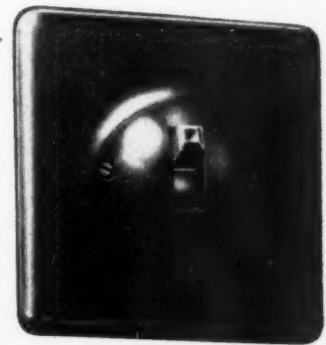


Tenby Pilot

FRIGATE FLUSH ASSEMBLY

A NEW TENBY PILOT SWITCH

Just Tenby Quality at its very best. The "Frigate" combines all the labour saving features of the Tenby Pilot Range of accessories. A heavy moulded box, plaster depth to reduce installation costs, special easy wiring terminals, a cover of exceptional strength and graceful appearance. In short, an extremely robust assembly at a price which enables you to instal Tenby Quality in the most competitive schemes. We'll be pleased to send you details.



MANUFACTURED BY

S. O. BOWKER LTD., 19-21 Warstone Lane, Birmingham, 18

LONDON Office and Store: 54/56 Oxford Street (Corner of Rathbone Place), London, W.1. Tel.: Museum 4695

MANCHESTER Office and Store: 85 Mosley Street, Manchester, 1 Tel.: Central 0051

LEEDS Office and Store: Somalac Sales Ltd. 5 Park Place, Leeds, Yorks. Tel.: Leeds 51608; 30347

B.I.F. BIRMINGHAM Stand No. C.705

lxxviii

4076

PAGE

lxi

xx

lxxx

v

lxxvi

vi

xxvii

xi

xlvi

lxxv

xxxii

lxvii

xlvi

xxvii

iii

xviii

lxx

lxxv

lxxv

lii

lxii

xli

xlvi

lxviii

lxx

lxiv

xxvii

lii

lii

lviii

lxxvi

xxvii

x

lvii

lxii

viii

lviii

lviii

xxxviii

Park

30347

4076 A

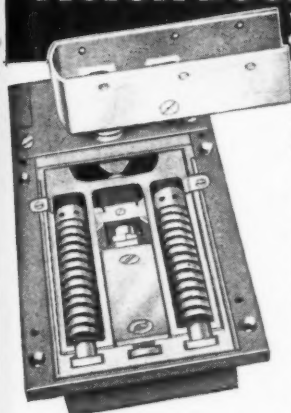
H
V

S

B

Have you seen the **NEW** **VICTOR DOOR SPRINGS**

WITH THE SELF-CONTAINED CHECK




Sceptre Victor No. 21

A GREAT ADVANCE
giving reliable, powerful
silent service

No. 21 "Sceptre Victor."
Patent double action Floor
Door Spring. Self-contained
hydraulic check action unit.
For medium size doors.
No. 22 for extra large or
heavy doors.

The elimination of back pressure
in this No. 21 "Sceptre Victor"
ensures that there is no free oil
in the box.



ROBERT ADAMS

ROBERT ADAMS (VICTOR) LIMITED

A D A M S

139, STAINES ROAD, HOUNSLOW

Telephone: HOUNSLOW 5714

MOULDEX RUBBER FLOORS

FOR

ELEGANCE

AND

DURABILITY

ESTIMATES & DESIGNS

ON APPLICATION

IMMEDIATE DELIVERIES

**BRITISH MOULDEX RUBBER
CO. LTD.**

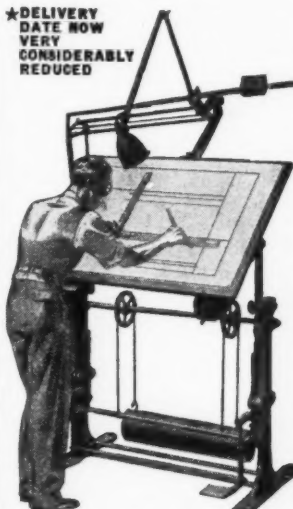
AGINCOURT ROAD, N.W.3



TELEPHONE: GUL 5508

The perfect drawing board

★DELIVERY
DATE NOW
VERY
CONSIDERABLY
REDUCED



B.I.F. (Castle Bromwich)
Stand No. D.714

The MAVITTA
Drafting Machine
stamps your draw-
ing office as
EFFICIENT. Made
of steel tube with
adjustable ball-
bearings. The main
angles are located
automatically, in-
termediate angles
by lock. Scales
have inlaid cellu-
loid edges and are
divided to order
on two edges.

**THE
MAVITTA DRAFTING
MACHINES LTD.**
Highlands Road, Shirley,
near Birmingham, Eng.
Telephone: Solihull 2231/2

MAVITTA DRAFTING MACHINES

Ask about the new Minor Model and new type Set Square

DUNBRIK

THE PRECISION FACING BRICK

Introduced in 1934 and since specified by Government
Departments, Local Authorities, Leading Architects,
Builders, etc. Buildings faced with Dunbriks include
Houses, Schools, Factories, Hospitals, Drillhalls, Cinemas,
Flats, Office Blocks, etc.

Dunbriks are Manufactured by:—

London and Home Counties

DUNBRIK LIMITED 35, Gloucester Square, London,
W.2. 'Phone: Paddington 2471/2

Suffolk, East and Central Essex

ALPHAMSTONE BRICK & TILE CO. LTD.

