

# THE ARCHITECTS' JOURNAL

STACK



## standard contents

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

## NEWS and COMMENT

Diary

News

Astragal'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 Ie one week, Ig to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 75, Eaton Place, S.W.1.	
IIBD	Incorporated Institute of British Decorators. Drayton House, Gordon Street, W.C.1.	Sloane 3158/1601
ILA	Institute of Landscape Architects. 12, Gower Street, W.C.1.	Euston 2450
I of Arb.	Institute of Arbitrators, 35/37, Hastings House, 10, Norfolk Street, Strand, W.C.2.	Temple Bar 4071
IOB	Institute of Builders. 48, Bedford Square, W.C.1.	Museum 7197/5176
IR	Institute of Refrigeration. Dalmeny House, Monument Street, E.C.3.	Avenue 6851
IRA	Institute of Registered Architects. 47, Victoria Street, S.W.1.	Abbey 6172
ISE	Institution of Structural Engineers. 11, Upper Belgrave Street, S.W.1.	Sloane 7128
IWA	Inland Waterways Association. 11, Gower Street, W.C.1.	Museum 9200
LIDC	Lead Industries Development Council. Eagle House, Jermyn Street, S.W.1.	Whitehall 7264/4175
LMBA	London Master Builders' Association. 47, Bedford Square, W.C.1.	Museum 3891
MARS	MARS Group (English Branch of CIAM). Secretary: Gontran Goulden, Building Centre, 9, Conduit Street, W.1.	Mayfair 8641
MOA	Ministry of Agriculture and Fisheries. 55, Whitehall, S.W.1.	Whitehall 3400
MOE	Ministry of Education. Curzon Street House, Curzon Street, W.1.	Mayfair 9400
MOH	Ministry of Health. Whitehall, S.W.1.	Whitehall 4300
MOLGP	Ministry of Local Government and Planning. 23, Saville Row, W.1.	Regent 8411
MOLNS	Ministry of Labour and National Service, 8, St. James's Square, S.W.1.	Whitehall 6200
MOS	Ministry of Supply. Shell Mex House, Victoria Embankment, W.C.	Gerrard 6933
MOT	Ministry of Transport. Berkeley Square House, Berkeley Square, W.1.	Mayfair 9494
MOW	Ministry of Works. Lambeth Bridge House, S.E.1.	Reliance 7611
NAMMC	Natural Asphalte Mine-Owners and Manufacturers Council. 94-98, Petty France, S.W.1.	Abbey 1010
NAS	National Association of Shopfitters. 9, Victoria Street, S.W.1.	Abbey 4813
NBR	National Buildings Record. 37, Onslow Gardens, S.W.7.	Kensington 8161
NCBMP	National Council of Building Material Producers, 10, Princes Street, S.W.1.	Abbey 5111
NFBTE	National Federation of Building Trades Employers. 82, New Cavendish Street, W.1.	Langham 4041/4054
NFBTO	National Federation of Building Trades Operatives, Federal House, Cedars Road, Clapham, S.W.4.	Macaulay 4451
NFHS	National Federation of Housing Societies. 13, Suffolk St., S.W.1.	Whitehall 1693
NHBR	National House Builders Registration Council. 82, New Cavendish Street, W.1.	Langham 4341
NPL	National Physical Laboratory. Head Office, Teddington.	Molesey 1380
NSA	National Sawmilling Association. 14, New Bridge Street, E.C.4.	City 1476
NSAS	National Smoke Abatement Society. Chandos House, Buckingham Gate, S.W.1.	Abbey 1359
NT	National Trust for Places of Historic Interest or Natural Beauty. 42, Queen Anne's Gate, S.W.1.	Whitehall 0211
PEP	Political and Economic Planning. 16, Queen Anne's Gate, S.W.1.	Whitehall 7245
RCA	Reinforced Concrete Association. 94, Petty France, S.W.1.	Whitehall 9936
RIAS	Royal Incorporation of Architects in Scotland. 15, Rutland Square, Edinburgh.	Edinburgh 20396
RIBA	Royal Institute of British Architects. 66, Portland Place, W.1.	Langham 5721
RICS	Royal Institution of Chartered Surveyors. 12, Great George St., S.W.1.	Whitehall 5322/9242
RFAC	Royal Fine Art Commission. 22A, Queen Anne's Gate, S.W.1.	Whitehall 3935
RS	Royal Society. Burlington House, Piccadilly, W.1.	Regent 3335
RSA	Royal Society of Arts. 6, John Adam Street, W.C.2.	Trafalgar 2366
RSI	Royal Sanitary Institute. 90, Buckingham Palace Road, S.W.1.	Sloane 5134
RIB	Rural Industries Bureau. 35, Camp Road, Wimbledon, S.W.19.	Wimbledon 5101
SBPM	Society of British Paint Manufacturers. Grosvenor Gardens House, Grosvenor Gardens, S.W.1.	Victoria 2186
SCR	Society for Cultural Relations with the USSR. 14, Kensington Square, London, W.8.	Western 1571
SE	Society of Engineers. 17, Victoria Street, Westminster, S.W.1.	Abbey 7244
SFMA	School Furniture Manufacturers' Association. 30, Cornhill, London, E.C.3.	Mansion House 3921
SIA	Structural Insulation Association. 14, Moorgate, London, E.C.2.	Central 4444
SIA	Society of Industrial Artists. 7, Woburn Square, W.C.1.	Langham 1984
SNHTPC	Scottish National Housing. Town Planning Council. Hon. Sec., Robert Pollock, Town Clerk, Rutherglen.	
SPAB	Society for the Protection of Ancient Buildings. 55, Great Ormond Street, W.C.1.	Holborn 2646
TCPA	Town and Country Planning Association. 28, King Street, Covent Garden, W.C.2.	Temple Bar 5006
TDA	Timber Development Association. 21, College Hill, E.C.4.	City 4771
TGC	The Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
TPI	Town Planning Institute. 18, Ashley Place, S.W.1.	Victoria 8815
TTF	Timber Trades Federation. 69, Cannon Street, E.C.4.	City 4444
WDC	War Damage Commission. Devonshire House, Mayfair Place, Piccadilly, W.1.	Mayfair 8866
WEDA	Welfare Equipment Development Association. 74, Victoria Street, S.W.1.	Victoria 5783
ZDA	Zinc Development Association. Lincoln House, Turl Street, Oxford.	Oxford 47988

No. 2938] [Vol. 113  
THE ARCHITECTURAL PRESS  
9, 11 and 13, Queen Anne's Gate, Westminster,  
S.W.1. 'Phone: Whitehall 0611

Price 1s. 0d.

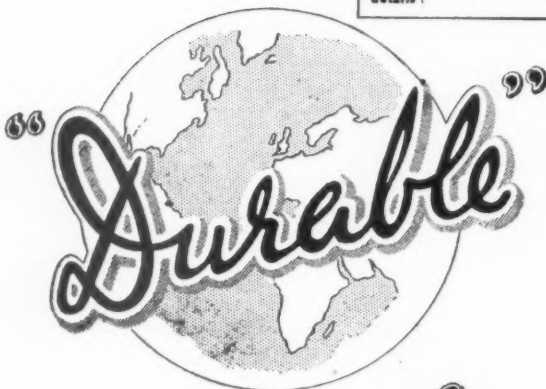
Registered as a Newspaper.

*Specify*

**FOR "BUILT UP" FELT ROOFING  
AND ASPHALTIC**

**"DURABLE REFLECTIVE ROOFING"**

is a scientific mastic roofing carrying a twenty year guarantee and very moderate in price. May we send you details?



*Durable Asphalt Co. Ltd.*

"KIMBERLEY HOUSE"

14/17 HOLBORN VIADUCT, E.C.1

Southern Depot: Great Testwood, Totton,  
Near Southampton

TELEPHONE CITY 1456/7, 4553, 6271

Northern Depot: Gladstone Street,  
Huntingdon Road, York

**FLOORING**

To B.S.S. 1451/1948

**ROOFING**

To B.S.S. 1162/1944 & 988/1941

**TANKING**

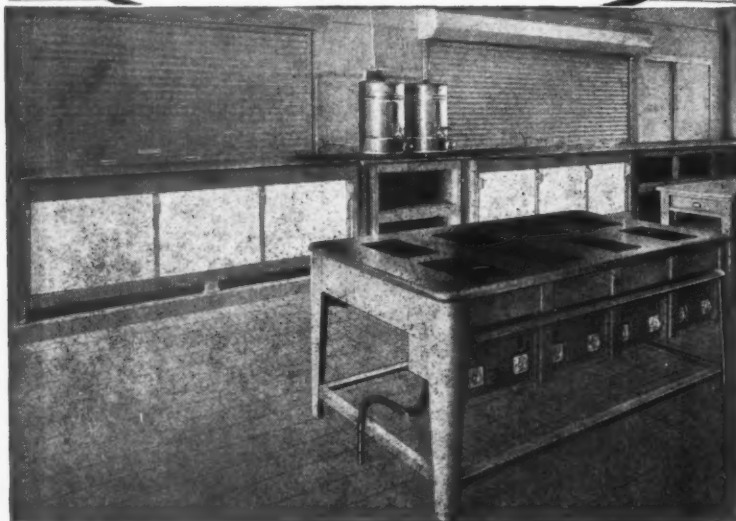
To B.S.S. 1418/1947 & 1097/1943

**DAMP COURSE WORK**

To B.S.S. 1418/1947 & 1097/1943

Typical Heavy Duty Installations by

*Jackson*  
(No. 3)



**A section of the Kitchen at  
British Timken, Ltd.**

The illustration shows Jackson Hot Cupboards incorporated in the spacious Serving Counter, also 2 Chromium Water Urns and an 8-Plate Boiling Table in the foreground. The equipment at Duston, Northampton, caters for 400 persons, and has a total loading of 160 kW. It is another excellent example of Jackson all-electric kitchen equipment. Jackson's design complete installations for kitchens of any size.

*Jackson*

**BOILING PANS • BAINS MARIE • CHEFS'  
RANGES • GRILLS • HOT CUPBOARDS  
STEAMING OVENS • FISH FRYERS • URNS  
PASTRY OVENS • ROASTING OVENS**

THE JACKSON ELECTRIC STOVE CO. LIMITED, 143 Sloane Street, London, S.W.1. SLOane 6248



NG

ORK

n at

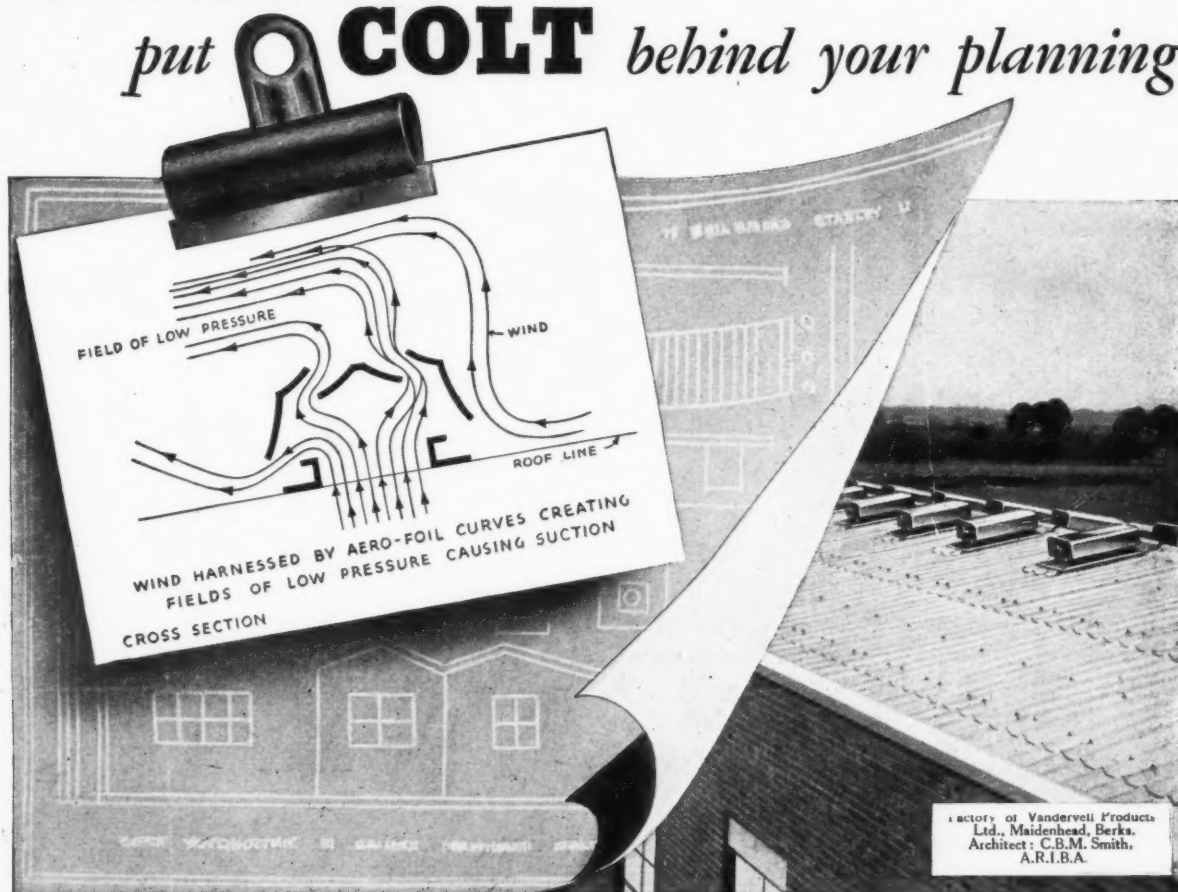
pboards  
ter, also  
Boiling  
Duston,  
d has a  
excellent  
quipment.  
kitchens

CHEFS'  
BOARDS  
URNS  
ENS

e 6248



# RIGHT *from the start . . .* put **COLT** *behind your planning*



factory of Vandervell Products  
Ltd., Maidenhead, Berks.  
Architect: C.B.M. Smith,  
A.R.I.B.A.

The Colt organisation has the science of ventilation at its finger-tips—from the first principles, down to a highly specialised knowledge of air induction and extraction under every type of atmospheric condition. When you are drawing-up plans, and while your ideas are still fluid, come to us with any ventilation problems you may have. We shall be glad to help you: and without any obligation, naturally.

**A FREE MANUAL** with full specifications of the types of standard Colt Ventilators is available on request from Dept. U. 163

*THE COLT S.R. VENTILATOR, illustrated above, is designed on aerodynamic principles embodying aero-foil curves that prevent the elements from interfering with the escape of the hot vitiated air which rises through the ventilator in accordance with the Laws of Convection.*

*Furthermore, these aero-foil curves assist this natural process by harnessing the free power of the wind and roof eddies, no matter from which direction they come, creating a suction which can produce a power of extraction equal to that of mechanical means without the drawbacks of noise, wearing parts or operating and maintenance costs.*

*These aero-foil curves have been so designed as to give a flat curve of extraction to prevent extraction from becoming excessive with the high winds of winter.*

*Just one example of the many types of ventilation that Colt have planned or carried out for over 4,000 prominent firms throughout the country.*

## COLT VENTILATION

INDUSTRIAL AND DOMESTIC

Colt Ventilation Ltd., Surbiton, Surrey. ELMbridge 6511-5

Also at Birmingham, Bradford, Bristol, Kilmarnock, Manchester, Newcastle, Newport (Mon.) and Sheffield



SEE COLT ABOUT VENTILATION—WHATEVER YOU DO



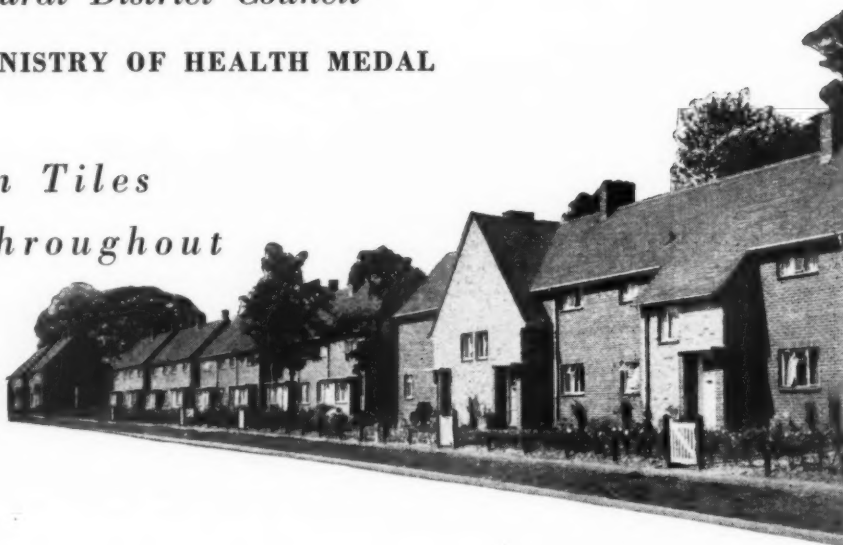


Architect : Peter Dunham, F.R.I.B.A. Contractors : Richardson & Bottoms and Tew Brothers.

**HOUSING AT HOUGHTON REGIS, BEDS**  
*for the Luton Rural District Council*

**AWARDED THE MINISTRY OF HEALTH MEDAL**  
*(Eastern Region)*

*Marley Plain Tiles*  
*were used throughout*



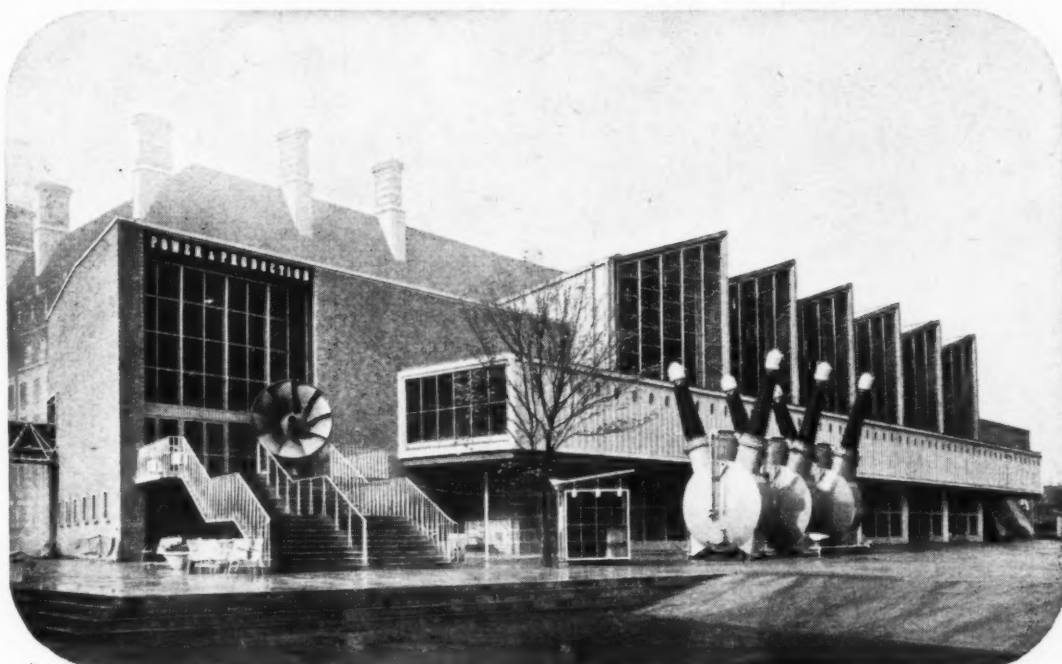
"Not for an age—but for all time."

The Marley Tile Company Limited, Sevenoaks, Kent. Sevenoaks 2251-8

**MARLEY**

## WELDED TUBULAR CONSTRUCTION

*-by the originators of tubular scaffolding!*



POWER AND PRODUCTION BUILDING. FESTIVAL OF BRITAIN.

Architects: G. GRENFELL BAINES, A.R.I.B.A., A.M.T.P.I., IN COLLABORATION WITH H. J. REIFENBERG, Dipl.Ing.Arch.  
Engineer: FELIX J. SAMUELY, B.Sc.(Eng.) Lond., A.M.I.C.E., M.I.Struct.E., F.I.A.S., M.I.W.

Welded tubular construction does the job with less steel, skilful design saving up to 60%. Its clean modern appearance pleases the eye of the architect. The simple shapes which arise from the method of construction are easy to protect against corrosion.

**SCAFFOLDING** (GREAT BRITAIN) LTD.  
MITCHAM SURREY

Telephone : MITCHAM 3400 (18 lines)

Telegrams : SCAFCO, MITCHAM

Branches at: ABERDEEN • BIRMINGHAM • BOURNEMOUTH BRIGHTON • BRISTOL  
CAMBRIDGE • CARDIFF • DOVER • DUBLIN DUNDEE • EDINBURGH EXETER  
GLASGOW • HULL • LEEDS • LIVERPOOL • MANCHESTER • NEWCASTLE • NOTTINGHAM  
OXFORD • PLYMOUTH • PORTSMOUTH • SOUTHAMPTON STOKE-ON-TRENT • SWANSEA

**S.G.B. WELDED STRUCTURES DIVISION**



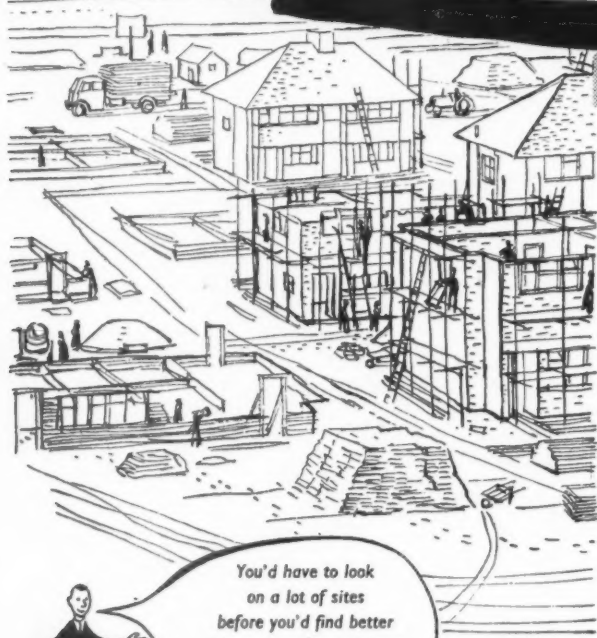
DOORS, WINDOWS,  
KITCHEN UNITS,  
STAIRS, MOULDINGS

by

**Austins** of East Ham

*The Biggest Name in Joinery*

with the most comprehensive and  
efficient service in the country



You'd have to look  
on a lot of sites  
before you'd find better  
joinery than Austin joinery

AUSTINS OF EAST HAM LTD., LONDON, E.6 · GRANGEWOOD 3446

the parent Company of

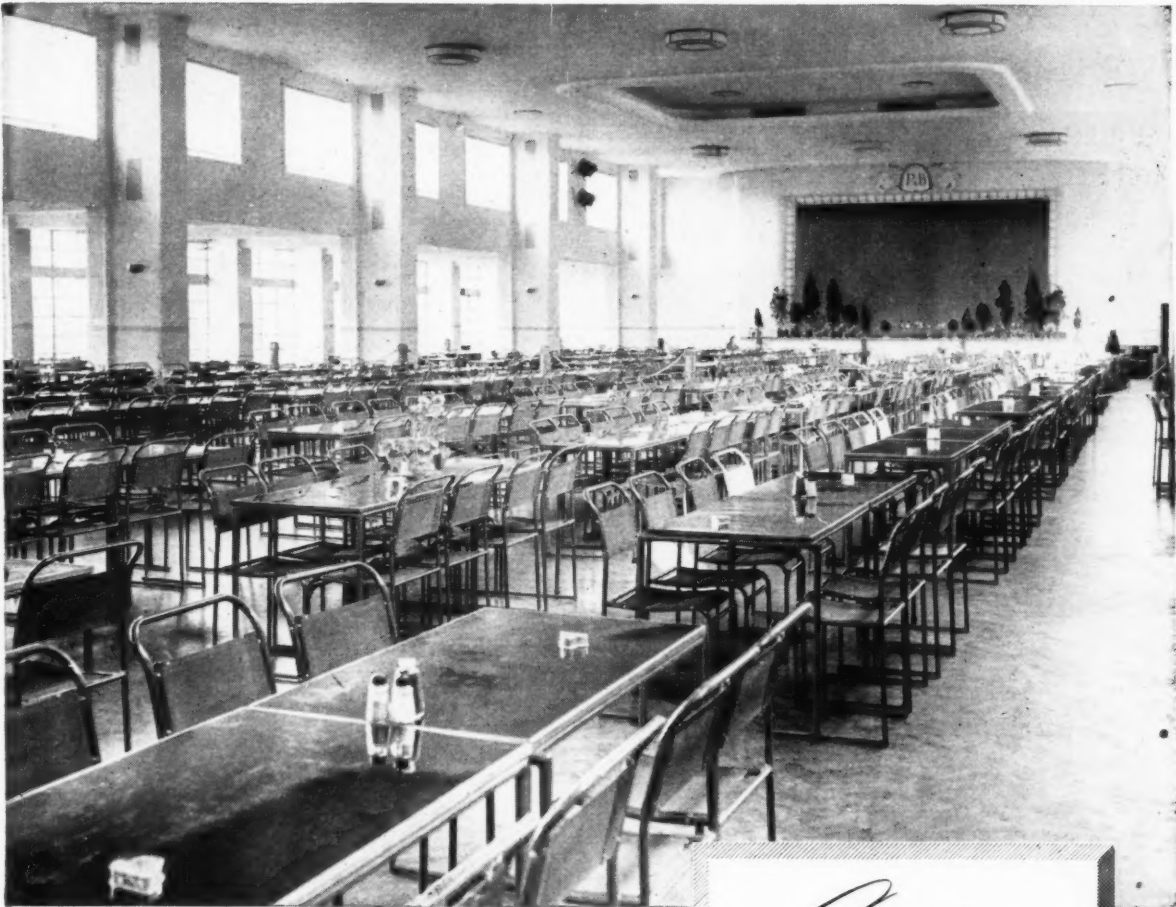
THE AUSTIN-HALL GROUP OF COMPANIES



214.18



Paton & Baldwin Ltd., Canteen—Darlington  
 Photograph by courtesy of Paton & Baldwin  
 Ltd. Architects: Sir Alex Gibbs & Partners,  
 Queen Annes Lodge, London, S.W.1.



NOWADAYS the works canteen often serves a dual purpose and for that reason permanent furniture is undesirable. When the last meal is served as likely as not preparations will commence for an evening concert or maybe a staff dance. In these circumstances Kingfisher space-saving furniture is the perfect answer. Strong, light and easy-to-handle it facilitates re-arrangement, removal and stacking in a matter of minutes and at the same time provides that degree of comfort which is looked for in furniture of a more permanent character.

The attractive and colourful appearance of Kingfisher Tubular Steel Nesting Chairs and Tables, the unmistakable mark of quality which withstands the most arduous conditions, and the remarkable economy of storage space make them ideal for use in canteens as well as in public halls, civic restaurants and other public buildings.

Kingfisher experience and productions are invaluable to Architects when preparing new designs.

*Comfort*  
 +  
**convenience**



**Kingfisher**



**CANTEEN FURNITURE AND EQUIPMENT**

**KINGFISHER LIMITED.** Charles Street and Phoenix Street, West Bromwich, Staffs. Phone: Tipton 1631. Grams: Kingfisher, Phone, West Bromwich  
 London: 139 Knightsbridge, S.W.1. Telephone: Kensington 1331

## *The most* **HYGIENIC** *flooring*



One of the most conspicuous advantages of a Clay Quarry floor is that it is so easily kept clean, particularly where skirtings of the same material are used. The smooth, dense surface, free from sharp angles or crevices, may be maintained in a spotless condition by simply sluicing or mopping. Further, floors may be rendered **ABSOLUTELY VERMIN-PROOF** by the application of colourful Clay Floor Quarries.

They are the obvious choice for all premises where regulations demand washable floors, and for all other buildings where hygienic conditions are essential.

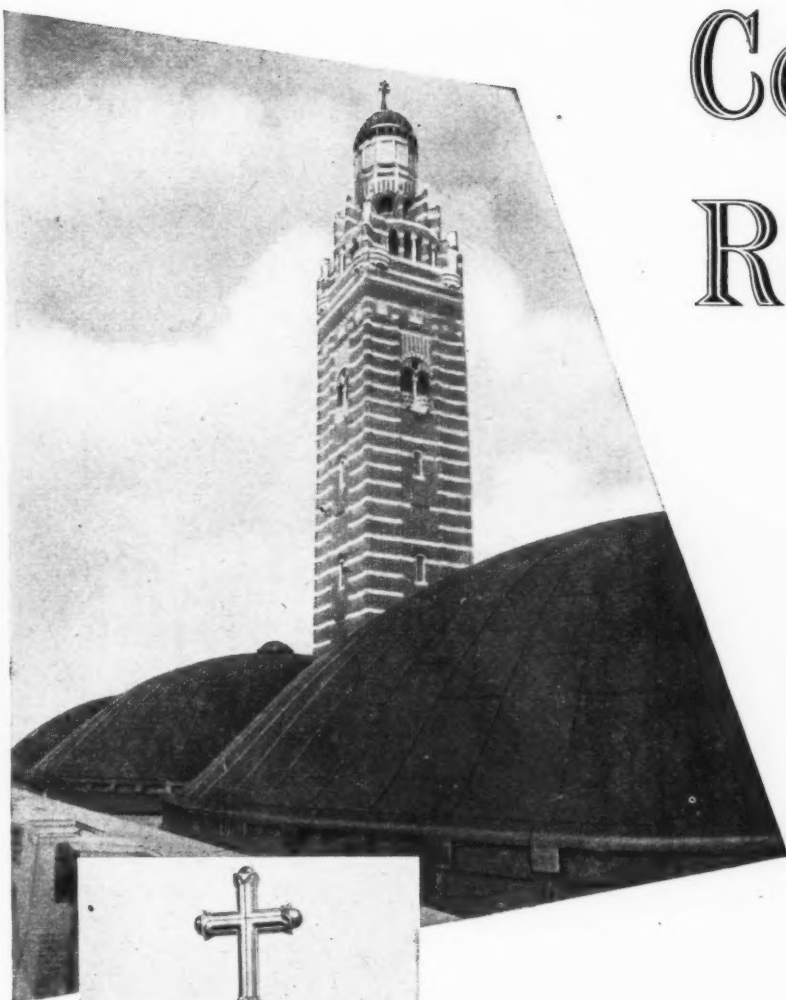
Clay Floor Quarries are highly resistant to impact and abrasion. They are available in a wide range of sizes, thicknesses and shapes, and in uniform shades of red, blue, brown and buff, or in multi-colours, and actually **COST LESS THAN ANY OTHER FLOORING MATERIAL**

Correctly laid, a Quarry floor will last as long as the building.

For further information, please write to The Secretary, Floor Quarry Association, Federation House, Stoke-on-Trent.

# Clay Floor Quarries

# Copper Roofing



**Westminster Cathedral**  
*The four large concrete domes on the main roof of Westminster Cathedral were recently covered by us, using nearly 8 tons of copper sheets.*



*Copper Terminal supplied for  
Namirembe Cathedral,  
Kampala, Uganda.*

*Overall height ... 17ft.  
Width across ball ... 5ft.*

CRAFTSMEN IN PLAIN AND  
ORNAMENTAL COPPER ROOFING

**BROCHURE ON REQUEST**

*One of the wide range of*

**BRABY**  
A C T I V I T I E S



**FREDERICK BRABY & COMPANY LTD**

**FITZROY WORKS, 352 EUSTON ROAD, LONDON N.W.1 TEL: EUSTON 3456**

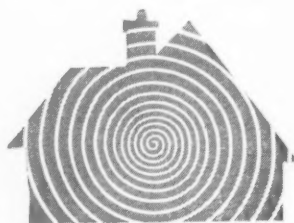
OTHER FACTORIES AT: **IDA WORKS, DEPTFORD, LONDON S.E.8 TEL: TIDEWAY 1234** • **HAVELOCK WORKS, AINTREE LIVERPOOL 10 TEL: AINTREE 1721** • **ECLIPSE WORKS, PETERSHILL RD., GLASGOW, N. TEL: SPRINGBURN 5151** • **ASHTON GATE WORKS, BRISTOL 3 TEL: 64041** • **ALSO FALKIRK & MOTHERWELL**

OTHER OFFICES: **110 CANNON STREET, LONDON E.C.4 (EXPORT) TEL: MANSION HOUSE 6034** • **QUEEN'S BUILDINGS, 10 ROYAL AVENUE, BELFAST TEL: 26509** • **PALACE STREET, PLYMOUTH TEL 2261**



# Warm . . .

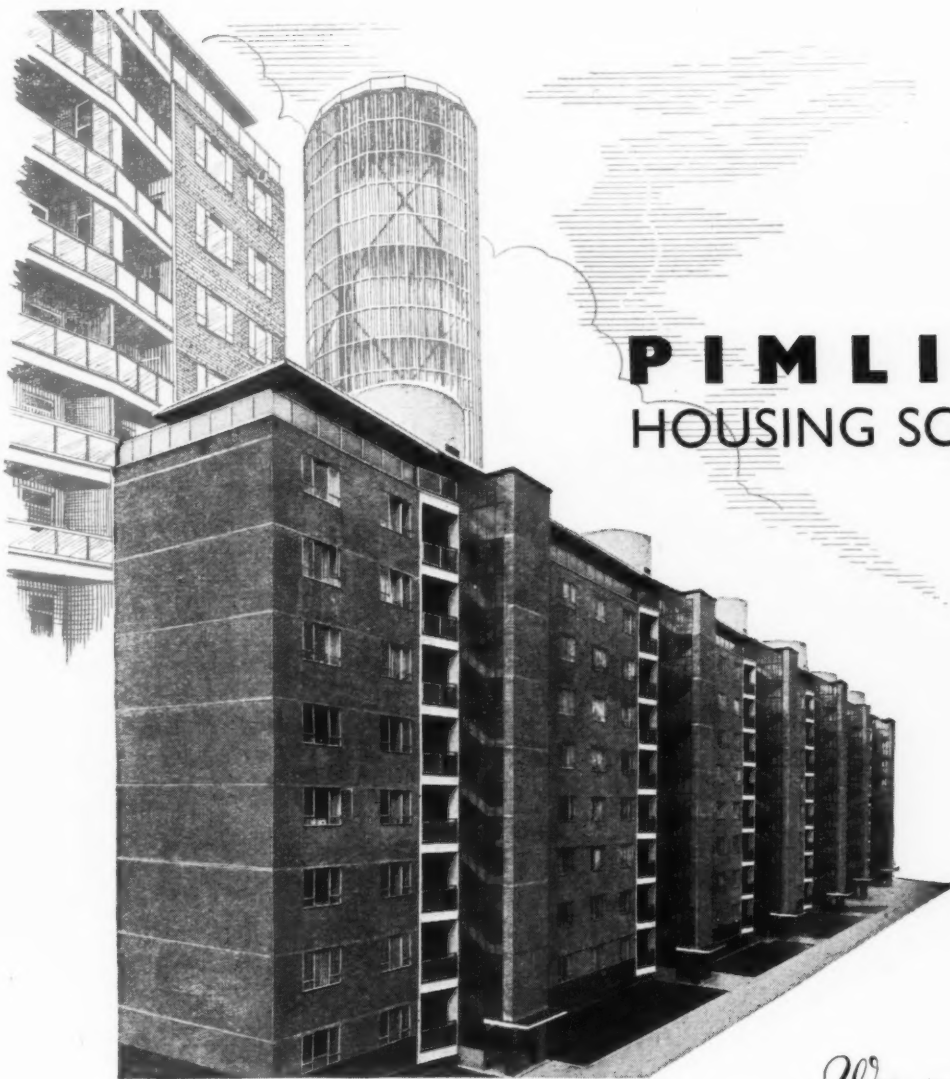
WHEREVER THEY GO



**Whole-house  
Warming by  
Radiation  
ducted air**

When the house is wholly warmed by Radiation ducted air, room temperatures vary only slightly from floor to ceiling. Children may patter around, lightly clothed, bare-footed if needs be, without danger of chills through sudden changes in temperature.

The Radiation system may be installed with either a solid fuel appliance, which burns without smoke any solid fuel, *including bituminous coal*, or as a fully automatic gas unit. Architects, housing authorities and others—especially those concerned with smokeless zones—are invited to write for literature explaining the system in full or to visit the experimental houses at Stanmore where both solid fuel and gas installations may be experienced in action. But please apply first for an appointment to Radiation Group Sales Limited, Lancelot Works, Wembley, Middlesex. Telephone: Wembley 6221



## PIMLICO HOUSING SCHEME

*With* its now famous hot water accumulator dominating its surroundings this housing scheme is one of the most modern now under construction. Designed by Messrs. Powell & Moya, A/A.R.I.B.A. winners of the open competition set by the Westminster City Council, the scheme will be in four sections on a 30-acre site and will eventually provide flats for approximately 1,600 families.

Electricity is distributed to the flats by means of rising main cables with feeding boxes on each floor from which run V.R.I. cables in conduit for all sub-circuits. For this work the Electrical Contractors, Messrs. Troughton & Young, Ltd., are using BICC Paper Insulated Mass-Impregnated Non-Draining Cable, Rising Main Boxes and V.R.I. Cables.



# CABLES

BRITISH INSULATED CALLENDER'S CABLES LIMITED  
NORFOLK HOUSE, NORFOLK STREET, LONDON, W.C.2



## *Housewives' choice!*

Singing about good plumbing? Well, perhaps not, but she'd hardly be happy without it! Seriously, for modern plumbing on any scale—housing estate, factory, office building—we offer you really first-rate service based on quite exceptional experience. So, when it's plumbing, call in Z.D.B. — you simply can't do better!

PLUMBING by  
**Z.D.BERRY**  
& SONS LTD.  
*Founded 1810*

1810-1951—OVER 141 years' experience

**HEATING, VENTILATING & PLUMBING CONTRACTORS**

Z. D. BERRY & SONS LTD., 16 REGENCY ST., LONDON, S.W.1

'Phone: TATe Gallery 0201

and at WARRINGTON & DONCASTER



ALL STONE USED IN THIS BUILDING IS

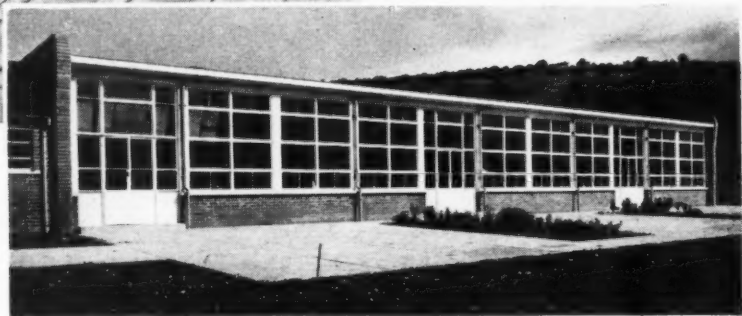
## Empire Stone



Architects : Willan & Stewart,  
F.A.R.I.B.A., in collaboration with  
S. H. Loweth, F.S.A., F.R.I.B.A.  
County Architect

Sculptor : Mr. Barry Hart, A.R.C.A.

Dover, The Powell County Primary  
School



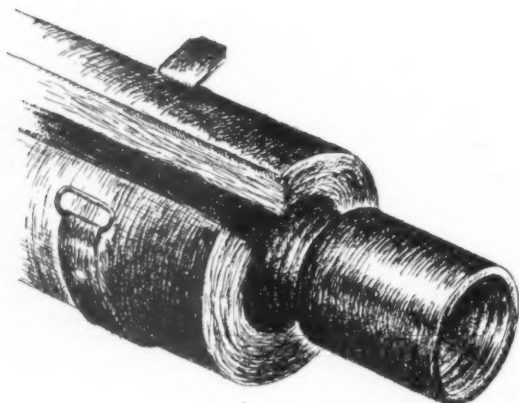
THANET HOUSE, 231 STRAND, LONDON, W.C

WINCHESTER HOUSE, BIRMINGHAM, 2

NARBOROUGH, NR. LEICESTER

324 DEANS GATE, MANCHESTER, 3

## Empire Stone Co. Ltd.



as simple as putting  
two and two together

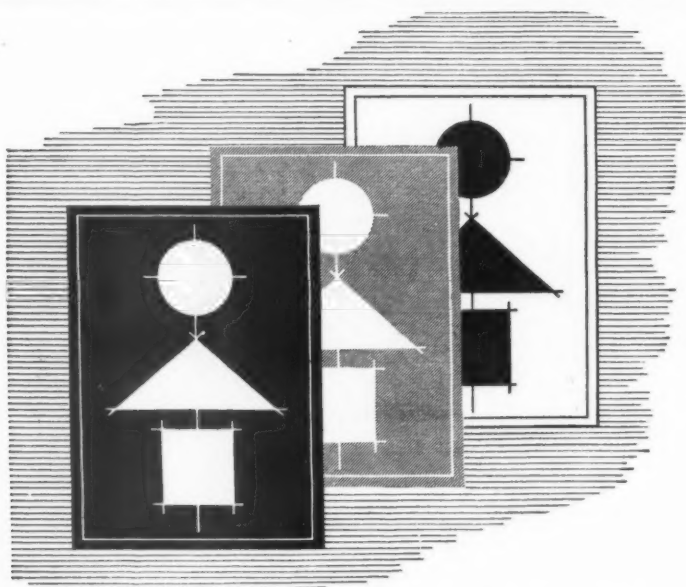
*Versil rigid sections make a neat and efficient job of pipe insulation. Two half-sections, shaped to fit the exact outside diameter of pipe, are held together and fixed with simple clip-on bands. In a matter of seconds, on either hot or cold piping, you have immensely durable yet removable insulation. You are welcome to send your Thermal Insulation problems to VERSIL Ltd., Rayner Mills, Liversedge, Yorks. . . you will find that VERSIL can usually supply the complete answer.*

IN A WORD

**V E R S I L**

GLASS SILK INSULATION

CPW



## PHOTO-PRINTING SERVICE

Our prestige has been built on long experience of the vital necessities of photo-printing—clarity of reproduction and reliability of service. We have always been abreast of developments and today the efficiency of our photo-printing remains unrivalled.

**BLUEPRINTS  
WHITEPRINTS  
BROMIDE PRINTS**

*Please send for our price lists and test the merits of our service.*

**HARPER & TUNSTALL LTD.**  
LETO WORKS · EDGWARE · MIDDLESEX



Telephone: EDGware 4455  
LONDON  
39, Victoria Street, S.W.1.

BIRMINGHAM  
31, Union Street, 2

xiv

Telegrams: OFTERIAL, EDGWARE  
GLASGOW  
278, St. Vincent's Street

**REINFORCED  
CONCRETE  
ROADS**

***Cheapest in the  
long run***



*Architect: R. Lewis Reynish A.R.I.B.A.  
Contractors: Warings (Contractors) Ltd.*

WITH  
**REINFORCEMENT BY**

**McCALL'S**

Road at Greenwood Avenue, Portsmouth  
for Mr. John Day, South Wymering  
Farm, Portsmouth, in which McCall's  
Matobar welded fabric reinforcement  
was used.

**McCALL AND COMPANY (SHEFFIELD) LIMITED**  
TEMPLEBOROUGH, SHEFFIELD • and at LONDON

SRB 37

## 3-storey flats in 'no-fines' concrete

*Three-storey no-fines flats at Coventry. Walls 12" thick. Concrete suspended floors with noise insulation. External finish spar dry dash giving self-cleaning surface. To the design of the City Architect: D.E.E. Gibson, A.R.I.B.A.*



This is Wimpey's latest contribution to the solution of the housing problem. The "No-Fines" technique, long successful in the construction of two-storey buildings, has been adapted for these attractive three-storey flats, now completed and occupied by satisfied tenants. This new Wimpey development offers many advantages. Quite apart from the great speed of erection, by which nine flats can be poured in a week from a single set-up, the demands on skilled labour are

minimised, and the design can be readily adapted to meet particular local requirements. Furthermore, this construction, which compares most favourably in every way with traditional types, is available at most economical and competitive prices.

**WIMPEY**

★ *NO-FINES means that the fine material, normal in dense concrete is omitted. The resultant mix has air cavities which give good thermal insulation and avoid the risk of capillary attraction. No-fines walls are therefore warm and dry*

*Send your enquiries to:*

GEORGE WIMPEY & CO. LTD., HAMMERSMITH GROVE, LONDON, W.6. RIVeRside 2000



# P & G BATTERIES

## in the public service



P & G Batteries provide many important auxiliary services to help keep Britain's electric trains running to schedule. On the new Liverpool Street to Shenfield electrification scheme, two of these are switchgear operation and supervisory control. P & G experience is spread over a very wide field and stretches back over 60 years. Specialists who know the battery business throughout will gladly discuss any projects with you. Since two heads are better than one, the results are often surprising. Our 3-point service covers **1. Technical Advice and Specifications. 2. Equipment and installation. 3. Regular inspection and report.**

### **PRITCHETT & GOLD & EPS Company Ltd**

53 GROSVENOR GARDENS · LONDON · SW1

Batteries and Control Panels for Emergency Lighting

**2** heads are  
better than **1**



PC38A



FOR  
*Cinsitu* FLOORING

Now being used for flats and L.C.C. Housing Schemes. Bitumen-based waterproof floor covering ideal for homes, offices, factories, hospitals etc. Non-absorbent, non-slip and hard wearing. Impervious to heat. Looks like lino, takes similar polish. Can be laid on existing concrete floors. Made in a variety of colours.

FOR  
**LUXOR**

**JOINTLESS PLASTIC FLOORING**

A plastic flooring with new features of comfort, elegance and durability; Luxor has been developed as a result of many years research into the chemical reactions of oxychloride cements and extensive practical experience of the technicalities of floor laying.

FOR  
**FIBROUS & SOLID  
PLASTERING**

In this department our expert staff of highly skilled craftsmen and operatives is able to carry out first-class work of every type. A John Kent job is a job well done, and good work is always economical in the long run. Your enquiries are invited.

**MELON ROAD, PECKHAM, S.E.15 Tel.: RODney 5522/3/4**

**FD15**

★ A NEW HARDBOARD-FACED FLUSH DOOR ★

★ FD15 Doors can be made with Licence-Free Hardwood cores and edges at extra cost

STANDARD SIZES  
2'0" 2'3" 2'6" 2'9"  
× 6'6" × 1½"

WITH DOVETAILED JOINTS & EXTRA RIGIDITY

A really well-made flush door, economical in timber and moderate in price. The Softwood cores have dovetailed joints between styles and rails, intermediate framing housed at each end and closely spaced to give adequate support to the faces of best one-eighth inch Hardboard. Vertical edges are lipped with solid tongued softwood strip.