Alphamstone, near Bures, Suffolk. 'Phone: Twinstead 229

Dorset, S.W. Hants and S. Wilts.

W. E. MASTERS, Brick Manufacturer, Lytchett Minster,
near Poole, Dorset. 'Phone: Lytchett Minster 291/2

Oxon, Berks, N. Wilts and N. Glos.

THE COTSWOLD BRICK AND TILE CO. LTD.,

47, Market Square, Witney, Oxon. 'Phone: Witney 390

East and West Ridings, Yorkshire

DUNBRIK (YORKS) LTD., Stanley Ferry, near Wakefield,
Yorks. 'Phone: Wakefield 3694

Counties of Notts, Lincs, Leicester, Rutland, Derby.

THE HOVERINGHAM GRAVEL CO., LTD.

Hoveringham, Notts. 'Phone: Bleasby 242.

Scotland

SCOTTISH DUNBRIK LTD., 250, Alexandra Parade,
Glasgow, E.1. 'Phone: Bridgeton (Glasgow) 1818;
Dundee 81673

Ulster

DUNBRIK (ULSTER) LTD., Doagh Station, Co. Antrim,
N. Ireland. 'Phone: Doagh 59.

Beauty · Economy · Permanence · Uniformity

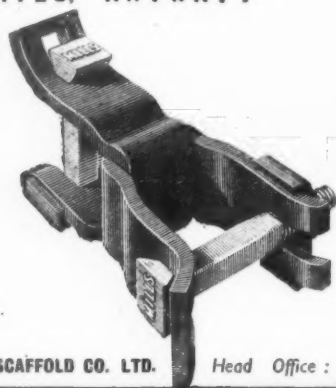
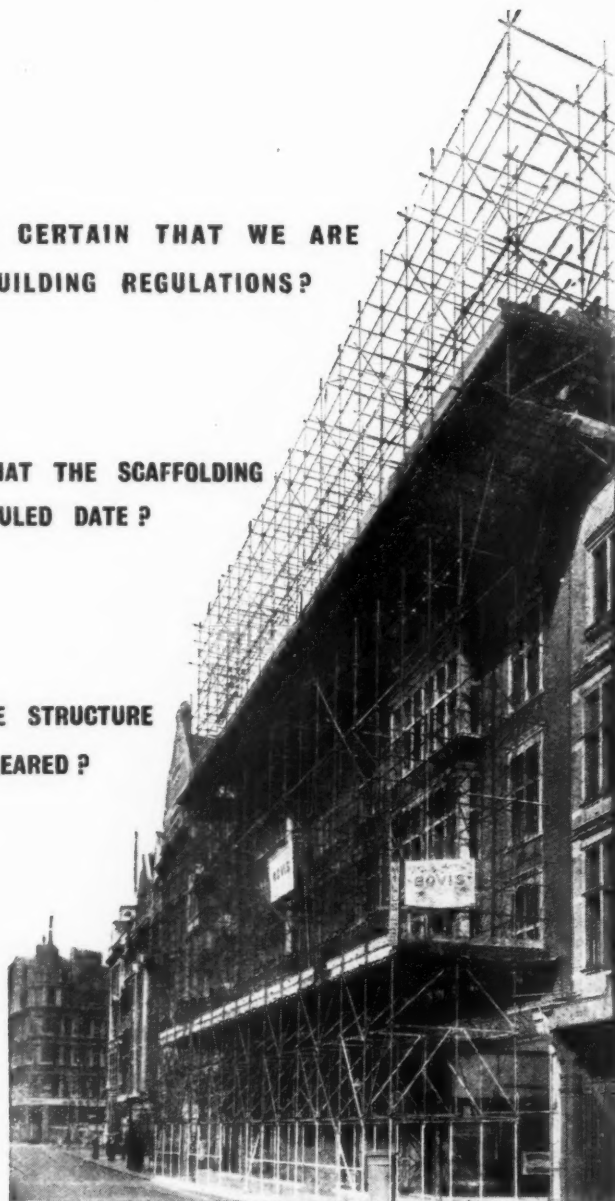
HOW CAN WE MAKE CERTAIN THAT WE ARE
COMPLYING WITH THE NEW BUILDING REGULATIONS?

HOW DO WE KNOW THAT THE SCAFFOLDING
WILL BE ERECTED BY THE SCHEDULED DATE?

HOW QUICKLY CAN THE STRUCTURE
BE DISMANTLED AND THE SITE CLEARED?

HOW MUCH IS IT
ALL GOING TO COST?

HOW DO WE GET
STARTED, ANYWAY?



MILLS SCAFFOLD CO. LTD.

Head Office :

**MILLS
KNOW HOW**

TELEPHONE : RIVERSIDE 5026/9
OR YOUR NEAREST DEPOT

BELFAST • BIRMINGHAM • BOURNEMOUTH • BRIGHTON • BRISTOL
CANTERBURY • CARDIFF • COVENTRY • DUBLIN • EXETER
GLASGOW • HULL • ILFORD • LIVERPOOL • LOWESTOFT
MANCHESTER • NEWCASTLE • NORWICH • PORTSMOUTH
PLYMOUTH • SOUTHAMPTON • SWANSEA • YARMOUTH

Head Office : TRUSSELY WORKS, HAMMERSMITH GROVE, LONDON, W.6