**JOHN SADD & SONS LTD.**

Specialists in Joinery

STATION RD. Wharf 1, MALDON, ESSEX  
Telephone: Maldon 131

# ESCALATORS LIFTS

for Passengers,  
Goods and Service

BY

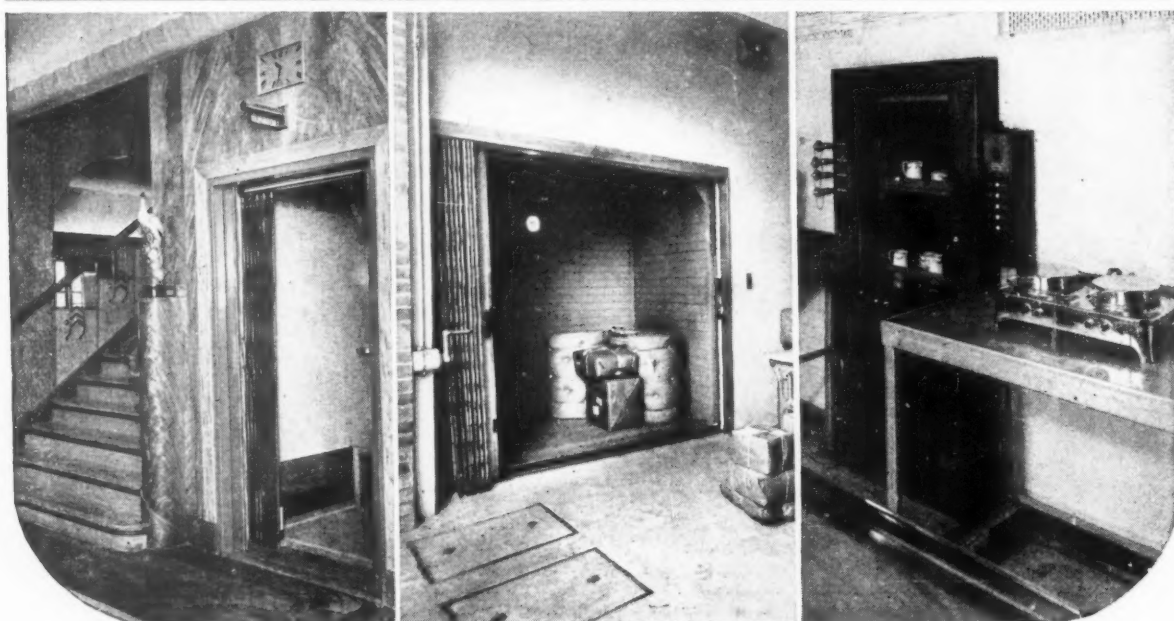
## J. & E. HALL

LIMITED

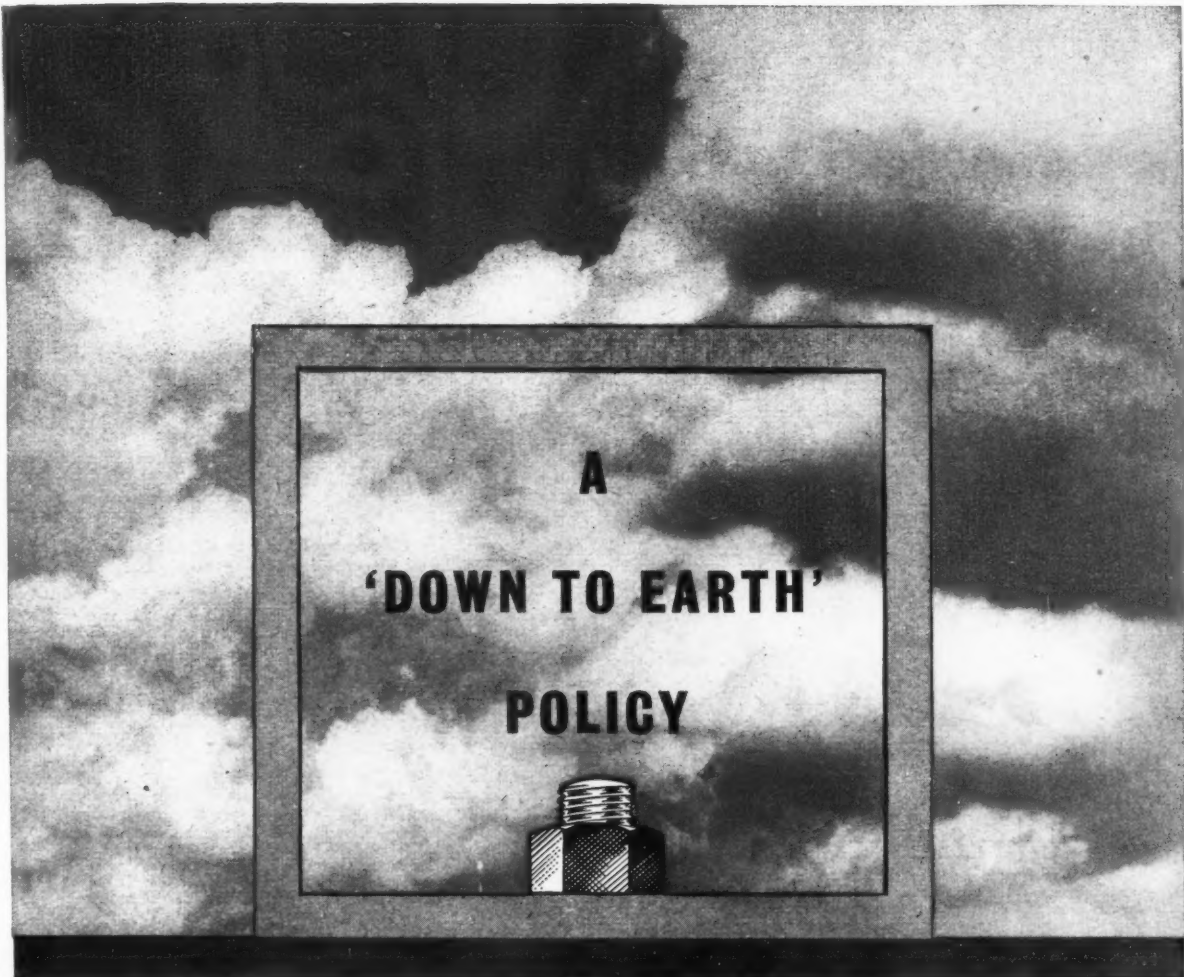
DARTFORD · KENT

LONDON OFFICE:

10, ST. SWITHIN'S LANE, E.C.4







Works Managers, Maintenance  
practical turn of mind appreciate a down  
have to fasten things to

The business end of the G K N  
the part which does its work unseen.  
special lugs give the bolt a holding  
strength of the material



Engineers and other folk with a  
to earth policy particularly when they  
concrete or masonry.

Indented Foundation Bolt is  
Grouted into concrete or masonry its  
power governed only by the  
in which it is set.

**GKN**

**INDENTED FOUNDATION BOLTS**

**GUEST KEEN & NETTLEFOLDS (MIDLANDS) LIMITED**

**BOLT & NUT DIVISION Atlas Works, Darlaston, S. Staffs**

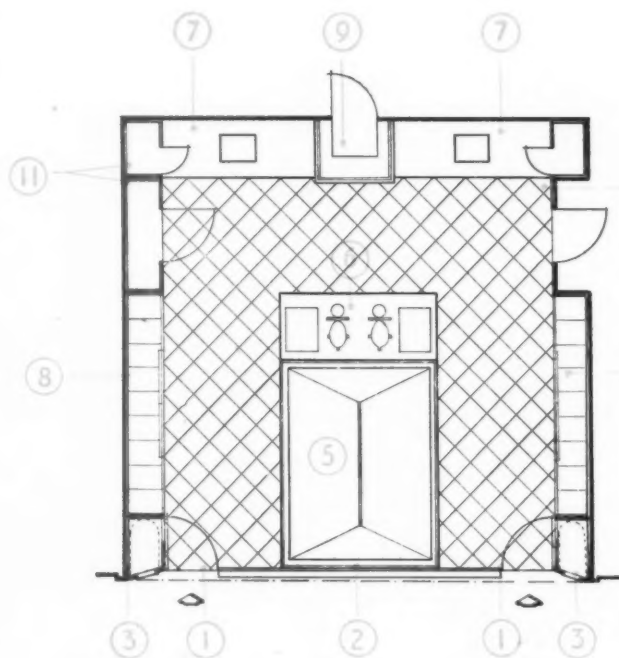
D/128/3

# DESIGN FOR

## NEW TYPE OF FISHMONGER'S SHOP

The problem of protecting foodstuffs that are displayed and stored in shops is basically an architectural problem, which may be solved by good design and the use of appropriate materials. Here is one solution, which provides new standards of hygiene; a fishmonger's shop designed by Edward D. Mills, F.R.I.B.A.

### *Specification of Materials*



Plan Fishmonger's shop

SCALE 1/8" = 1'-0"

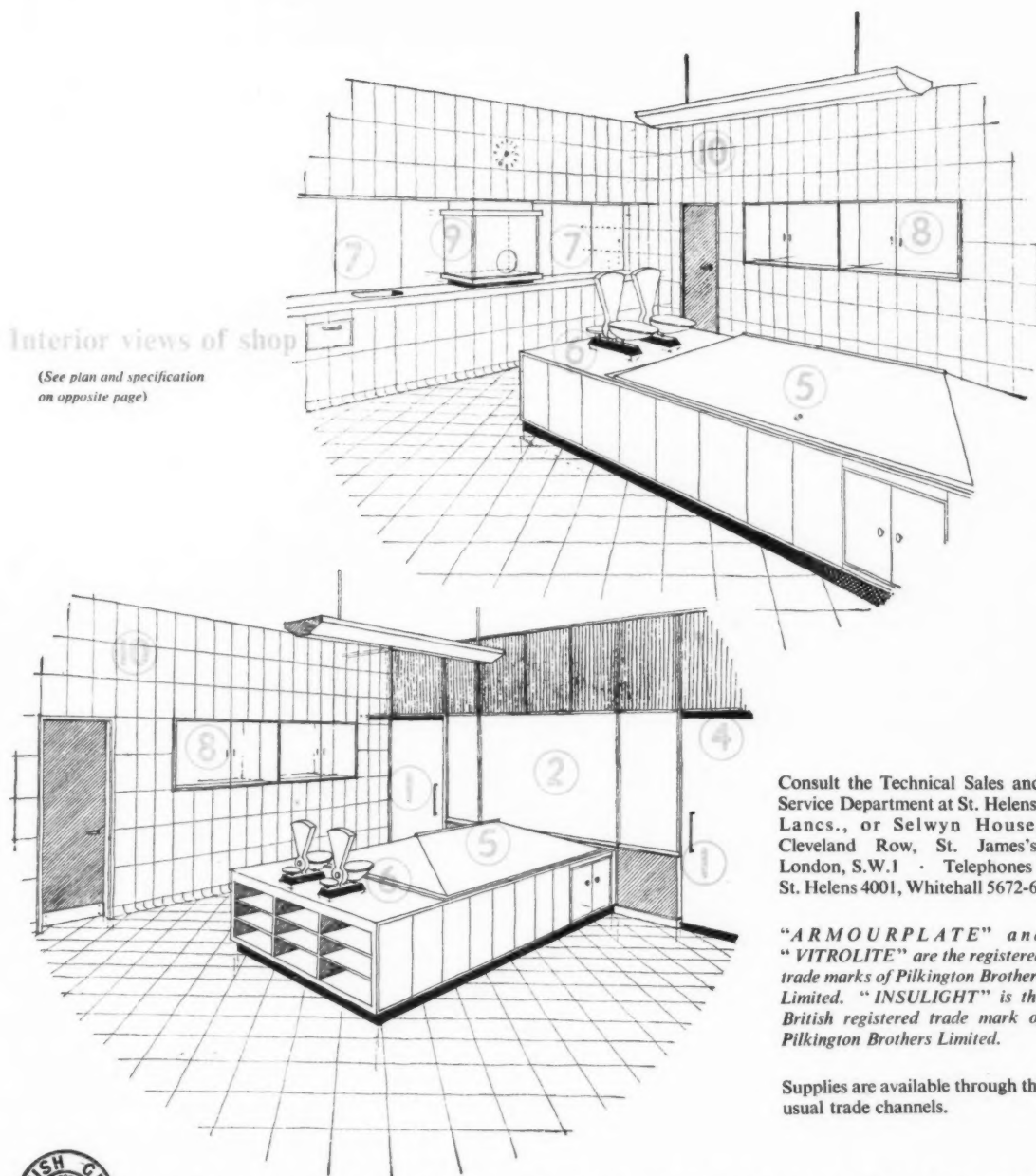
Perspective of exterior

1. Entrance doors. Standard "ARMOURPLATE" glass frameless doors.
2. Shopfront. Window and side lights glazed with "INSULIGHT" Double Glazing units. Stall board including access doors to basement faced with "VITROLITE".
3. Shop surround. Side panels faced with "VITROLITE", display panels glazed with polished plate glass and lined with mirror.
4. Fascia. Hardwood frame glazed with fluted glass, with provision for fixing lettering.
5. Fish slab. Marble top with drainage gutter and water spray. Counter facing including access doors to lift to basement faced with white "VITROLITE".
6. Service point. 1/2" rough cast glass top on timber substructure faced with white "VITROLITE".
7. Preparation benches. Marble slabs. White "VITROLITE" linings to walls. Ceiling light glazed with Borealis glass to conceal lighting. Bench front faced with white "VITROLITE". Metal lining to refuse chutes.
8. Wall display cases for poultry. Lined with mirror to increase display value. Doors; sliding frameless polished plate glass. Adjustable shelves in polished plate glass.
9. Cashier's Desk. "ARMOURPLATE" glass surround to cash desk.
10. All walls to shop lined with white "VITROLITE" in standard ashlar sizes.
11. Cupboards for overalls and equipment, etc.



# PROTECTION

## WITH NEW STANDARDS OF HYGIENE



Interior views of shop

(See plan and specification  
on opposite page)

Consult the Technical Sales and Service Department at St. Helens, Lancs., or Selwyn House, Cleveland Row, St. James's, London, S.W.1 · Telephones : St. Helens 4001, Whitehall 5672-6.

"ARMOURPLATE" and "VITROLITE" are the registered trade marks of Pilkington Brothers Limited. "INSULIGHT" is the British registered trade mark of Pilkington Brothers Limited.

Supplies are available through the usual trade channels.



PILKINGTON BROTHERS LIMITED

ST. HELENS

LANCS.

# About Aluminium...

4

## MECHANICAL PROPERTIES • tensile

ALUMINIUM alloys offer a very wide range of properties, from those of the commercially pure metal on the one hand to those of advanced heat treatable alloys on the other. The range between is adequately covered by a large number of alloys, most of which are available in several conditions or tempers.

Behaviour under tension is generally considered the first yardstick of an engineering material, and the figure at the foot of the page shows typical tensile stress/strain curves for three different aluminium alloys and compares them with that for mild steel. The alloys are: commercially pure aluminium (Noral 2S) in the fully annealed state suitable for deep pressing; a 5% magnesium aluminium alloy (Noral A56S) after strain-hardening, by rolling, to the "half-hard" temper; a zinc-magnesium-copper aluminium alloy, known as Noral M75S and used in aircraft construction, after solution treatment and ageing.

### Modulus of Elasticity

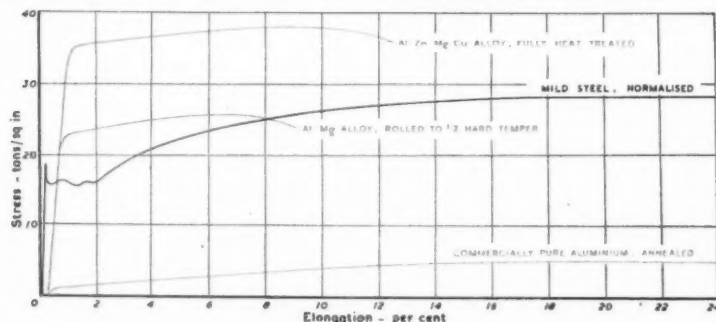
It will at once be obvious that the strain per unit increase of stress is much higher for the light metal than for steel, in fact the Elastic Modulus is about one third, being between  $9\frac{1}{2}$  and  $10\frac{1}{2}$  million lb. per sq. in. for most aluminium alloys.

If, to effect a weight saving of 66%, a steel structural member is replaced by one of identical form in an aluminium alloy of equal strength, elastic deflection will be about three times as large. Should this be objectionable, a redesigned member of equal stiffness will weigh about half as much as the steel one instead of a third.

This relatively low stiffness is an advantage under shock or impact loads, which, by virtue of the large elastic deformation, are absorbed well by the aluminium alloys.

### Proof Stress

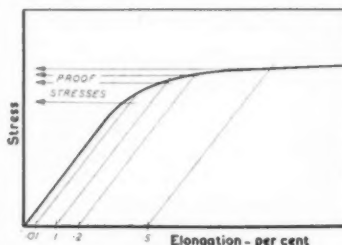
No clearly defined elastic limit or yield point is to be seen on stress/strain curves



This article is one of a series by which it is hoped to make students more familiar with the nature and properties of aluminium and its alloys. Only the barest outlines can be presented, but these may serve as an introduction to this major structural material.

for aluminium alloys, so the point of departure from the elastic range has to be defined arbitrarily. For convenience in routine testing, a point is chosen at which the permanent deformation is easily measured: in this country, a permanent set of 0.1% of the original gauge length, abroad more usually 0.2%. To mark the limit of proportionality closely, 0.01% set is sometimes used.

The stress at which a 0.1% set is observed is called the 0.1% proof stress, and, because it reveals the onset of plastic movement, is often of more value to the designer than is the ultimate stress.



The figure above shows how it is obtained from a stress/strain diagram.

Some alloys, notably the heavily strain-hardened ones, have a high ratio of proof strength to ultimate strength; in 2SH for example the 0.1% proof stress is 9 tons per sq. in. and the ultimate stress 10 tons per sq. in. Generally the ratio of proof to ultimate varies from 35% for soft tempers to 90% for the hardest; in the fully heat treated alloys it is about 80%. Although a high proof stress is in itself an advantage, a high proof stress/ultimate stress ratio implies a low ductility.

### Elongation

The amount of permanent stretch at the instant of breaking is a useful guide to the ductility of a metal, and a minimum value is usually demanded by light alloy specifications. It is not, however, an infallible index of workability, and selection of an alloy for forming operations should never be made on this basis alone.

Elongation may be found by clamping the pieces of a broken test specimen together and measuring between marks applied before starting the test. It is generally expressed as a percentage of the original gauge length of the test specimen. Elongation is not equal everywhere in the specimen but is greatest around the fracture; the gauge length chosen will therefore affect the value very much, and is always specified.

A gauge length of 2 inches is a common standard in this country. For better comparison of different sized specimens, the length may be referred to the original cross-sectional area; thus  $4\sqrt{\text{Area}}$  is frequently used, especially for round sections. In Europe, gauge lengths of  $11.3\sqrt{\text{Area}}$  and  $5.65\sqrt{\text{Area}}$  (equivalent to 10 and 5 diameters for round specimens) have long been standard.

Typical elongation values for aluminium alloys vary from 35% (on two inches) in annealed material to as little as 3% in fully strain-hardened metal. The heat treated alloys, even the strongest, possess a fair elongation, ranging from 9% to 20%.

### Strength/weight ratio

It will be seen that the strength of an aluminium alloy may exceed that of mild steel. If the weight of the two materials has to be considered, aluminium is able to compete with the high-tensile steels.

A rough indication of the structural merit of a material, at least under tension, is given by its *specific 0.1% proof stress*. This empirical figure, useful only for comparison, is obtained by dividing the 0.1% proof stress by the specific gravity. A similar idea is sometimes expressed as the length of uniformly cross-sectioned rod of a material that could be suspended before it broke under its own weight. On this basis, a commonly used alloy of the heat treatable type, Noral 26S, is over three times as effective as mild steel.

The fifth article in the series will touch on some other mechanical properties.

## NORTHERN ALUMINIUM COMPANY LIMITED

TECHNICAL DEVELOPMENT DIVISION • BANBURY, OXON



Reproduced from: THE BOOK OF ENGLISH TRADES & Library  
of the Useful Arts, 1821



#### THE MASON

With sharp and practised strokes, the master-mason carves the quarried stone. Tools of his trade, the square and compasses are symbols of his life. Working towards perfection, his artistry in stone and marble will live through aeons of recorded time . . .

AND CRAFTSMANSHIP LIVES ON *With the coming of the Industrial Revolution and the development of machinery, the era of the lone craftsman passed into history. No longer was one man single master of his trade. Instead, the work was divided among specialists, each one a craftsman in his own particular line. To-day, the individual is an expert, whose specialised skill is an essential part of the whole.*

★  
**A**T CELLON we believe in the essence of craftsmanship. For example, after a new decorative finish has been produced by our laboratory specialists, it is tested by experts who examine every Cellon product under the conditions of use for which it is intended. Like the mason of old, whose skilled chisel inspired cold blocks of stone with all the warmth of beauty, we always strive for perfection in our finished work.

The existing range of Cerrux Decorative Paints includes Gloss, Satin and Matt Finishes, Flat under-

coatings, Primers for all types of surface and, also, Cerrusco Texture and Water Paints. The skill and forethought embraced in our work together with constant research have established perfect uniformity among our standard finishes. The result is that you can always be sure of consistency of quality when re-ordering a particular finish.

On the development side, we maintain a continuous service for the production of special finishes for special needs outside the standard range. It is, in fact, a service by craftsmen for craftsmen.

# CERRUX

## DECORATIVE PAINTS

*Created  
by Craftsmanship*



**CELLON**  
Aircraft  
Finishes



**CERRIC**  
Wood  
Finishes



**CERRUX**  
Marine  
Paints



**CERRUX**  
Coach  
Paints



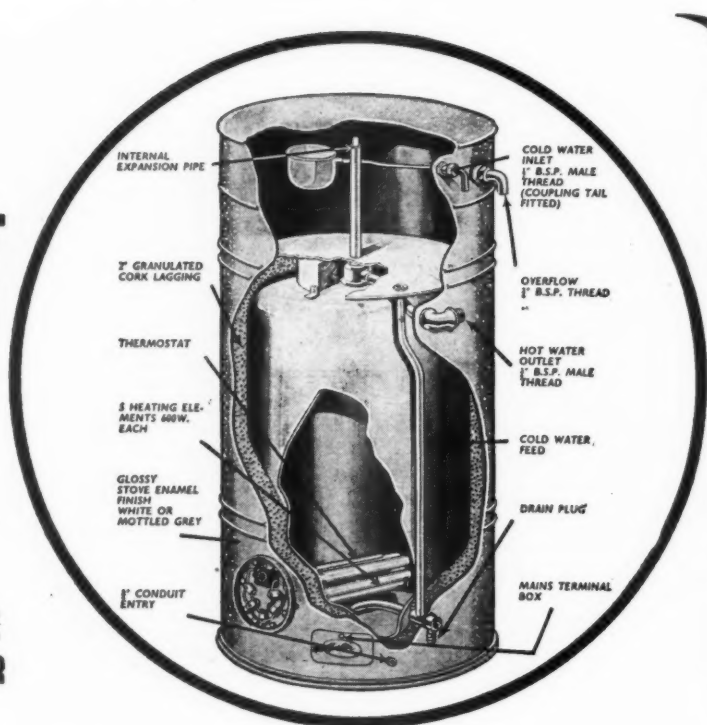
**CERRIC**  
Industrial  
Finishes

CELLON LIMITED • KINGSTON-ON-THAMES • PHONE KINGSTON 1234

CVS-682

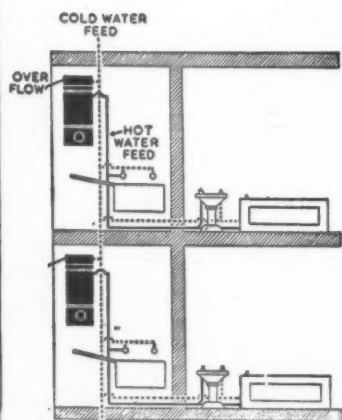
# CUT PLUMBING SIMPLIFY STRUCTURAL PROBLEMS

with the  
*Charlton*  
CISTERN TYPE  
ELECTRIC WATER HEATER



*Self-contained system for flats!*

- Item 1. Ball valve supply tank
- Item 2. Hot water storage tank
- Item 3. 3 KW bank of electric heating elements
- Item 4. Expansion pipe exhausting back into the supply tank



*—all in one compact self-contained unit!*

A single common down feed-pipe, an overflow, and connections to the taps at sink, bath and handbasin—that is all the plumbing required for the CHARLTON Cistern Type Hot Water System. No separate feed tank to buy and install, no flue to construct, and, as with all electric water heating systems, no noise, no fumes, no labour and no dirt to annoy the tenants. Further, with the Cistern Type Heater each tenant has his own hot water system to use as much or as little as he wishes, and the operation being entirely automatic, there is no labour charge as is the case with a coal or coke fired central boiler.

The simple plumbing for two flats is clearly shown in the sketch alongside, and it will be noted that a single cold water feed serves the heaters as well as the cold taps. This feed can be direct from the water mains or from a storage tank in the roof.

Without a doubt this is the hot water system for blocks of flats or conversions. It scores on every count—cost, ease of installation, and efficiency of operation. Write for full details now.

**BRITISH NATIONAL ELECTRICS LTD.**  
THE DOMESTIC APPLIANCES SECTION OF  
**JOHNSON & PHILLIPS LTD.**

NEWARTHILL · MOTHERWELL · SCOTLAND.

*ABNE Product*  
OF JOHNSON & PHILLIPS LTD.

SAXONE SHOE STORE,  
OXFORD STREET,  
LONDON, W.1.



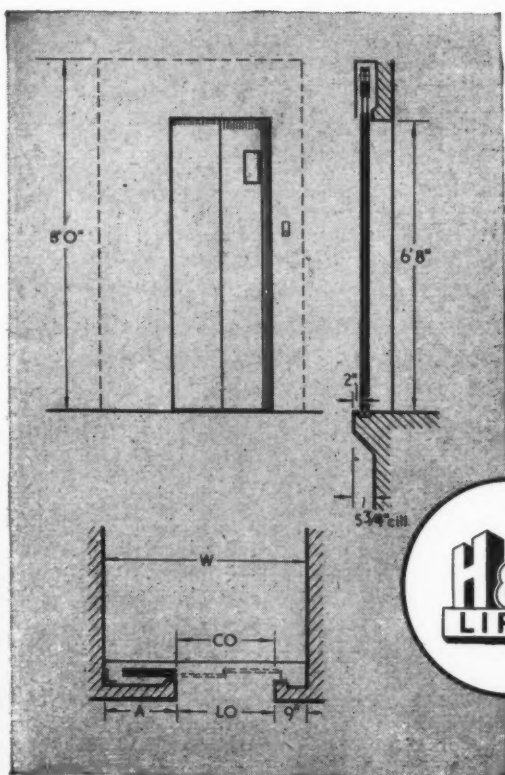
LIFTS

FOR A

SHOE

Architects: Lewis Solomon & Son, F.F.R.I.B.A.  
Consulting Architect: Michael Egan,  
A.R.I.B.A., A.A. Dipl.

STORE



**H&C**  
LIFTS

A two speed H. & C. passenger lift has been installed for the Saxone Shoe Company in their Oxford Street premises. The lift serves five floors and is fitted with full automatic push-button control. Two speed sliding doors to the landings provide a wide entrance in proportion to the well width and are quiet and swift in operation.

**Hammond & Champness Ltd.**

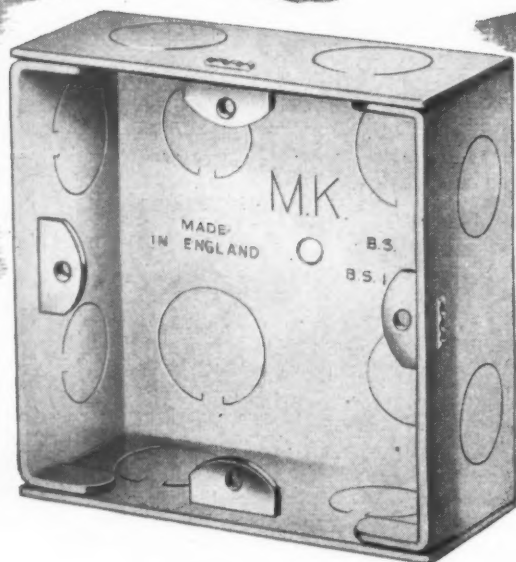
HEAD OFFICE & WORKS: GNOME HOUSE, BLACKHORSE LANE,  
LONDON, E.17.

Telephone: LARKSWOOD 1071



# **NEW FLUSH SOCKET-OUTLETS**

**To B.S. 546:1950**  
**FOR STANDARD BOXES**  
**To B.S. 1363:1947**  
*Two hole fixing-  
2<sup>3</sup>/<sub>8</sub>" centres*



All the advantages of standardisation are to be found in this new range of 3-pin flush socket-outlets in 2, 5 and 15 ampere ratings. Boxes to B.S. 1363:1947 are now suitable for all M.K. flush socket-outlets — including 13 ampere rectangular pin type. Further details are given in our Leaflet 220.

**M.K. ELECTRIC LIMITED**  
**WAKEFIELD STREET, EDMONTON, LONDON, N.18**

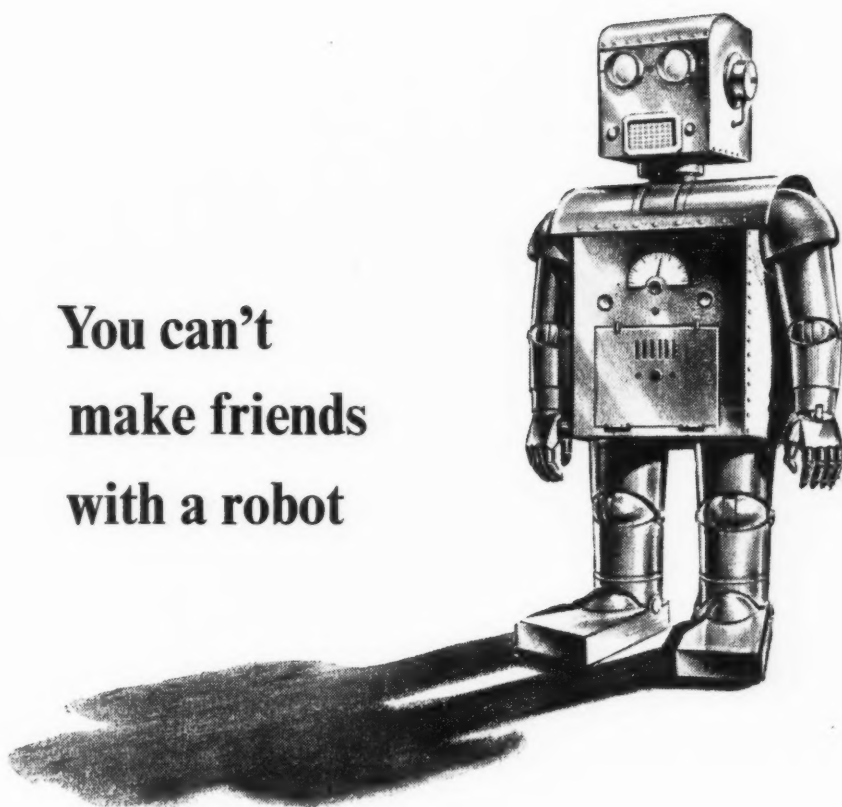
Telephone: Tottenham 5151

Telegrams: Multicon, Southtot, London.





**You can't  
make friends  
with a robot**



SCIENTISTS have invented highly ingenious *Mechanical men* which can work out sums, cross a floor without bumping into furniture and answer questions almost as knowledgeably as Professor Brogan. Nevertheless, most of us would rather have real human beings as companions in our daily lives.

It's rather the same with wood. Wood has a *feel* and a character all its own. No matter how it is sawn, carved and planed, it remains somehow *alive*. You can *make friends* with it.

Naturally, architects specify wood for its traditional purposes wherever they can. The difficulty, these days, is in knowing what timbers are available and in what quantity. A card to the Timber Development Association will bring you details of many excellent woods which have recently come into the market.

*There's nothing like* **WOOD**

ISSUED BY THE TIMBER DEVELOPMENT ASSOCIATION • 21 COLLEGE HILL • LONDON • EC4  
and at Leeds, Leicester, Manchester, Bristol & Glasgow

*This little 'chap'*  
  
 can save you pounds  
 in Timber, Time and  
 Materials!

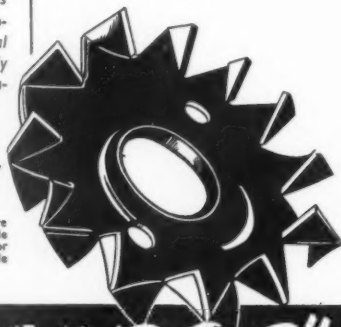
**'BULLDOG'**  
 TIMBER CONNECTORS  
 ARE SIMPLE TO  
 USE

1 While the members are held temporarily in place by nails, a bolt hole is bored through the assembly.

2 The members are lifted apart and the toothed connectors are placed between the adjacent faces of the members to be connected.

3 The members are then drawn together by means of the bolt until the projecting teeth of the metal plates are completely embedded in each contacting timber surface.

'Bulldog' Timber connectors are also made with teeth on one side only for timber to steel joints, or for portable and demountable timber buildings.



The 'Bulldog' timber connector consists of a metal plate with the edges turned off at right angles to form sharp triangular teeth projecting evenly from both sides of the plate.

In use, these connectors are embedded firmly between the lapped members, thus greatly increasing the small bearing area provided by a bolt alone, and enabling the stresses to be distributed over practically the entire cross section of the Timbers involved.

'Bulldog' connectors put timber construction on a sound engineering basis and the consequent increase in efficiency results in an amazing saving of timber, time and material.

Full details and technical advice are available to everyone interested.

**"BULLDOG"**  
 TIMBER CONNECTORS

W. F. HOLLWAY & BROTHER, LIMITED,  
 42, GRAFTON STREET, LIVERPOOL 8.



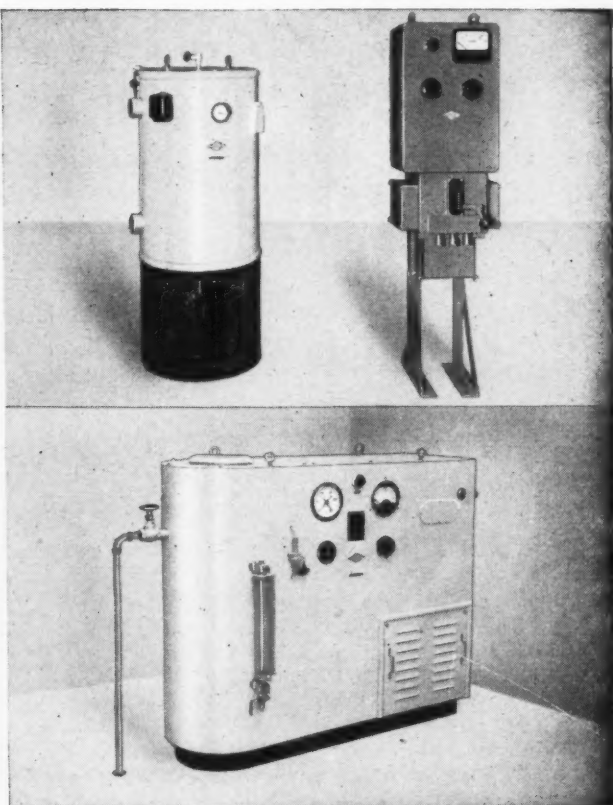
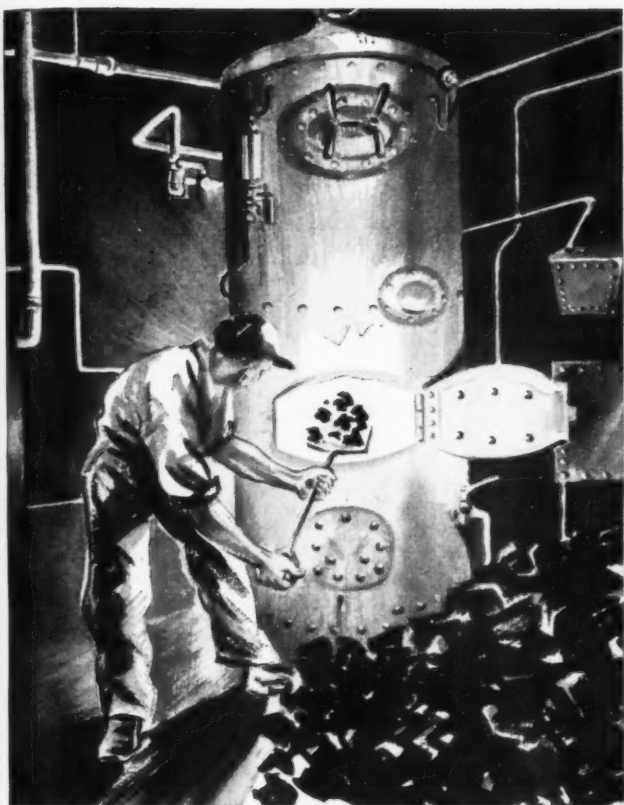
solve  
 the  
 problem  
 with  
 tiles

For simple and straightforward treatment, or attractive decorative effect, tiles by Pilkington's are most suitable for interior or exterior walls and floors. An interesting example of unusual treatment is shown above.

We also specialize in faience for fireplaces and certain other purposes, and mosaic for floors.

**Pilkington's**  
 TILES  
 LIMITED

CLIFTON JUNCTION, Nr. MANCHESTER  
 London Office: 27b, Old Gloucester Street,  
 Holborn, W.C.2



## SPACE HEATING

*-the hard way      -the easy way*

Space Heating in the past inevitably entailed the major disadvantages of dirt and fumes from furnaces as well as the volumes of smoke from elaborately constructed chimneys. In addition, much space had to be devoted to boiler-house construction and capacious fuel storage and, as furnace construction developed, intricate and costly mechanical devices and fuel elevators came into use. But all that is done away with . . .

. . . where the new AUTOLEC ELECTRODE STEAM OR HOT WATER BOILER is installed. These revolutionary units are so comparatively small and compact that they need no special housing building; and no stoking, fuel storage or chimney are needed. Clean, silent, automatically controlled—they produce maximum output in a few minutes, starting cold, and maintain it without attention, with 98% efficiency. They give, in fact, the highest efficiency and the highest precision of control ever achieved.

Switch to —



**ELECTRODE STEAM AND  
HOT WATER BOILERS**

DESIGNED AND MANUFACTURED BY **G. W. B. ELECTRIC FURNACES LTD.**, DIBDALE WORKS, DUDLEY, WORCS.  
Proprietors: **GIBBONS BROS. LTD.**, AND **WILD-BARFIELD ELECTRIC FURNACES LTD.**

*These three together* . . . on Festival Occasions



When it's bricks and mortar remember — gauging with **LIME** gives mortar easier spreading power. Such a mortar bonds well by filling joints tightly, gives adequate strength and durability. Improves weather resistance and lowers costs.

*For a better job in less time use —*

- Full details of Cement/Lime/Sand mixes will be sent on application.

**LIME**

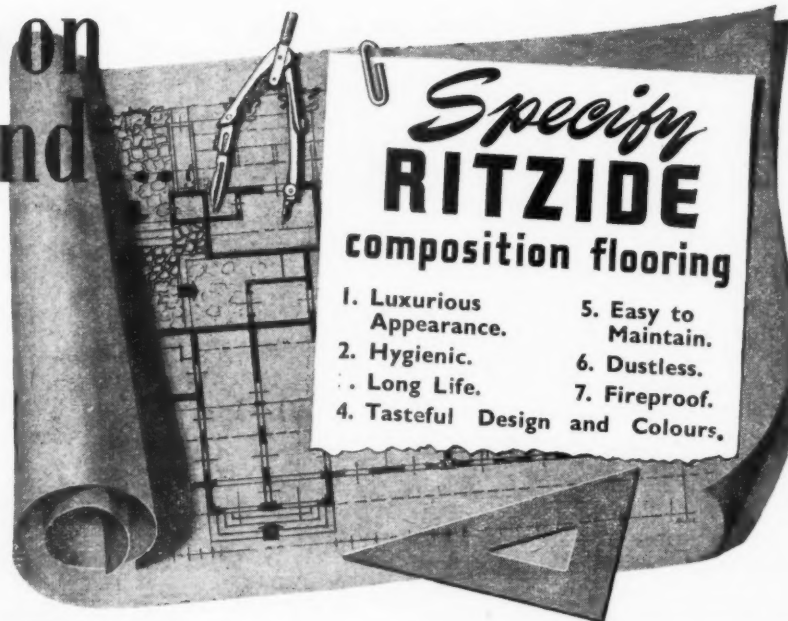


Don't forget to visit The British Standards Institution's Golden Jubilee Exhibition 18th-28th June.

THE SOUTHERN LIME ASSOCIATION, HANOVER HOUSE, 73-78 HIGH HOLBORN, LONDON, W.C.1. Tel: HOLborn 5434

## Treading on safe ground

Years of Laboratory research lie behind the superb elegance and lifelong durability of RITZIDE. Laid in any design anywhere in Great Britain. Highly recommended for use in Housing Schemes, Private Houses, Shops, Schools, Factories, etc.



*Specify*  
**RITZIDE**  
composition flooring

1. Luxurious Appearance.
2. Hygienic.
3. Long Life.
4. Tasteful Design and Colours.
5. Easy to Maintain.
6. Dustless.
7. Fireproof.

**RITZIDE**

### LEATHERFLOR LIMITED

Full particulars and prices gladly sent. Write or phone Leatherflor, Limited, Wellington Works, Wellington Road, Forest Gate, London, E.7. (Tele. MARYland 3786) — Leatherflor, Limited,; Inch Mill, Hume Street, Arbroath, Scotland. (Tele. ARBroath 3271) — Leatherflor, Limited — 3, Oldgate, Morpeth, Newcastle, (Tele. MORpeth 463)



s

ar  
es  
a  
/  
/  
s.

o

4





# "TURNALL"

REGD. TRADE MARK

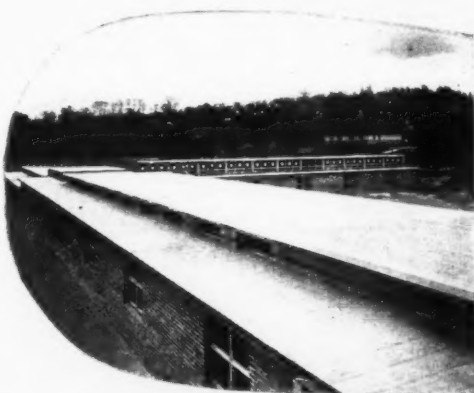
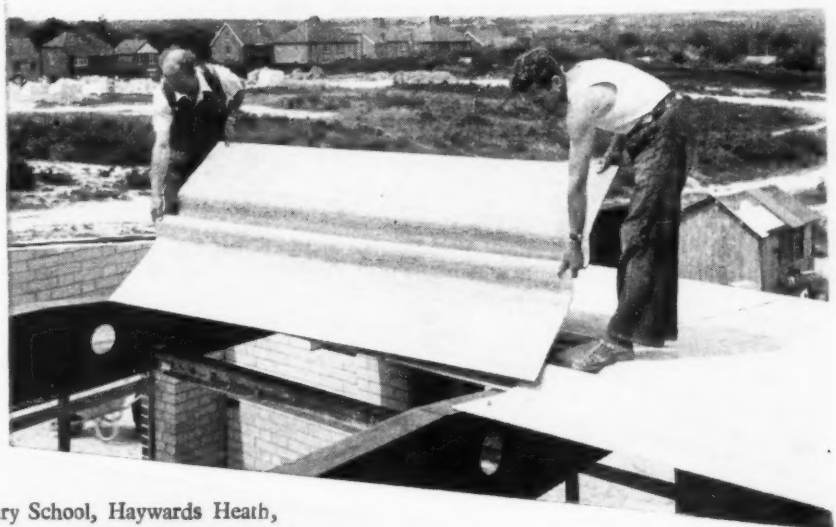
## Asbestos-Cement CAVITY DECKING

PAT. NO. 620012.

**LIGHT WEIGHT  
IMPRESSIVE STRENGTH  
DRY CONSTRUCTION  
NON-CORRODIBLE**

**Providing in one operation  
Roof Deck,  
Ceiling and  
Insulation.**

The illustrations emphasize the simplicity in erection and fixing of "TURNALL" Cavity Decking, and show the extensive flat roof system at St. Wilfred's Voluntary Primary School, Haywards Heath, Sussex.  
*Architects: Harry W. Smith & Sons.*



Weight as laid 10·8lb. per sq. ft.  
Safe Working Load 50lb. per sq. ft.



Supports at 8ft. 0in. or 8ft. 3in. centres.

### TURNERS ASBESTOS CEMENT CO LTD

A MEMBER OF THE TURNER & NEWALL ORGANISATION

TRAFFORD PARK

MANCHESTER 17

FESTIVAL OF BRITAIN



# ROYAL FESTIVAL HALL



## Auditorium Permanently Lighted by — **G.E.C.**

It is the Royal Festival Hall, the only permanent building on the site, that will carry proud memories of the South Bank Exhibition; and it is a source of pride to the G.E.C. that for the auditorium the Chief Engineers' Department of the London County Council should have appointed the Company to collaborate in the design of the lighting installation as well as the supply of the equipment.

The Company's equipment was also used for the exterior lighting of a quarter of the exhibition grounds which included the Homes and Gardens section as well as the fountains and lakes which employed over 800 G.E.C. floodlights.

OSRAM lamps are installed throughout the Royal Festival Hall—foyer and auditorium—and elsewhere in the exhibition.

Electrical contractors: Berkeley Electrical Engineering Company Limited  
**THE GENERAL ELECTRIC CO., LTD., MAGNET HOUSE, KINGSWAY, LONDON, W.C.2**



L





AND BY APPOINTMENT  
TO HIS LATE MAJESTY  
KING GEORGE V

# MANDER'S

## MATSINE

FOR STAINING AND  
SCUMBLING

MANDER BROTHERS LIMITED  
WOLVERHAMPTON

# One Coat Painting OF ASBESTOS CEMENT . . .

Tretolin Paint is now available in six special roofing shades for one coat painting without previous sealing or neutralising treatment. One application of Tretolin, sprayed or brushed, will attractively colour asbestos cement roofing surfaces. *Tretolin is not a stain or a tint;* it provides a solid film of colour with great wearing qualities.

*Tretolin  
Roofing  
Shades—*

RUSSET BROWN  
BEECH BROWN • TERRA-  
COTTA • DARK GREY • DARK  
GREEN • LIGHT BRUNSWICK GREEN  
*Other shades available*

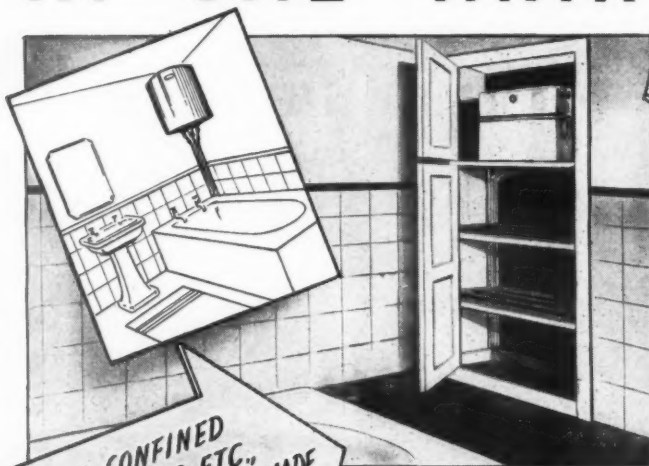
- Waterproof and Durable
- Acid and Alkali Resistant

**TRETOLIN**  
PAINT

TRETOL LTD., 12/14 NORTH END ROAD, LONDON, N.W.11. Telephone: SPEdwell 4621 (3 lines) WORKS: SLOUGH, BUCKS

## A COMPLETE HOT WATER SYSTEM IN ONE TANK

SPECIFIED BY  
MORE THAN 300  
LOCAL AUTHORITIES



IDEAL FOR CONFINED  
SPACES CORNERS ETC.,  
THE RECESSED TYPE CAN BE MADE  
DOWN TO A BACK TO FRONT  
MEASUREMENT OF ONLY 12 INCHES

Simplicity for  
Plumbing, Compact-  
ness for limited spaces, Accessibility  
after fixing, and far greater Heating  
Efficiency are the characteristics of the  
Rolyat system which have outmoded  
the tank and cylinder and convinced  
heating engineers and local authorities  
throughout the country of its  
superiority.

Several types and sizes are available  
for both Hard and Soft water areas  
and in various designs and capacities.  
The manufacturers will be pleased  
to send complete specifications on  
request.

**ROLYAT** PATENT **HOT WATER  
TANKS**

THE ROLYAT TANK CO. LTD. • CROMWELL ROAD • YORK



# Announcement!

by the **TENTEST FIBRE BOARD CO. LTD.**

**TENTEST ACOUSTIC TREATMENT.** We would like to call the attention of Architects, and others who may be interested, to our Acoustic service, which is based on our unrivalled experience in the fixing of Building Boards.

Wall and ceiling treatment in special absorbent materials, either alone or interspersed with plain board, can be provided to give the required degree of sound control in a way which is both pleasing and inexpensive. Units are available in a large range of sizes such as 2 ft. 0 in. by 2 ft. 0 in., 4 ft. 0 in. by 3 ft. 0 in. and up to 8 ft. 0 in. by 4 ft. 0 in., and can be fixed by a variety of our Specialised Construction methods.

May we help in the solution of YOUR acoustic problem? Our technical representative will call at any time, on request.

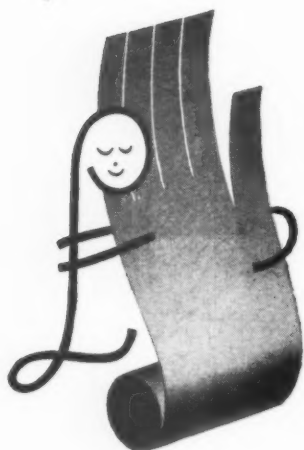


**TENTEST FIBRE BOARD CO. LIMITED**

**SPECIALISED CONSTRUCTION DEPARTMENT 75, Crescent West, Hadley Wood, Barnet, Herts.**

Telephone: BARnet 5501 (5 lines).

Telegrams, Fiboard, Norphone, London.



You can wed

---

sound practice to true economy in a

---

dozen proofing, lining and insulating jobs

---

occurring in building and construction

---

by using **IBECO** Waterproof all through,

---

easy to handle, low in cost, it's a good

---

friend to the builder's time-sheet as

---

well as to his reputation for sound work.

---

C. DAVIDSON & SONS LTD. (DEPT. K94) MUGIE MOSS,  
ABERDEENSHIRE



**You're right—  
It's a Peglers!**

*As good as  
a tap can be*

*Peglers*  
Limited

BELMONT WORKS · DONCASTER

London Office:

PRESTEX HOUSE · MARSHALSEA RD · S.E.1

*Prestex*  
Trade Mark



From a relief on  
Trajan's Column in Rome

These men knew timber

## PLINY THE ELDER

PLINY'S famous 'Natural History', an encyclopædic work in thirty-seven books, contains an account of timber and the timber trade which shows that the Roman Empire in the first century A.D. was faced with problems not unlike our own to-day. The demand for timber was immense—for shipbuilding, for bridges and military works, houses and fuel.

Home-grown supplies were running short; big constructional timbers were imported from as far away as the Alps and Cyprus—Pliny mentions a larch of 120 feet long with a quarter-girth of 2 feet, and a cypress which yielded a mast 130 feet long.

Distant countries were scoured for rare woods to make decoratively-figured tables. What Pliny calls 'citrus' wood, in 'Tiger', 'Panther' and 'Peacock's feather' figures, was probably burr Thuya from North Africa.

These tables, sometimes veneered, sometimes a solid section of the trunk, fetched fantastic prices among the wealthy connoisseurs of Nero's Rome—the equivalent of £25,000 was given for one supreme specimen.

Pliny's insatiable thirst for knowledge of every kind led to his death. He insisted on going to observe for himself the great eruption of Vesuvius which overwhelmed Pompeii, and was suffocated by the sulphureous fumes of the volcano.



*The modern timber merchant must have a wide range of knowledge if he is to serve industry as he should. He must be able to supply and advise on the uses of not only the traditional timbers of commerce, but also the many less familiar hardwoods now coming from tropical forests, and the 'new' timber products—plywood in all its forms, building boards and wallboards.*

*Our organisation, with eleven branches covering the country, is at your service.*

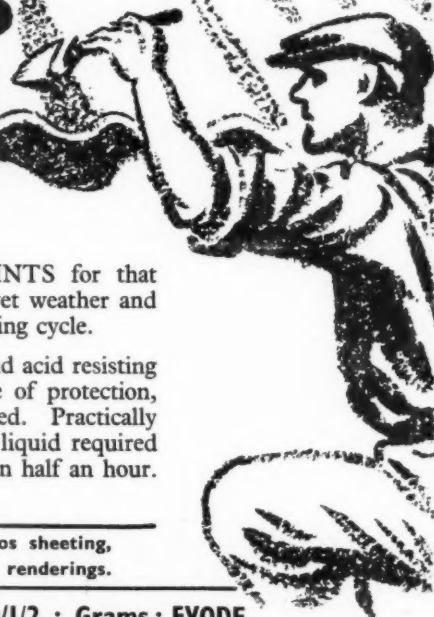
## DENNY MOTT & DICKSON LTD.

Telephone: MANsion House 7961

ADELAIDE HOUSE, KING WILLIAM STREET, LONDON, E.C.4

Branches at: Belfast · Birmingham · Bristol · Cardiff · Glasgow · Hull  
Liverpool · Manchester · Newcastle · Preston · Southampton

# The PAINT that PROTECTS ASBESTOS CEMENT SURFACES



EVODE PROTECTIVE (Chlorinated Rubber) PAINTS for that extra protection to asbestos cement surfaces against wet weather and the flaking and lamination caused by the freezing-thawing cycle.

EVODE PROTECTIVE PAINTS are highly alkali and acid resisting and are the answer in all cases where a high degree of protection, durability and a pleasing semi-gloss finish is required. Practically fireproof when dry. No special primer or petrifying liquid required either on asbestos cement or on concrete. Dust dry in half an hour.

For iron, steel, wood and direct painting of asbestos sheeting, concrete and concrete floors, brickwork and cement renderings.

EVODE LIMITED, GLOVER STREET, STAFFORD • Tel.: 1590/1/2 • Grams: EVODE

## 'BROADS TRUCAST' DUCT COVERS

*Specially designed  
for use in —*

POWER STATIONS, HOSPITALS  
SCHOOLS, KITCHENS  
LABORATORIES, BOILER HOUSES, ETC.

'Broads Trucast' Duct Covers are available in widths from 6" to 36", with Cast Iron Sectional Frames for bolting together to form continuous runs, with necessary angles and branches of various sizes. The Cast Iron Covers and Frames have machined seatings and the covers are recessed for fitting on site to match the surroundings.

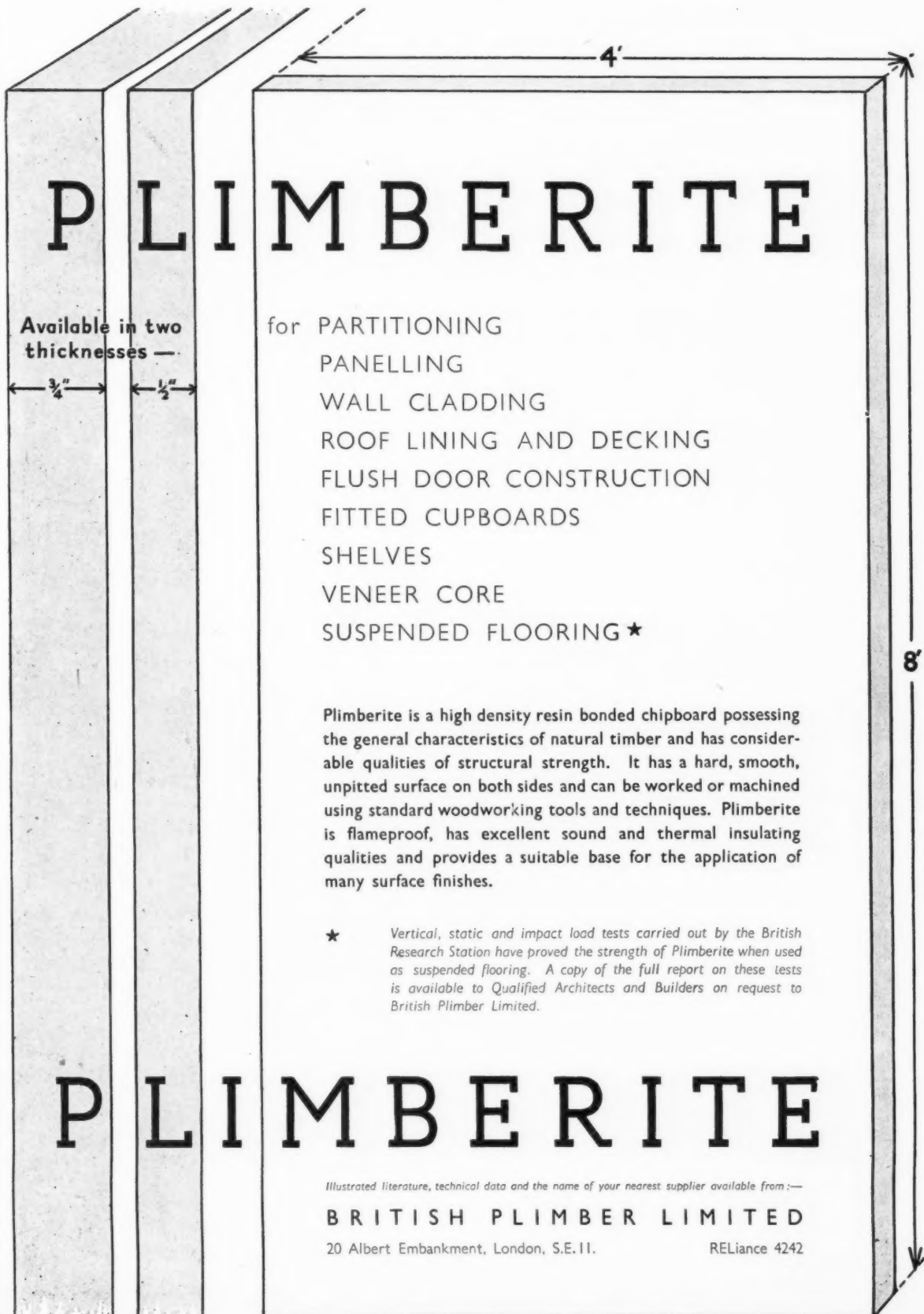


# BROADS

★ Technical Staff are available to visit site to check final details and offer expert advice on layouts. Liaison is also maintained with contractors during installation. Full details submitted on application.

MANUFACTURING CO. LTD. 4 SOUTH WHARF, PADDINGTON, LONDON, W. 2 Tel. PAD: 7061 (20 lines.)





The diagram illustrates the dimensions and applications of Plimberite panels. On the left, two vertical panels are shown with thicknesses of  $\frac{3}{4}$ " and  $\frac{1}{2}$ ". The main panel is shown in perspective, with a width of 4' and a height of 8'. The word "PLIMBERITE" is printed in large, bold, sans-serif capital letters across the top and bottom of the main panel. The text "Available in two thicknesses —" is placed above the two vertical panels. A list of applications is provided in the center, and a descriptive paragraph is below it. A footnote marked with a star is also present. At the bottom, the company name "BRITISH PLIMBER LIMITED" and its address are listed, along with a reference number "RELIance 4242".

# PLIMBERITE

Available in two thicknesses —

$\frac{3}{4}$ "  $\frac{1}{2}$ "

4'

8'

for PARTITIONING  
PANELLING  
WALL CLADDING  
ROOF LINING AND DECKING  
FLUSH DOOR CONSTRUCTION  
FITTED CUPBOARDS  
SHELVES  
VENEER CORE  
SUSPENDED FLOORING ★

Plimberite is a high density resin bonded chipboard possessing the general characteristics of natural timber and has considerable qualities of structural strength. It has a hard, smooth, unpitted surface on both sides and can be worked or machined using standard woodworking tools and techniques. Plimberite is flameproof, has excellent sound and thermal insulating qualities and provides a suitable base for the application of many surface finishes.

★ Vertical, static and impact load tests carried out by the British Research Station have proved the strength of Plimberite when used as suspended flooring. A copy of the full report on these tests is available to Qualified Architects and Builders on request to British Plimber Limited.

# PLIMBERITE

Illustrated literature, technical data and the name of your nearest supplier available from:—

**BRITISH PLIMBER LIMITED**  
20 Albert Embankment, London, S.E.11. RELIance 4242

**Lead & Gloss combined**  
for  
**DECORATION, DURABILITY**  
and greater covering capacity  
with

**SULAC**



**THE LEAD BASE, HIGH GLOSS  
ENAMEL PAINT**

SULAC is the perfect combination of LEAD and GLOSS which produces a brilliant, hard finish of excellent covering power. It is for use Inside or Outside on all surfaces of Wood, Metal, Plaster and Stone.

SULAC is economical to use because of its fine obliterating qualities, yet it dries with a high gloss finish without brush marks. Manufactured in white and 24 attractive FAST colours.

WRITE FOR COLOUR CARD & FULL DETAILS TO:—

Sole Manufacturers

**STORRY SMITHSON & CO LTD**

*Paint, Enamel & Varnish Specialists since 1831*

**BANKSIDE WORKS, HULL**

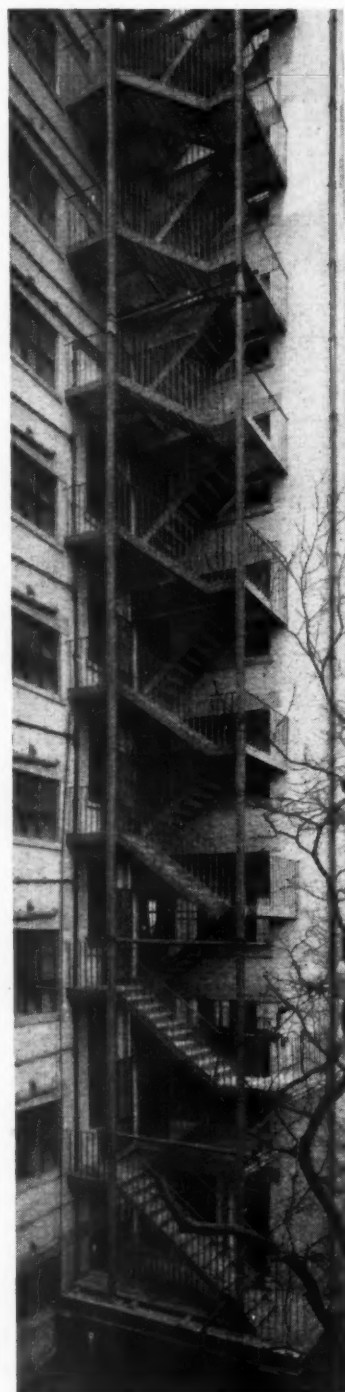
Telephone: 34734 (2 lines)

Telegrams: 'Economic' Hull

and at

London, Liverpool, Glasgow, Newcastle, Cardiff and New York

## FIRE ESCAPE STAIRS



We have made and erected fire escape stairs for the last 60 years all over Britain for:—

Government Buildings,  
Local Authorities,  
Hospitals,  
Office Blocks,  
Theatres, etc.



The fire escape stairs shown here are typical of many made and erected by Lion Foundry.



Nothing equals perforated cast-iron treads and landings for resistance to wear and weather

**LION FOUNDRY CO., LTD.**

ARCHITECTURAL & SANITARY IRONFOUNDERS

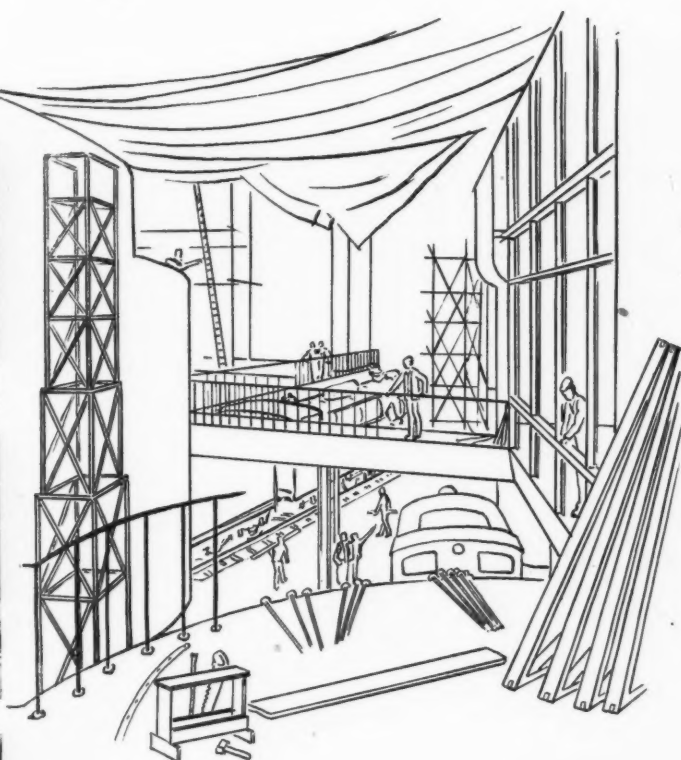
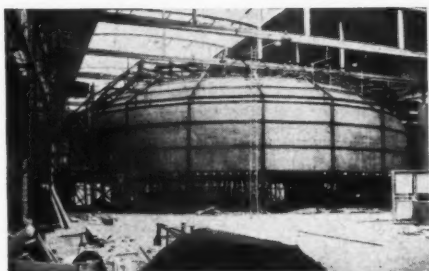
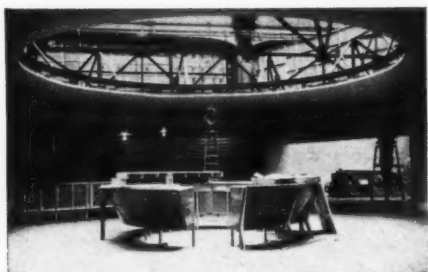
CONTRACTORS TO H.M. GOVERNMENT

**KIRKINTILLOCH, near GLASGOW**

London Office: 124 Victoria Street, S.W.1

Telephone: Victoria 9148

THE FESTIVAL OF BRITAIN EXHIBITION OF INDUSTRIAL POWER, KELVIN HALL, GLASGOW



**WRIDALE**  
*built it*

From designing and building Advertising Displays in 1926, "Wridale" has progressed through a quarter of a century, until today they are amongst the foremost builders of spectacular displays in Britain.

"Wridale built it" is synonymous with speed, efficiency and quality.

We are justifiably proud in having been associated with the Festival of Britain Exhibition of Industrial Design in the Kelvin Hall, Glasgow:—the biggest single contract ever entrusted to one firm.—A testimonial in itself.

**ARMSTRONG & CO. (WRIDALE) LTD.**

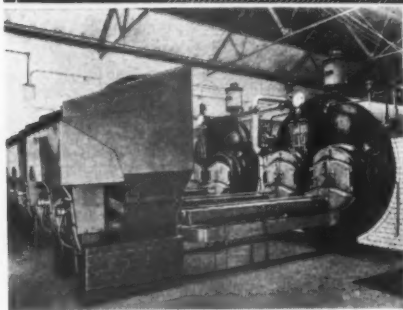
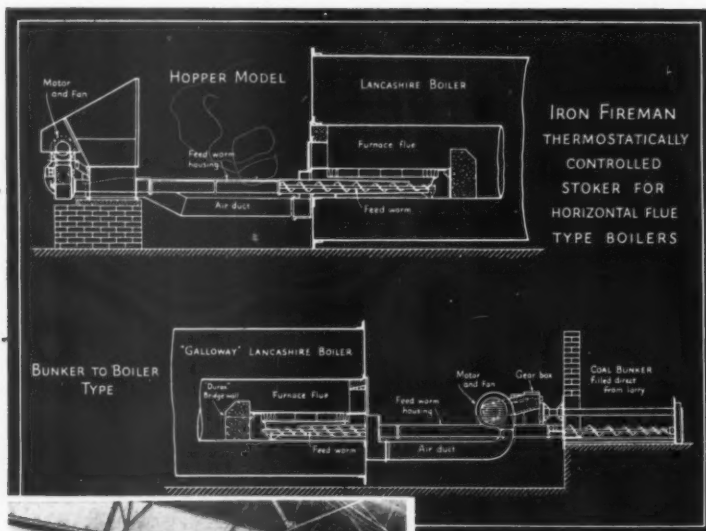
LONDON OFFICE: 26 OLD BROMPTON ROAD, S.W.7.

Works: Mount Pleasant, Ashton-under-Lyne, Lancs.

Telephone: KEN. 0025

Telephone: ASH. 3004

WRIDALE  
PLANNED  
DISPLAY



## Lancashire Boilers Fired by the "Iron Fireman" Stoker

We illustrate a typical arrangement drawing of an Iron Fireman stoker on a Cochran Boiler, and picture an actual installation. Iron Fireman stokers are firing ALL TYPES OF SOLID FUEL BOILERS throughout the Country for they are recognised as the most successful Automatic Coal Stokers in Britain. They embody all that is finest in engineering skill and performance; and, because Iron Fireman engineers first introduced automatic stoking, they are the men most likely to solve your heat problem.

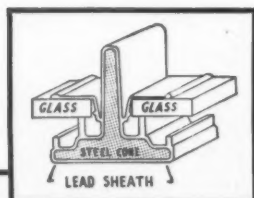
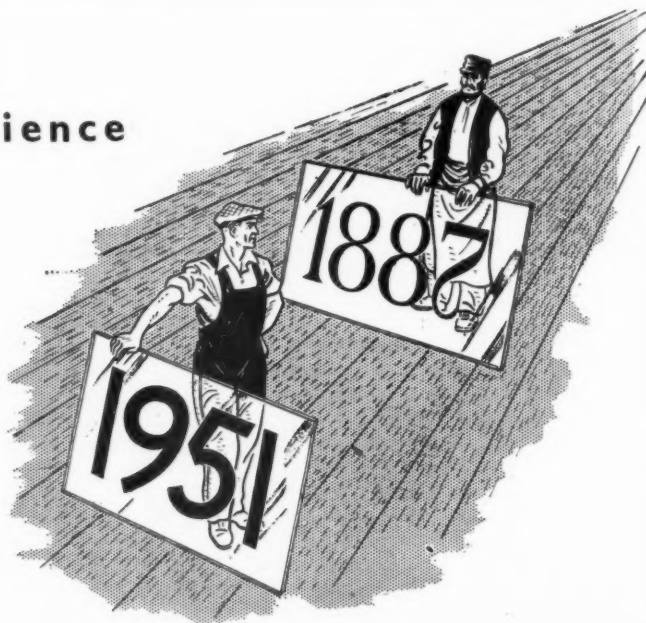
**Iron Fireman**  
FIRST AND FOREMOST  
*Automatic Coal Stokers*

**ASHWELL & NESBIT LTD., BARKBY ROAD, LEICESTER**

LONDON: 12 Gt. James Street, Bedford Row, W.C.1. MANCHESTER (13): 184 Oxford Road.  
BIRMINGHAM (4): 12 Whittall St. LEEDS (6): 32 Headingley Lane. GLASGOW: 13 Douglas St. Cz.

## TIME means experience

The Pennycook System of Patent Roof Glazing was first introduced by 1878, since when, it has been specified by Architects and Builders throughout the world. The Pennycook Steel Bar is entirely lead sheathed and suitable for all types of glazing. It is guaranteed Watertight, Dust-proof and Permanent, requiring no further maintenance after the initial installation. We are in a position to give quick delivery. Write to-day for further details and illustrated matter describing the Pennycook System of Patent Roof Glazing.



## THE PENNYCOOK PATENT GLAZING AND ENGINEERING COMPANY LIMITED

ST. MUNGO WORKS, BISHOPBRIGGS, GLASGOW, N.

'Phone: Bishopbriggs 1117.9

'Grams: "PENNYCOOK" Glasgow

London Office: 3 Victoria Street, Westminster, S.W.1



*Available **NOW***



**DONNACONA**  
**INSULATING BOARD**

AS SOLE CONCESSIONNAIRES for the United Kingdom, the Merchant Trading Company, Ltd., are pleased to announce that this well known Canadian Insulating Board is now being imported once again.

DONNACONA INSULATING BOARD WILL BE AVAILABLE FROM YOUR USUAL MERCHANT SUPPLIERS THROUGHOUT THE COUNTRY

*Your orders and enquiries are invited*



ASK FOR METCO SERVICE

*The* **MERCHANT TRADING COMPANY** *Limited.*

**EFFINGHAM HOUSE, ARUNDEL STREET, STRAND, LONDON, W.C.2**

Telegrams: "Themetraco. Estrand, London."

Telephone: TEMple Bar 5303 (8 lines)



# Solignum wood preserve it!



There are 3 kinds of SOLIGNUM:

**SOLIGNUM WOOD PRESERVING STAIN**—the standard preservative used throughout the world to give protection against dry rot, decay and the ravages of insects. It preserves and stains and is available in a variety of colours.

**V.D.K. SOLIGNUM WOOD PRESERVATIVE**—the grade that can be painted over; and which should be used on seed boxes, garden frames and the inside woodwork of greenhouses.

**SOLIGNUM WOOD BEETLE DESTROYER**—for woodworm in furniture.



WOOD PRESERVATIVE

Solignum Ltd., 30 Norfolk Street, London, W.C.2

## ATMOSPHERIC CONDITIONING

### SCIENTIFICALLY PLANNED FOR MODERN BUILDINGS

The planning and installation of efficient equipment for space heating, ventilating, air conditioning, hot water supplies, steam process work, dust and fume removal is our specialisation. Our technical knowledge and long experience is at your disposal.

**SAUNDERS & TAYLOR LTD**  
IMPERIAL BUILDINGS, 13 OXFORD RD. MANCHESTER, 1



*"WHAT A JOB  
this could have been for  
**PORN & DUNWOODY  
LIFTS!**"*

*We make Lifts suitable for EVERY purpose. Consult us before completing your Plans. Meanwhile we shall be pleased to send you a copy of our illustrated booklet on request.*

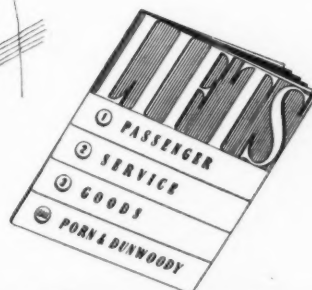


**PORN & DUNWOODY LTD**  
**UNION WORKS, BEAR GARDENS**

Telephone :  
WATERloo 7107 (4 lines)

**LONDON, S.E.1.**

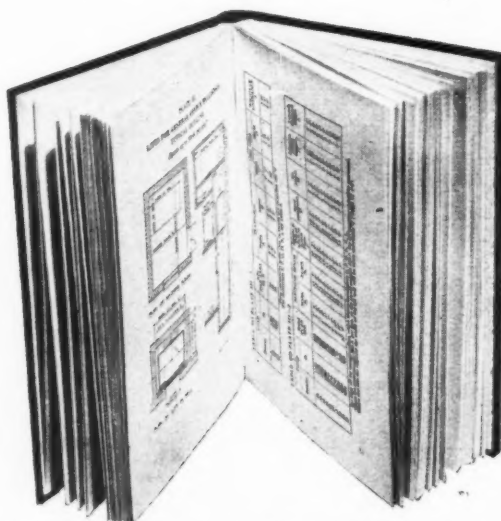
Telegraph :  
Ingporna, Sediast, London



# MARRYAT-SCOTT LIFTS

'Lifts' A collation of British Legislation and official recommendations on Lift Design with notes on Lift Planning. This valuable reference is profusely illustrated with plans and photographs.

Available free on request to practising Architects from :—



## MARRYAT & SCOTT LTD., The Lift Manufacturers

Wellington Works, Hounslow, Middlesex Telephone : Hounslow 6284 Telegrams : Marryat, London  
or from any of the following Branch Offices :

LONDON, 40 Hatton Gdn. • BIRMINGHAM, 41 Water St. LIVERPOOL, 15 Tithebarn St. • BRIGHTON, 34 Chesham Rd.  
BRISTOL, 29 Orchard St. CARDIFF, 67 Queen St. • BRADFORD, 154 Harris St. • EXETER, 22 Oakfield Rd.  
GLASGOW, Moncur St. • CHELTENHAM, 107 St. Georges Rd. BELFAST, 6/7 Queen St. • DUBLIN, 7/8 Eden Quay



Nurses Home, Kent County Hospital, Farnborough.

Photograph by permission of T.D.A.

For full particulars appertaining to "Bulldog" toothed plate and "Teco" double bevelled split ring timber connectors apply to the sole representatives:

**MACANDREWS & FORBES LIMITED**

2 CAXTON STREET, WESTMINSTER, LONDON, S.W.1

Telephone : ABBEY 4451/2/3

Stocks held by appointed Distributors throughout U.K. and Eire

## 40% SAVING

The construction illustrated embodies the latest timber engineering technique by which it is estimated a saving of 40% was made in the **TIMBER** used as compared with that required for schemes previously considered. The design is based on a system of trussed rafters incorporating

**"BULLDOG"**

**TIMBER CONNECTORS**  
in the joints.

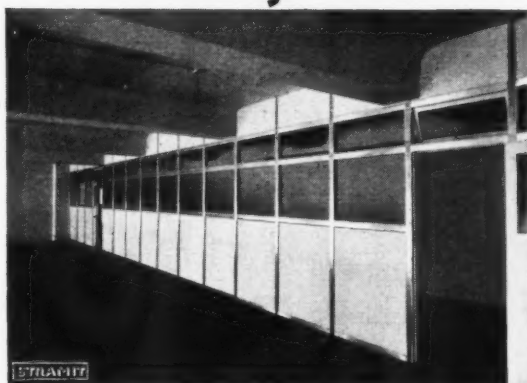
**ECONOMY IN TIMBER** has been achieved in many thousands of timber structures by use of **"BULLDOG" TIMBER CONNECTORS** to strengthen the joints.



# STRAMIT

*The Building Board for Universal Use*

**PARTITIONS  
WALL LININGS  
CEILINGS  
ROOF DECKING**



(Top left) Illustration showing A TYPICAL EXAMPLE OF STRAMIT PARTITIONING erected for the British Electricity Authority in London.

Two illustrations showing STRAMIT ROOF DECKING at Ricardo Street Schools, Poplar, London, which form part of the live architecture Exhibition, FESTIVAL OF BRITAIN 1951.

(Left) On this section timber framing is laid at 2ft. centres on Messrs. Hill's "Presweld" beams and standard 4ft. STRAMIT is used.

(Below) Precut STRAMIT 2in. roofing slabs approximately 9ft. 6in. by 2ft. are laid in STRAMIT 18G Steel Tees and are held down by standard STRAMIT clips. The slabs' ends are supported on the purlins. This portion of roof will be copper covered—other parts will be felted.

In Stramit the Architect and Building Contractor have a unique and revolutionary material for a wide range of constructional work. Manufactured from compressed straw, Stramit building boards are 2in. thick, and are available in a range of standard lengths by 4ft. widths, whilst non-standard sizes are readily supplied. Used with hardwood, softwood, steel tees or aluminium sections, Stramit offers a complete system, whether for partitions, roof decking, wall linings, or tank insulation; the ease and speed of erection enables finished costs to be kept to a minimum. Ample stocks are available and licence free.



**STRAMIT**  
BOARDS LIMITED

★ Our Technical Representatives cover the entire country

DEPT. A, PACKET BOAT DOCK, COWLEY PEACHEY  
NEAR UXBRIDGE, MIDDLESEX · Tel: West Drayton 3021



Architects: Easton & Robertson. Contractors: Gilbert Ash Ltd.

**The roof of Hatfield  
Technical College is  
insulated with  
'Fibreglass' quilt**



Photograph illustrates the application of 'Fibreglass' quilt under the concrete roof slabs.

# FIBREGLASS

TRADE MARK

For structural, heat, and cold insulation. Sound-deadening. Acoustic correction. Porous membranes for pipe-wrapping, flooring, roofing. Battery retainer mats and air filters. In textile form for electrical insulation and flameproof decorative fabrics.

**FIBREGLASS LIMITED, RAVENHEAD, ST. HELENS, LANCS. (ST. HELENS 4224)**

LONDON OFFICE:  
63/65 Piccadilly, W.1  
(Regent 2115/6)

GLASGOW OFFICE:  
136 Renfield Street  
(Douglas 2687)

NEWCASTLE-ON-TYNE OFFICE:  
c/o Pilkington Brothers Ltd., Westgate Rd.  
(Newcastle 20938)

MANCHESTER OFFICE:  
11 Piccadilly  
(Blackfriars 8863)



THE ARCHITECTS' JOURNAL

No. 2938 21 JUNE 1951 VOL 113

EDITORIAL BOARD : (1) *Consulting Editor*, F. R. Yerbury Hon. A.R.I.B.A. (2) *Guest Editor*, Frank Russon, F.I.O.B. (3) *Town Planning Editor*, Dr. Thomas Sharp, L.R.I.B.A., P.P.T.P.I. (4) *House Editor*, J. M. Richards A.R.I.B.A. (5) *Technical Editor*, R. Fitzmaurice, B.Sc., M.I.C.E., Hon. A.R.I.B.A. (6) *Editor Information Sheets*, Cotterell Butler A.R.I.B.A. (7) *Editorial Director*, H. de C. Hastings.

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

ASSISTANT EDITORS : (19) *Chief Assistant Editor*, D. A. C. A. Boyne (20) *Assistant Editor (News)*, K. J. Robinson *Assistant Editors (Buildings)*, (21) L. F. R. Jones, (22) A. P. Lambert, (23) *Assistant Editor (Information Sheets)*, E. G. Johnson (24) *Assistant Technical Editor*, M. Jay *Photographic Department*, (25) E. R. H. Read, (26) 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, £2 10s. 0d. per annum. Single copies, 1s. ; post free, 1s. 3d. Special numbers are included in Subscriptions; single copies, 2s. ; post free, 2s. 3d. Back numbers more than 12 months old (when available), double price. Half-yearly volumes can be bound complete with index in cloth cases for 25s. 0d. ; carriage 1s. extra.



## PLANNING IN ADVANCE

I have just seen a long statement prepared jointly by the RIBA and NFBTE which is "to call the attention of building owners to the way in which it is possible to economize in both time and money by supplying full and complete information at the earliest stage possible and by refraining from making alterations in plans." The views set out are, as one might expect, exactly what most of us have been saying ever since we started practice, but it is difficult to see how the statement, which is fairly long, can be got over to the potential building owner: most dailies ignored it. Couldn't it be published for us to give to clients at the same time as the RIBA scale of charges?

## NEVER LEAVE WELL ENOUGH ALONE

That is the title of the autobiography\* written by the man who has done more,

\* Simon and Schuster. New York \$5.00

perhaps, for industrial design than anyone else alive today. You can see him portrayed on page 787 of this issue with his attractive young wife; the manager of his London branch, William Reiser, and what appear to be two of my cub-reporters. His name? Raymond Loewy, the man who, as the blurb on his book cover states: "enters your life every time you open a package of soap (Lux), squeeze a tube of tooth paste (Pepsodent), take a railroad trip (by Pennsylvania RR) look at a car (Studebaker). So, if you are careful and watch when you travel, avoid the cinema and keep your eyes tight shut now and then, you can keep him out of your life successfully in Britain. But you would be led a terrible dance in America. Not, of course, that you need to keep him out. His designs are, by and large, excellent, and thoroughly American. Which means, to my daisy English taste that it is sometimes rather heavy, and what can only be described as unnecessarily streamlined.

\*

His autobiography is amusing, fascinating, and well illustrated with his work. He designed the book too, needless to say (a design which will sit well on the shelf beside F. L. Wright's biography). It is interesting to read how a young Frenchman, arriving in America after the first world war, within a remarkably short space of time made a name for himself in an entirely new profession. He was, perhaps, the pioneer of industrial designs, as we know them today, and one who has contributed as much as any towards making the profession a respected one. When Loewy redesigns an object, he is not satisfied until the finished object not only looks better, but works better and sells better too. And that is certainly something. His book is worth reading (what a pity there is no one

over here who could write the British equivalent) to all who want to understand the scope of the industrial designer's job. It is American, of course, in every sense of the term; there is very little left of the young French immigrant save, perhaps, his charm.

## THE MILAN TRIENNALE

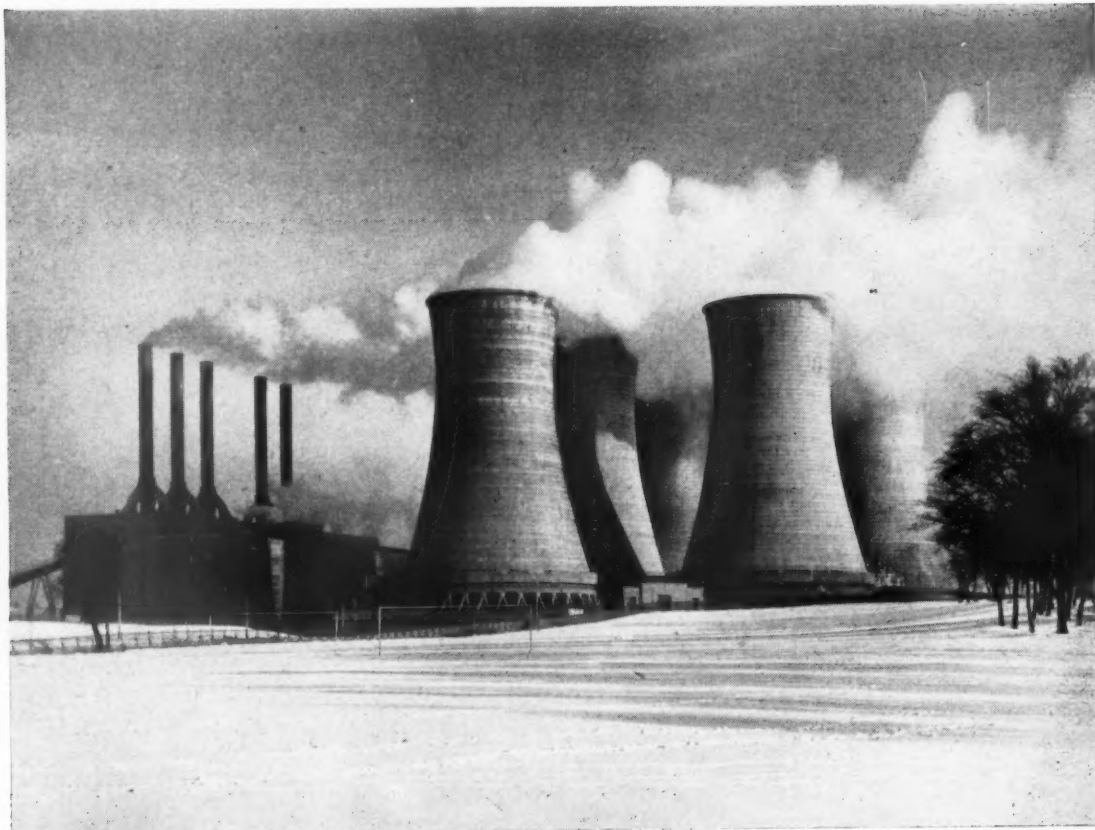
One of my spies-at-large writes from Italy: "Any architect going to Italy this year should make his first stop Milan, where the Triennale is now being held. With its special emphasis on architecture, this is rather different from most periodical exhibitions.

\*

"I spent yesterday afternoon in the Palazzo delle Arti, where they are showing furniture and industrial art as it affects the home, together with a number of photographic exhibits relating to modern architecture and town-planning. Some of the last-mentioned are more stimulating visually than anything of the kind I remember having seen in England. One of the most exciting is a (relatively) small room devoted to 'Architecture the Measure of Man' (Architettura Misura dell'Uomo), arranged by Ernesto Rogers. Here some score of very large photographs of buildings of all ages—from Cheops to Corb—are built up into an abstract composition through which you thread your way in spot-lighted semi-darkness over a gravel floor.

\*

"The series of furnished apartments designed by Italian architects gains much in interest from the fact that one can actually walk through them (though there is apt to be congestion in the kitchen). Functionalism is still a concept to conjure with in Italy, and to English eyes most of the rooms may appear a trifle uncanny; but the furniture



WALSALL POWER STATION, STAFFS  
FOR THE BRITISH ELECTRICITY AUTHORITY, MIDLANDS DIVISION

# HOPE'S WINDOWS

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



is full of all those good ideas which designers unrestricted by utility regulations can indulge in.

\*  
"Exhibits from other participating countries seemed to be much what one would expect—though one would need a full day to make sure there were no surprises. I wish I could report that the English exhibit illustrating the new towns, Herts. schools and post-war housing was attracting enthusiastic attention; in fact it was far too gentlemanly to be attracting any attention at all. It is time we learnt that first-class material just isn't enough in an international exhibition like this.

\*  
"The USA goes one better than anyone else in putting its contribution in the park, outside the museum. The result, ironically enough, seemed to be that only a tiny proportion of those visiting the main exhibition ever saw it. But the objects shown are as good as the Museum of Modern Art could find—which is saying a great deal. And the pavilion, designed by the Italian architects Belgiosa, Peressutti and Rogers, is a real beauty. I send you photographs of it, together with a snap of the Italian shipping lines pavilion, which also stands in the park."

\*  
I share these pictures with readers on page 786.

OH FOR THE WOODEN O!

Reader; have you had a "cinematic experience"? You have? Then drop whatever you're doing and read on. You are probably one of those people who have convinced the compiler of FOB 1951/Immediate/AC/Press/22/51 that "architectural changes are desirable" in the theatre. "Cinema audiences," says this scribe, "frequently find stage presentations remote and artificial when compared with the film. . . . A movement is afoot (begad!) to change the shape of the auditorium and even to abolish the proscenium." (No, no, not that!—at least not that spelling!)

\*  
Now where does this learned writer get all his information about the influence of the cinemagoer on theatre design? It has been discovered, he says, by "the architect of today." Why doesn't this "architect of today"

*The Victorian drawing room above is part of an exhibition of old gas lighting fittings at the Ranelagh Works of Suggs & Co., Ltd., Chapter Street, Westminster. Right: part of the street lighting section of the exhibition, showing lamps loaned by Peter Varnon. Left to right: Blackfriars Bridge lamp, London Bridge lamp, an early "cradle" type of lantern with oil lamp and an early Parkinson "Warwick" lamp. (See note on page 785.)*

come out into the open like a man. I suspect that it's because his assumed title gives him an omniscience and helps him to talk up a state of affairs that does not exist.

\*  
What nonsense it is to claim that public (especially "cinematic" public) demand is leading to revolutionary changes in theatre design! The most extraordinary thing about "the theatre-goer of today" is his adaptability. He appears to be as much at home with picture-frame Shaw, Ibsen and Eliot as he is with forestage Shakespeare and Sophocles. If any demand for a change in stage forms is made it comes from imaginative producers and playwrights. And I support them entirely in their wish to create a closer actor-audience link for certain types of play. But I am growing tired of the present fashion of looking upon

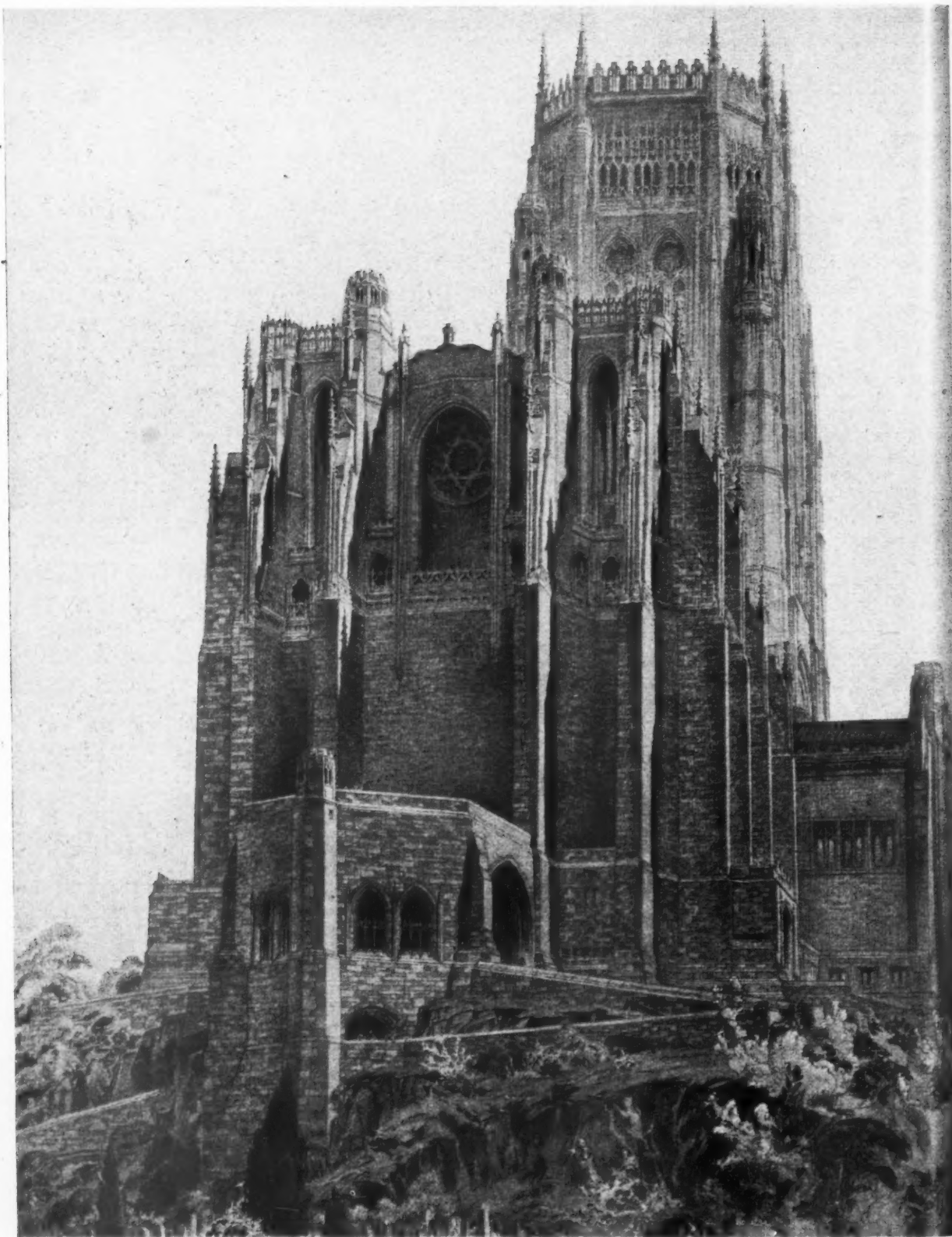
existing stage arrangements with scorn and of speaking of the non-realistic production as though Reinhardt Pirandello and Wilder never existed.

\*  
I hope that the Coventry exhibition of models and drawings, showing new and reconstructed theatres in many parts of the world, will not be as arch about the proscenium as the Press hand-out which describes it. I shall certainly go along to St. Mary's Hall after June 28 to see this exhibition, which has been organized by the British Centre of the International Theatre Institute under the supervision of Richard Southern. Who knows, that "architect of today" may be there at the same time.

#### TOO MANY RUNNING TAPS

One of the administrative snags about district heating schemes is that it is difficult to gauge by a meter the amount





### *Cathedral Designs Revealed*

Designs for the nave and west front (see above) of Liverpool Cathedral were revealed for the first time by Sir Giles Gilbert Scott last Saturday. It will be remembered that Sir Giles' design won first prize in an open competition in 1902. For some time now the completed tower has

been a familiar Liverpool landmark, but throughout the years the architect has made many amendments to his work and has revealed new parts of his design as alterations have been finished. Work has already commenced on the first bay of the nave.

of h  
it.  
how  
the  
payi  
are n  
they  
But,  
after  
extra  
wha  
they  
ing  
the  
trict  
diffe  
limi  
the  
amo  
app  
cent  
own  
the  
cyl  
seen  
hea  
ling

ANC  
Co  
the  
stra  
cur  
aft  
tha  
bet  
eac  
sep  
tha  
stre  
Jus  
con

PR  
Fr  
En  
wa  
of  
a  
Fra  
tho  
ma  
An  
dis  
pa  
ma

“  
wo  
thi  
ha

## No. 2 : Guest Editor

## NOMINATED SUPPLIERS AND SUB-CONTRACTORS

ONE of the major causes for delay in the general contract work of the building industry is due to inefficient relationships between the architect and the builder and the nominated supplier and sub-contractor. Twenty-five years ago prime cost and provisional sums rarely averaged more than ten to twenty per cent. of the total of any contract. Since then the proportion has steadily increased, and it is now quite common to find these sums equalling at least half the contract sum. Indeed, in one large contract, recently placed, seventy-five per cent. of it consisted of prime cost and provisional sums. Now whether, in an age of specialists, one approves or disapproves of this tendency it is obviously becoming more and more important that relationships between the general contractor and the nominated sub-contractor should be smooth and efficient. This can best be achieved by the right action of the architect from the start. For instance, regrettably few architects, when inviting tenders for specialist work, provide the sub-contractors with details as to the terms of the main contract. Such as, for instance, the time that can be allowed to perform the work, the discount that must be included on their prices for the builder, and the terms of payment. The majority of nominated sub-contractors are left in complete ignorance of these vital matters until ultimately the builder sends the sub-contract, when a spate of correspondence ensues. A final complicating fact is that most specialist firms print a multiplicity of conditions and stipulations on the back of their estimates : and most are at variance with the main contract. Now surely a big step would be made towards the efficient and expeditious settlement of preliminaries if architects, when inviting tenders for specialist work, would simply provide the following information. Firstly, the name and address of the main contractors. Secondly, a copy of the main contract, or essential details of it, stating : the terms of payment; the discount (if any) to be allowed to the builder; the probable dates for commencement and completion; the main finance period; and the proviso that the sub-contractor must conform to all the principal contract conditions, notwithstanding any of the printed conditions of the specialists. A great deal has been said, in the JOURNAL, and elsewhere, on the importance of co-operation between builder and architect. Here, then, is another instance when the architect and the builder, and, of course, the contract, would benefit if a full consultation could take place at an early stage to discuss these nominations. The builder is often in a position to advise the architect of the best firms in the locality to execute specialist work. Finally, if the builder is to prepare a progress chart for the contract (and this is a popular idea too, judging by what has been published recently) then he cannot reasonably be expected to do so unless he knows, within a few weeks of commencing the contract, full particulars of all nominated sub-contractors and suppliers.

of heat supplied, and then charge for it. And nobody seems to know how much hot water people use when the supply is unlimited. If they are paying a flat X shillings a week people are naturally encouraged to make sure they are getting their money's worth. But, in general, it is often assumed that after a comparatively short period of extravagance, the demand will drop to whatever people would normally use if they paid on quantity. It is interesting to see the report compiled by the MOLGP's Working Party on district heating. Reports from twenty different authorities show that with unlimited hot water from a central source the consumption is about double the amount used with individual heating appliances, though it is only 75 per cent. up when each dwelling has its own calorifier, presumably because of the time lag in reheating after a cylinder full has been used. The moral seems to be that if you base district heating charges on an ordinary dwelling average you are likely to be wrong.

## ANCIENT LIGHTS

Congratulations to Messrs. Suggs for the excellent way they have demonstrated domestic gas lighting at their current exhibition. You will agree, after seeing the photos on page 783, that the interior lighting is displayed better than the lamp posts. Shouldn't each of the lamp-posts have had a separate frame—concealing the fact that it is foreshortened—backed with a street scene of the period represented? Just a thought. And I repeat: congratulations.

## PRAISE FROM THE MASTER

Frank Lloyd Wright, who was in England for one night last week on his way to Florence, where an exhibition of his work is being held, and was given a private reception by his friend, Frankland Dark, was asked what he thought of the Royal Festival Hall. He made a reply that was typical of him. And I print it here for the benefit of the disciples who have already produced paste and scissors at the sight of their master's name.

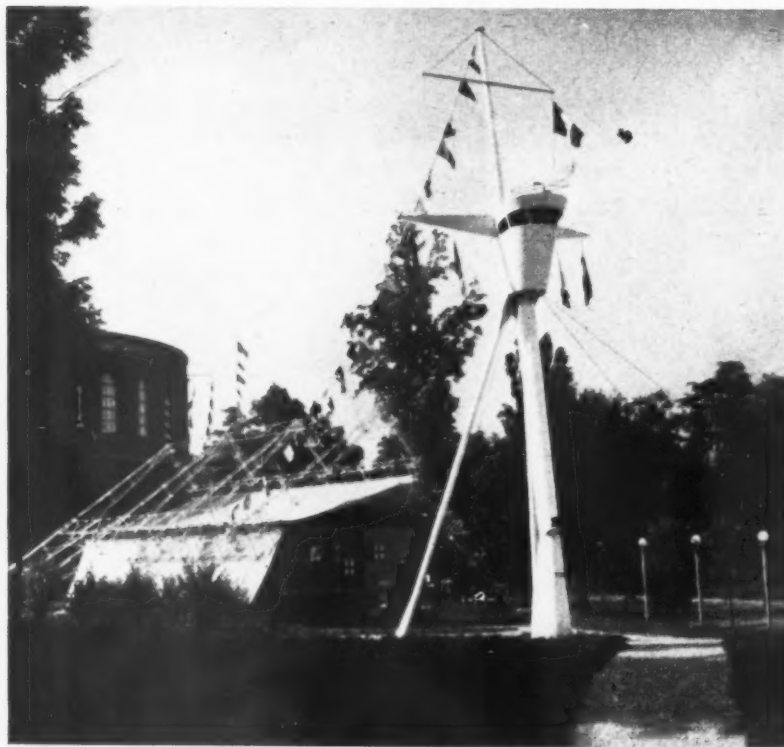
\*

"I don't think it's a particularly wonderful building," he said. "But I think it's wonderful that your country has a new building."

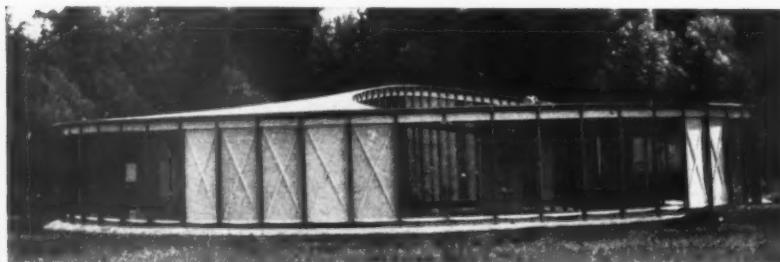
ASTRAGAL



# PAVILIONS AT THE MILAN TRIENNALE



Shown here are two of the pavilions on view at the Milan Triennale, which is commented on by one of ASTRAGAL's correspondents on page 781. Above is the Italian shipping lines pavilion. Below are two views of the American pavilion, which contains exhibits supplied by the Museum of Modern Art, and was designed by the Italian architects, Belgiosa, Peressutti and Rogers.



F. C. Johnson

Pembroke Wicks

J. S. Cousins, A.R.I.B.A.

Tony Slater

D. Ross

## What is a Qualified Architect?

SIR.—Under the heading "Premiums for Architects" ASTRAGAL (May 17) states that the Minister of Local Government and Planning has dropped a broad hint to local housing authorities that they should employ "qualified architects" for their housing schemes.

Will Dr. Dalton, and ASTRAGAL please explain what is an *unqualified* architect.

Is it not a fact that the term "qualified architect" became redundant at the time the Architects Registration Bill passed into force in 1931 and that the expression "qualified" architect is as irregular as the expression "qualified doctor" and its use liable to mislead the public?

Essex.

F. C. JOHNSON.

[We asked Mr. Pembroke Wicks, registrar of the Architects Registration Council of the United Kingdom, to reply to this letter. It is printed here.—ED.]

The use of the phrase "qualified architect" is certainly calculated to mislead. All persons practising as architects must, of course, be registered and to that extent are "qualified" but what people who use the term "qualified architect" really mean is probably "qualified by examination" as distinguished from the temporary provisions of the Architects Registration Act, 1938, under which persons were admitted to the Register up to 1940 on the basis of their practical experience.

London.

PEMBROKE WICKS.

## Is the Public Ahead of Planners?

SIR.—It was indeed interesting to hear in the BBC "Critics" programme discussion on "Lansbury—the Live Architecture Exhibit", the books critic making an impassioned plea for Le Corbusier's principles of town planning, while the architects



present stoutly defended the east end brick, the space-saving virtues of the terrace and the joys of the small back yard.

Can it be that enlightened public opinion is at last ahead of the planners—or is it that *Life begins Tomorrow* was a very good film with a very apt title?

J. S. COUSINS.

Hampstead.

[\* In this film the cinemagoer was shown Le Corbusier's flats at Marseilles.—Ed.]

## Plastic Tiles can be Laid on Heated Floors

SIR.—I read with interest your article (March 15) on "The Use of Plastics in Building." In this article the author said that "thermo-plastic tiles have become one of the most popular floorings used today," with which statement I agree wholeheartedly. But he went on to say that these tiles "should not be used where there is floor panel heating, as the edges of the tiles may tend to curl up." With this I do not agree.

In fact, the "thermo-plastic" tiles manufactured by this firm have been tested for use over concrete floors equipped with radiant heating and found perfectly satisfactory. (The tests were carried out with water temperatures varying from 100° to 115° F. giving surface temperatures on the floor between 80° and 85° F.)

In the USA these tiles are commonly used over floor heating systems and suffer no detrimental effects. (Surface temperatures in the USA are usually, on the concrete—82° F. on the tiles—80° F.)

I hope you will be able to publish this letter and, thereby, dispel any doubts which may have been raised by the statement quoted above.

TONY SLATER,

Armstrong Cork Company Ltd.

London.

SIR.—In his article "The Use of Plastics in Building" which appeared in your issue of March 15, J. B. Singer states that "Thermo-plastic" tiles should not be used over panel-heated sub-floors.

As pioneer manufacturers of the thermo-plastic floor tile in this country we feel that your readers should know that this type of flooring can, in fact, be laid with confidence under such conditions. In this country several installations have been laid with complete success and the use of these tiles over similar construction is standard practice in the United States.

This Company's technical department has studied this aspect of floor-surfacing extensively both in the United Kingdom and in America and would be pleased upon request to advise readers of their findings.

D. ROSS,  
Semtex Ltd.

London.

[The author comments: Plastic tiles vary considerably in their degree of "plasticity" and, therefore, in their resistance to the effects of heat. The National Building Studies Bulletin No. 11 (Floor Finishes for Houses) recommends the use of "thermo-plastic" tiles for "most interior situations, except where exposed to heat . . ." But it is quite safe to use the tiles mentioned in the above letters (or others of similar composition) over floor heating systems, provided, firstly, that temperatures are not excessive and, secondly, that extra care is taken to prevent indentation.]

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



Raymond Loewy, centre, with his wife, Viola, and the British representative of his organization, Raymond Loewy Associates, William B. Reiser, seen talking with Ian McCallum, standing, one of the editors of *The Architectural Review*, and Colin Boyne, chief assistant editor of the JOURNAL. (See *Astragal's* note on page 781.)



## RIBA

### Science Committee to Replace ASB

The Architectural Science Board is to be dissolved. A Science Committee will be formed to replace it. The RIBA Council have taken this measure to bring themselves into closer touch with the study of scientific matters in connection with architecture. (The Architectural Science Board had an independent status.)

There will be fewer people on the new committee, which will meet more often and will report to the executive committee and the council after each meeting. The Science

Committee will co-ordinate the activities of sub-committees entrusted with special tasks.

The RIBA Council "hopes that the paramount importance of science in the study and practice of architecture will be kept more prominently in the view of members of the Royal Institute."

## Exhibition: 100 Years of British Architecture

An RIBA exhibition of *One Hundred Years of British Architecture* consisting of original drawings—many of them not publicly shown before—plans, photographs and models, will open at 66, Portland Place, W.1, on July 12 and will be on view until September 4.

## Statement on "Planning in Advance"

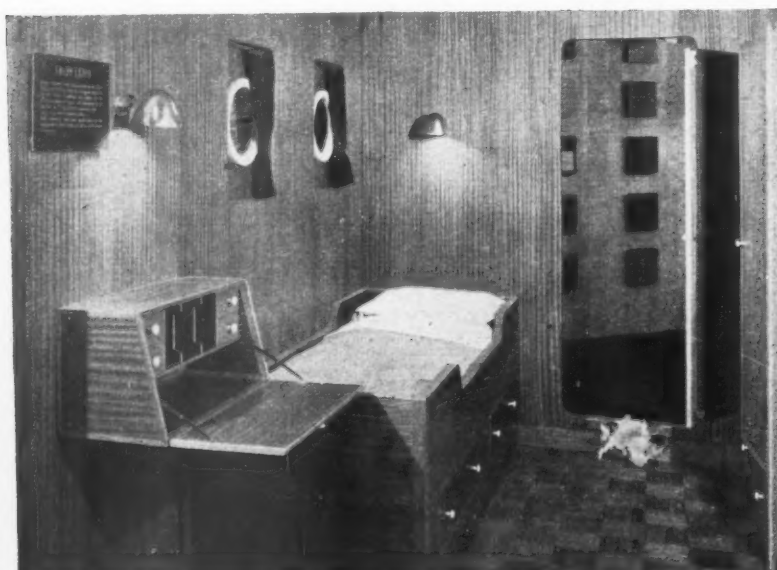
One of the most important factors in the raising of building productivity and in the reduction of building costs is the complete planning of the job before work starts. This point was made very strongly in the two Reports published last year by the Working Party on Building Operations and by the Anglo-American Council on Productivity's building industry team.

The RIBA and NFBTE are in entire agreement with the views of the Working Party and Productivity Team on this point and they have decided jointly to call the attention of building owners to the way in which

## SYNTHETIC BOARD IN UNLIMITED LENGTHS



On this stand at the British Plastics Exhibition, Olympia (for the Vere Engineering Co., Ltd.) the designers, Gaby Schreiber and Associates, have made use of the first synthetic timber board to be produced in unlimited lengths and in widths up to 4 ft. This board, shown in use here (veneered) for panelling, floors and furniture, is not yet being manufactured, but is expected to cost about 4d. per sq. ft., at a thickness of  $\frac{1}{4}$  in. Above, a living room; below, a ship's cabin.



it is possible to economize in both time and money by supplying full and complete information at the earliest possible stage and by refraining from making alterations in plans. The two organizations feel that this is of particular importance at the present time when a large programme of building for defence purposes is about to be undertaken. Following is part of a joint statement they have issued with this object.

"Arising from their examination of the recommendations contained in the reports of the Building Industry Working Party and the Building Productivity Team which were issued last year, the RIBA and NFBTE deem it desirable to draw general attention to the importance of adequate planning in advance as a means of securing economy in building construction cost and, conversely, to the serious effect on costs and efficiency (a) of failure, before operations begin, to determine exactly the work to be carried out and (b) of any alterations of plan during the course of the work. It is felt that to re-emphasize the importance of the principles laid down in the two reports is particularly appropriate at the present time, not only for the assistance of private building owners but also for the guidance of the government departments responsible for constructional work under the defence programme.

"The experience gained during the years 1938-45 should have proved conclusively to the government departments concerned that failure to plan in advance and frequent alterations of plans whilst work was in progress not only delayed considerably the completion of contracts but led to heavy additional costs. There are already signs, however, that in the rush to carry out the new defence programme the lessons of the past are in danger of being forgotten.

"The RIBA and the NFBTE wish therefore to appeal to all building owners, government departments and local authorities as well as industrial concerns and private individuals, to heed both the lessons of the past and those to be learned from the valuable study of constructional practice and procedure in the USA which was made by the Productivity Team. Further, they desire to call upon each architect and each contractor to regard it as his individual responsibility to take whatever action is open to him to prevent the adoption of a procedure in respect of any individual job which is likely to delay completion and to increase costs.

"The Productivity Team found that in the United States the architectural profession has in general been more successful than it has in Britain in convincing clients of the importance of advance planning and strict adherence to a plan once determined.

"There is a greater appreciation in the United States of the fact that, within reason, the longer the time that is spent in the preparation of a building project the shorter will be the time that will be required for the actual construction and, secondly, that as time spent in construction is more costly than time spent in planning, money is likely to be saved rather than wasted by thorough preliminary planning. Although American building owners are equally, if not more, anxious than British building owners to make their building schemes revenue-producing as quickly as possible, it is indeed not unusual in the United States for the planning stage to be considerably longer than the construction stage."

## BSR

## Sound Insulation

At last a means has been found of taking measurement of sound travelling by indirect paths. This was announced last week at Abbots Langley, when statements were given on the large-scale experiments which are being carried out there to devise efficient methods of sound insulation.

It was pointed out on this occasion that until there exists a practical way of reducing indirect sound transmission in buildings with timber joist floors, the BRS recommends that such floors should not be used in blocks of flats.

A full report of the statements made at Abbots Langley by William Allen, the architect in charge of the sound insulation experiments, and by J. Parkin, one of the specialists working on the study of indirect sound transmission, will appear in the Technical Section of next week's JOURNAL.

## MOW

### Building Exhibition at Chester

A "Modern Building Exhibition," sponsored by the MOW, will be held at Little Roodee, Chester, from June 22 to 30. (Daily, except Sundays, 10.30 a.m. to 8 p.m.)

Among the Ministry exhibits will be a new feature, "Building Research and Housing," which shows by means of press-button models, photographs and illuminated diagrams, how research can be applied to the building of a traditional semi-detached house. This, with "Modern Site Organization," "Plumbing," "Careers in Building," a Building Apprenticeship and Training Council exhibit, and an exhibit by the Directorate General of Works, will be in three frame pavilions, the largest of which is 160 ft. in length.

Other exhibitors on the 150,000 sq. ft. site include the Building Research Station of the Department of Scientific and Industrial Research, the Coal Utilization Joint Council, the North Western Gas Board, and the Merseyside and North Wales Electricity Board. A cinema marquee will be provided for the showing of films dealing with the building industry.

## SCOTLAND

### New Standard for Housing Layouts

Standards for the siting and layout of local authority housing schemes are given in Parts 1 and 2 of the Scottish Housing Handbook which have just been issued by the Department of Health for Scotland. Other parts of the handbook dealing with house design and house equipment have already been published.

A leaflet issued by the Department of Health states that "provided that the handbook's standards are observed and that qualified technical officers are employed in producing the layout and house designs, local authorities need not obtain the Department's approval to their plans and specifications for normal housing. This is part of the system recommended by the Local Government Manpower Committee for Scotland for reducing the time and work involved in approving local authorities' housing proposals.

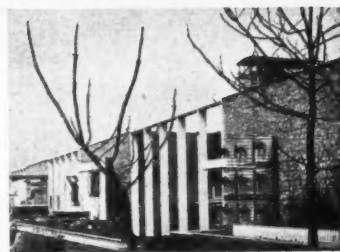
Local authorities are reminded in the handbook of the possibility of relaxing pre-war building byelaws to give effect to modern standards and developments in technique. Pre-war byelaws tend to be less economical, the handbook claims. For example, ceilings of 7 ft. 6 in. instead of 8 ft. or 9 ft. are now considered suitable for any room. Local authorities who wish to accept any of the handbook's recommendations in place of their present byelaws can rely on immediate approval by the Secretary of State.

Standards of road construction can also be unnecessarily high, the handbook adds. Recommended widths and specifications for housing scheme roads are set out in a series of tables and are illustrated in diagrams.

## SOUTH BANK ARCHITECTS: 2: B. KATZ AND R. VAUGHAN

Bronek Katz (left in picture) and Reginald Vaughan (partners since 1945) designed Homes and Gardens Pavilion.

B. Katz: Age 38. Graduated architecture at Technical University, Vienna, 1935. Worked with Gropius and Fry in England, 1936-39. DCRES Office, London West Area, 1940-42. Designed exhibitions for MOI and MOS, 1943-45. Appointed exhibition consultant to UNESCO, 1947. Became FSIA in 1949. Reginald Vaughan: Age 45. Articled pupil and Honours course at AA. Architect to Municipality of Penang, SS, for three years. Became associate of RIBA, 1932. Chief assistant to Maxwell Fry and later to Gropius and Fry, 1933-38. Following year designed schools for MCC as chief architect. Forces (officer, RE 1939-45).

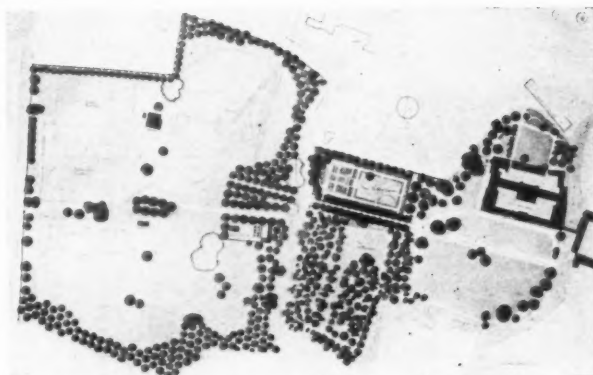


## 3: H. T. CADBURY BROWN

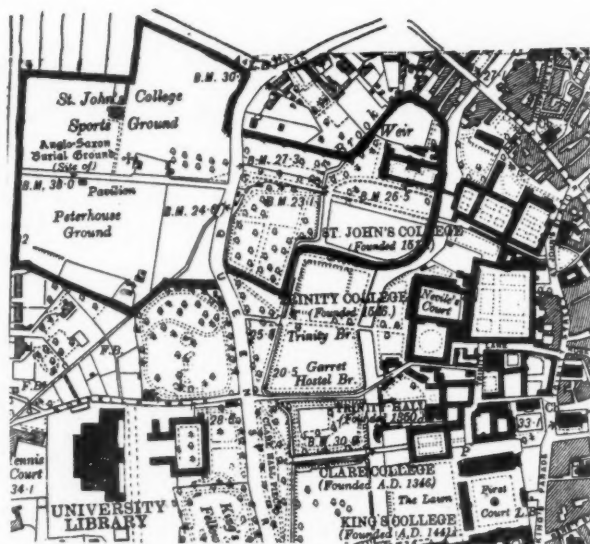
Designed Land of Britain and People of Britain (left). Born 1913. Trained at AA 1930-35. Became associate of RIBA, 1936. Worked in office of Erno Goldfinger. Began private practice in 1937. Won competition for British Railways Town Office, 1937, and for a Central Feature at Woman's Fair at Olympia, 1938. Royal Artillery, 1939-45. Part-time teacher at AA School, 1946-48. Recent work for Council of Industrial Design and Harlow New Town Corporation. Serving on RIBA Housing and Town Planning Committee and Public Relations Committee.



## THOMAS SHARP REPLANS COLLEGE GROUNDS AT CAMBRIDGE



St. John's College grounds at Cambridge have suffered severely from the loss of trees by decay, storm damage and elm disease. The extent of these grounds (40 acres), which are to be replanted according to a scheme by Dr. Thomas Sharp, may be seen in the photograph above (St. John's is in the top right-hand corner) and in the plan on the right. The plan above left shows the existing layout, while that above right shows the proposed replanting. Most elms in the avenue which leads from the College to Queen's Road and on to the playing fields beyond are to be felled, as they are diseased. An avenue of limes will take their place and will be flanked on each side by a yew hedge. Where the avenue protrudes on to the playing fields (to the west side of Queen's Road) it will be flanked by new planting so that it will appear as a cut in a bank of trees and not as an artificially-imposed feature. The interior fences on the playing fields (which have never been planned as a whole before) will be removed, there will be heavy planting on the boundaries for landscape enclosure and trees—single or grouped—will be planted in the enclosure to create a parkland effect. On the other side (east) of Queen's Road the ground to the north of the main avenue, which is now open orchard, will be laid out as a garden. This will provide contrast to the wilderness of the Fellows'



Garden on the south side of the avenue. Trees planted will be lime, horse-chestnut, tulip trees, balsam, black Italian poplar, hornbeam, beech, sycamore, plane and ash, with an occasional ilex or other special tree. The limes planted will be 15 ft. to 17 ft. high; most of the others will be 10 ft. to 12 ft. The greater part of the work should be completed by April next year.



# DIARY

*Regional Planning in the USSR.* Professor J. D. Bernal. At Beaver Hall, Garlick Hill, E.C.4. (Sponsor, SCR.) 7.30 p.m.

JUNE 21

*The Space Behind the Picture Frame.* Part 2. Basil Taylor. At 34, Bedford Square, W.C.2. (Sponsor, AA.) 7.30 p.m.

JUNE 26

*British Standards Exhibition.* At Science Museum, South Kensington. (Sponsor, BSI.) Weekdays: 10 a.m. to 7 p.m.

UNTIL JUNE 28

*Exhibition of Work by Students of LCC Brixton School of Building.* At Building Centre, 9, Conduit Street, W.1. Monday to Friday: 10 a.m. to 5 p.m. Saturdays: 10 a.m. to 1 p.m.

UNTIL JUNE 29

*Modern Theatre Architecture.* Exhibition. At St. Mary's Hall, Coventry. Daily.

JUNE 28 TO JULY 5

*Modern Building Exhibition.* At Little Roodee, Chester. (Sponsor, MOW.) Daily (except Sunday): 10.30 a.m. to 8 p.m.

UNTIL JUNE 30

*Exhibition of Contemporary Architecture (Members' Work).* Herbert Gallery, Coventry. (Sponsor, Coventry Society of Architects.) Monday to Friday, 10 a.m. to 8 p.m. Saturdays, 10 a.m. to 5 p.m.

UNTIL JUNE 30

*FOB Exhibition of Architecture.* At Lansbury, Poplar. Weekdays, 10.30 a.m. to 8 p.m. Sundays, 12.30 p.m. to 8 p.m.

UNTIL SEPT. 30



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

**ERNEST WATKINS**

## The Architect and Current Affairs

Rent restriction is creating a problem here that is no longer the concern of the property owner alone. It is a problem that challenges our whole conception of property ownership. Have we, as a country, come to accept the argument that the ownership of a house rented to someone else gives a status of negative social value, if not one of anti-social activity? If so, have we done so with full awareness of all the consequences? Certainly, the attitude of many towards rent control seems to be based on that view of house-ownership.

The Belgian rent control scheme, as outlined by M. Victor Bure, director general of

## INTERIOR DESIGNS FOR THE "RUAHINE"



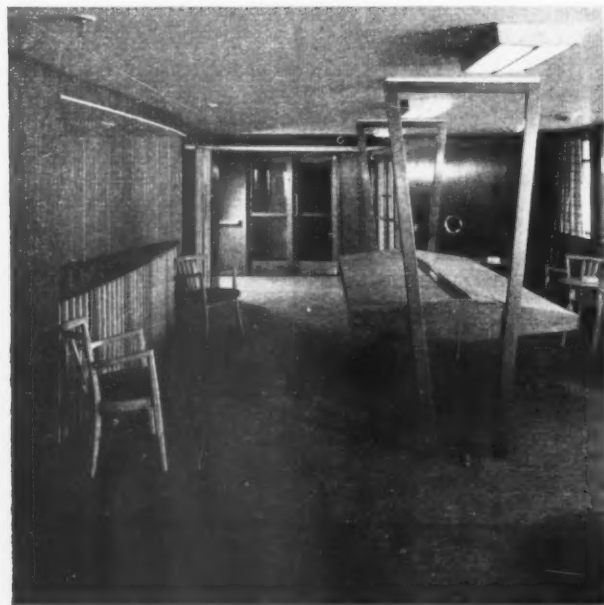
The "Ruahine" (pronounced Ru-a-hee-ni, Maori for "old woman") sailed on her maiden voyage on May 22. The interior of this 17,800 ton, 17 knot ship was designed by Easton and Robertson and is the third ship interior for the New Zealand Shipping Company they have been responsible for. Accommodation is provided for 257 passengers. There is only one class. Above, the nursery on B deck. Beechwood is used throughout; the upholstery is of sea-green leather, grey jaspé-pattern cork composition on floor; ceiling bands and stars are mauve. Below left, the "Ruahine" leaving Tilbury. Bottom left, the writing room on A deck; the carpet is of alternate strips of light and dark brown; furniture is beech; writing table tops are of leather; paintwork is pale grey. Below right, the lounge on A deck; chairs are fitted with loose covers of blue, beige, red and green material; furniture is of beech; walls are panelled with cedar; curtains are gold, green and blue. General contractor for interior, Waring & Gillow, Ltd. List of sub-contractors on page 810.



# INTERIOR DESIGNS FOR FIRST CLASS ACCOMMODATION



The "Oronsay" (left), the fourth Orient Line ship for which Brian O'Rorke has designed the interior, weighs 28,000 tons and replaces a ship of the same name (Oronsay is an island in the Western Isles) which was sunk in 1942. The "Oronsay" was launched in June, 1950, and sailed on her maiden voyage for Sydney on May 16 this year. The ship has eight passenger decks. Accommodation is provided for 668 first class and 833 tourist passengers and a crew of 622. On this page, top, the restaurant



## ON THE RMS "ORONSAY"



on A deck. Walls are panelled with plastic sheet; columns are faced with beech; chairs are covered with brown linen and the carpet is grey-green. Opposite page, below left, the vestibule on the games (A) deck. The table in the centre of the photograph is for sports notices; the windows on the right overlook the sports arena. Panelling is of mahogany. Opposite page, below right, the children's play room on B deck. The wood used in this room is beech. The raised platform on the left acts as a dummy bridge, and fixed to the face of it are blackboards. The children also have their own deck-space, on which is a sand pit and paddling pool. Above left, the tavern on C deck with its long bar. The bar is faced with pine; the furniture is of beech, with yellow linen covers and curtains are red. Top right, the sitting room in the only special suite on the ship. Below, the purser's office on D deck; the floor is covered with grey marbled linoleum, the counter is faced with plastic sheeting. The contractors for the first class accommodation were Waring & Gillow, Ltd. and H. H. Martyn & Co., Ltd. Other contractors: page 810.



town planning in the Belgian Ministry of Works, may be set against the proposals recently made by the Royal Institution of Chartered Surveyors for an increase in controlled rents. At the moment, our system rests on one plain principle: if property is controlled, no increase above the rent payable in September, 1939, is permitted. The Chartered Surveyors' plan would allow an increase of rent corresponding to the increase in repairing costs. But this increase would be calculated only on that proportion of the rating assessment which is, by statute, regarded as the notational allowance to the houseowner for repairs and maintenance. That allowance is commonly between one-quarter and one-fifth of the gross assessment. Therefore, with a property carrying a £7 rating allowance for repairs, the landlord would be entitled to add to the rent, say, £14 a year, to cover the 200 per cent. increase in costs since 1939.

The Surveyors' plan has a political base. It is not founded on the argument that the landlord, like any other property owner, should be allowed to increase his nominal money income to meet the fall in his real income, due to inflation. It is founded on the belief that any plan involving an increase in the rents of controlled tenancies must be so dressed up as to leave the landlord's actual monetary return unchanged since 1939. That may or may not be a good political move; it remains political.

In Belgium, the owner of house property seems to enjoy a higher status than the owner in England. As here, his income is taxed. State and local taxes may take 30 per cent. to 35 per cent. of his revenues. In addition, there is a complementary tax on his total income which bears some resemblance to our surtax. But the Belgian does not, like his British counterpart, face an absolute ban on rent increases.

Rent restriction in Belgium began, as here, after the First World War. And as happened in Britain, the 1945 situation compelled a rent "freeze" at 1939 levels. But since 1945 property in Belgium has been progressively freed from controls, and all forms of rent control are to end after December 31, 1952. Only residential property which is let at the lowest rents is now subject to control. Individual houses in Brussels are free from control if the rentable value is above 15,000 francs a year. (This corresponds roughly to our level.) The upper figure for flat rents is 12,000 francs. In addition, the Belgian property owner can recover the increased cost of repairs and of services he supplies, and may recover possession of the property, in the courts, on grounds which have a good deal of resemblance to the provisions in our Rent Acts governing cases of "hardship" and cases where alternative accommodation is available for the tenant. But the Belgian has the big advantage that even where the tenant is given security of tenure, the rent he pays may be increased. An increase of 70 per cent. above the 1939 level was allowed in 1948. At the beginning of this year, Parliament raised that figure to 100 per cent.

Clearly, the Belgians do not regard the owner of a rented property as a man to be singled out for especially hard treatment. The contrast between conditions in Belgium and those in this country should disturb the architect. Admittedly the architect is rarely directly concerned with the ownership of existing property. But the underlying assumption on which the architect in private practice works is that he and his client are engaged on a meritorious activity; that the building—and, therefore, the ownership—of property is to the advantage of the community. Should he, then, remain indifferent to the terms on which that owner of land and buildings is treated by the State? If the ownership of a rent-controlled house is shameful, what is there to be said for the ownership of a factory or of a block of offices? And what is there to be said for the man who designed them in the first place?



## GYMNASIUM

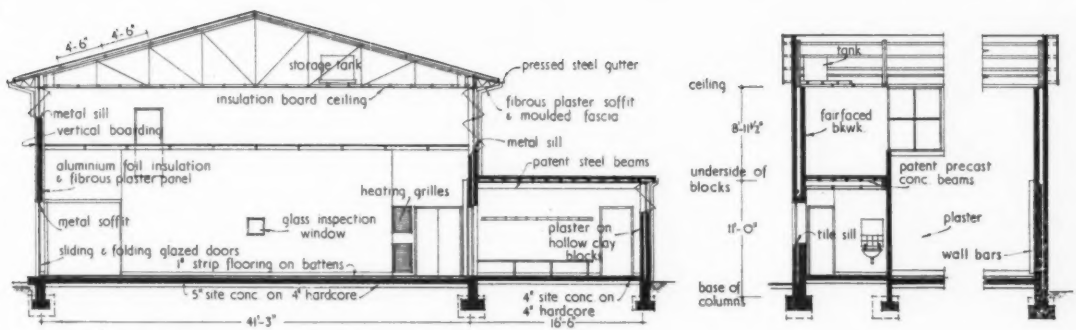
at BALLS PARK TEACHERS' COLLEGE, HERTFORD  
designed by C. H. ASLIN, County Architect  
assistant architect J. T. PINION

A full-size gymnasium was required for the women students of the teachers' training college at Hertford, and one which could be shared by children from adjacent primary schools. It also has to serve temporarily as an assembly hall for the college and, at the last moment, accommodation had to be found for a portable stage, proscenium and stage lighting. The auxiliary accommodation serves as dressing rooms. The site, approximately 150 yards from the main 17th century college buildings, is on the edge of the playing fields where the showers and changing rooms can serve for either outdoor or indoor recreation.

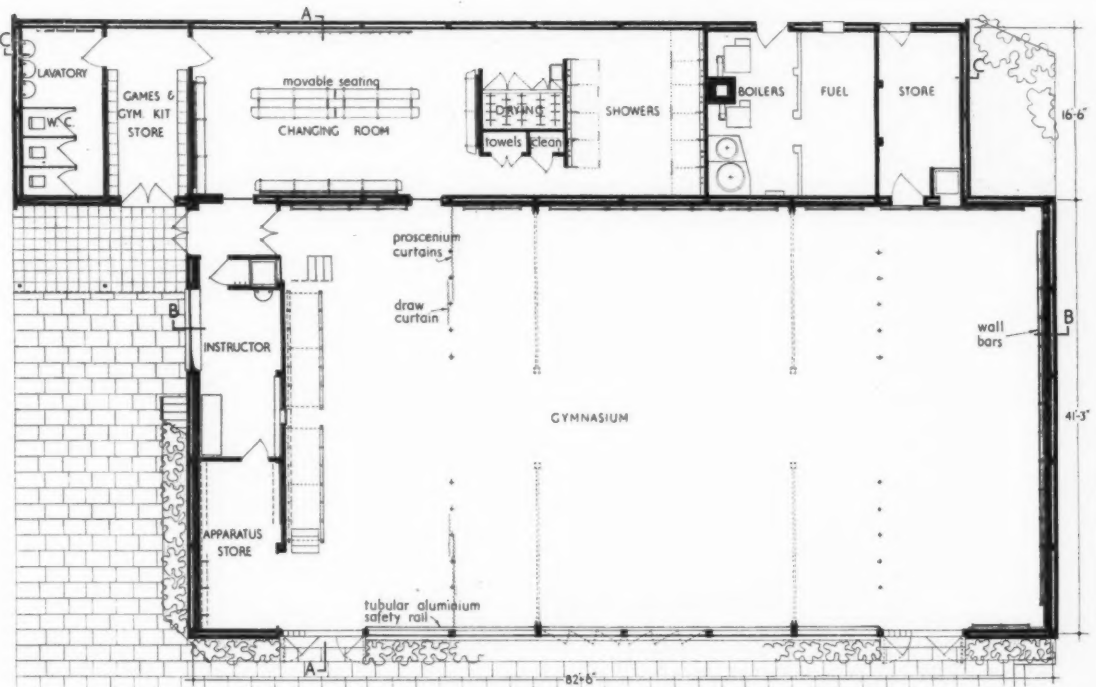
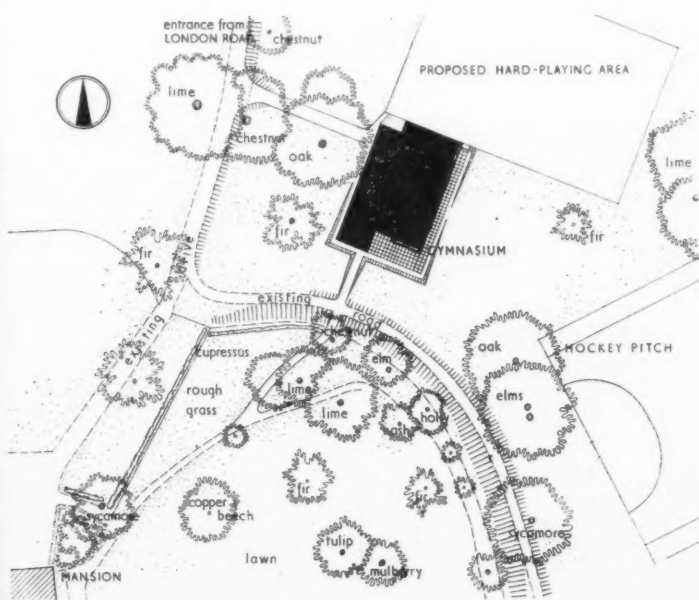
*View looking north-west.*







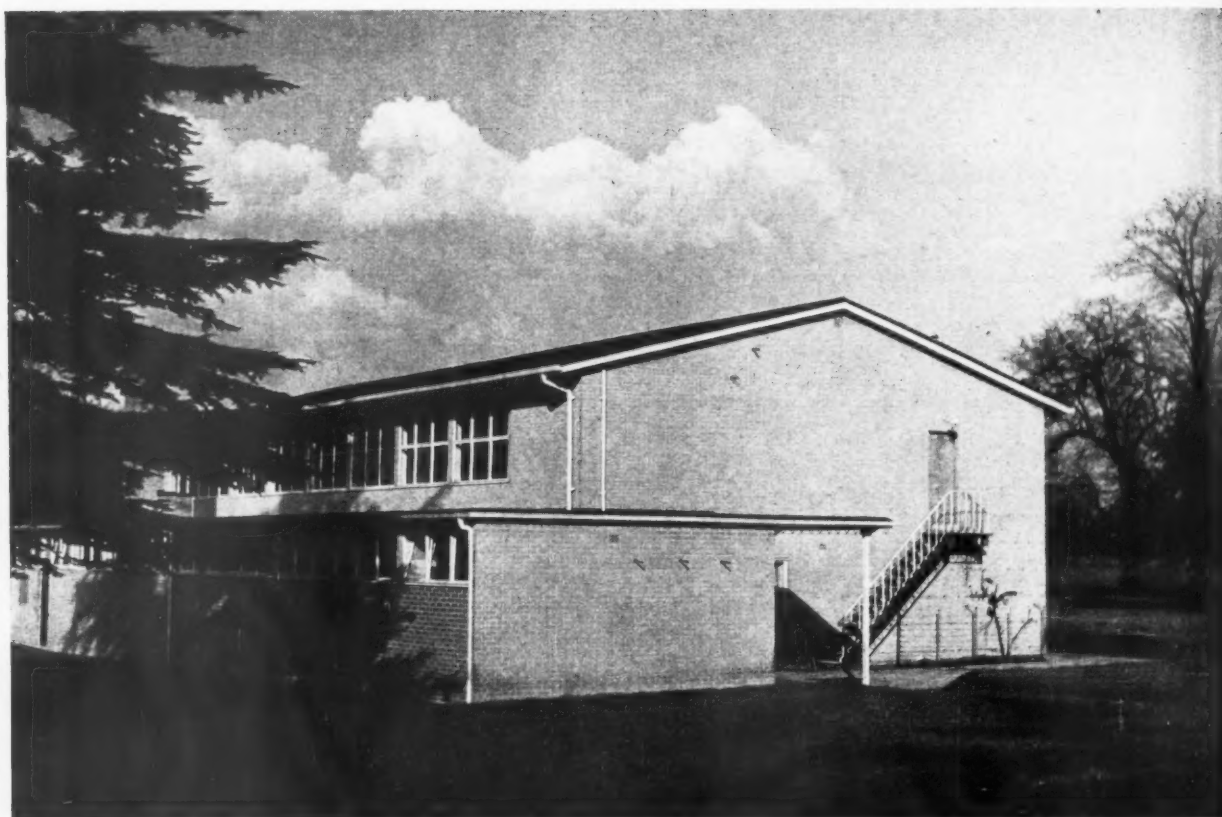
Sections A-A and B-B

Ground floor plan [Scale:  $\frac{1}{8}$ " = 1'-0"]

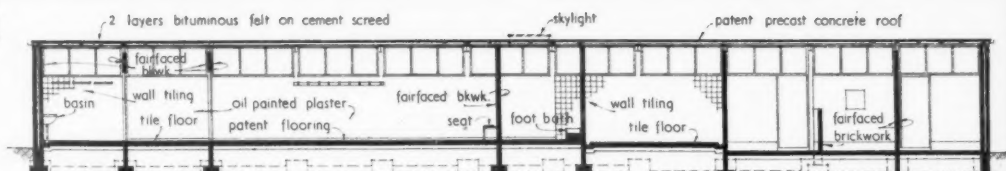
Site plan

**PLAN.**—The plan is based on the 8-ft. 3-in. grid. Normal circulation to the gymnasium is through the games kit room and the changing room, with the alternative, and more direct, route through the lobby outside the instructor's room being used for college assemblies. The instructor's room and the apparatus store permits easy circulation back-stage, when the stage is in use. Low-level windows were required on the east side to give views over the playing fields and parkland.

**CONSTRUCTION.**—There is a galvanized light steel frame, using standard beams and column sections as in the current Hertfordshire schools programme. External walls are mostly of cavity brickwork with an inner skin of vibrated clinker blocks in the changing room section. The roof is of timber purlins on light steel roof trusses at 8 ft. 3 in. centres. On the lower block there are precast



Above, looking north-east with low changing and cloakroom block on the left.



Section C-C (Scale:  $\frac{1}{8}'' = 1' 0''$ )

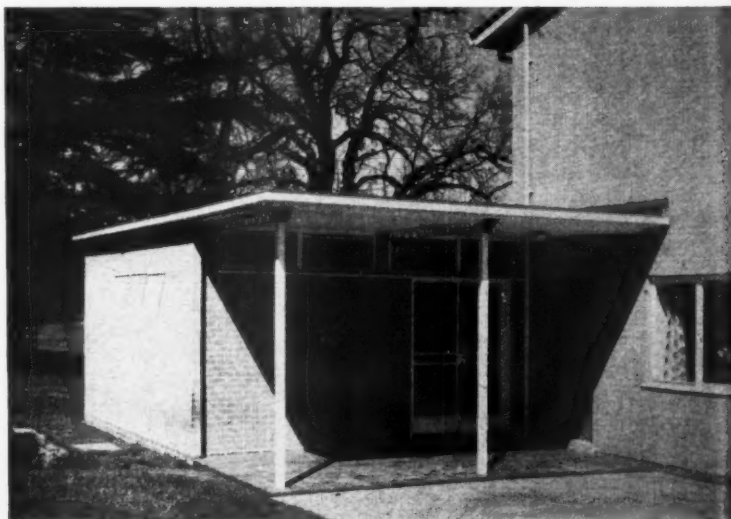
## GYMNASIUM

at BALLS PARK TEACHERS' COLLEGE, HERTFORD  
designed by C. H. ASLIN, County Architect

concrete roof beams. The site concrete is sealed with a layer of bitumen.

**FINISHES.**—The main roof is finished with 23 gauge copper on 1-in. insulation boards and in the lower block has built-up bitumen felt on vermiculite screed. Externally, walls are of buff colour, except for the side walls of the lower block, which are terra cotta, repeating the brick colour of the main college buildings. In-filling between the upper and lower windows on the east elevation is of western red cedar boarding with fibrous plaster internally and insulation between. Steel windows are housed in pressed steel covers cladding the external faces of stanchions. The external stairs have treads of reinforced granolithic in pressed

The entrance porch.





= 1' 0"

porch.





**WORKING DETAIL**

**FURNITURE AND FITTINGS : 8**

**BAR : ROYAL FESTIVAL HALL**

*Robert H. Matthew and J. L. Martin, Architect and Deputy Architect, L.C.C. : Edwin Williams, senior architect-in-charge : Peter Moro, associated architect.*



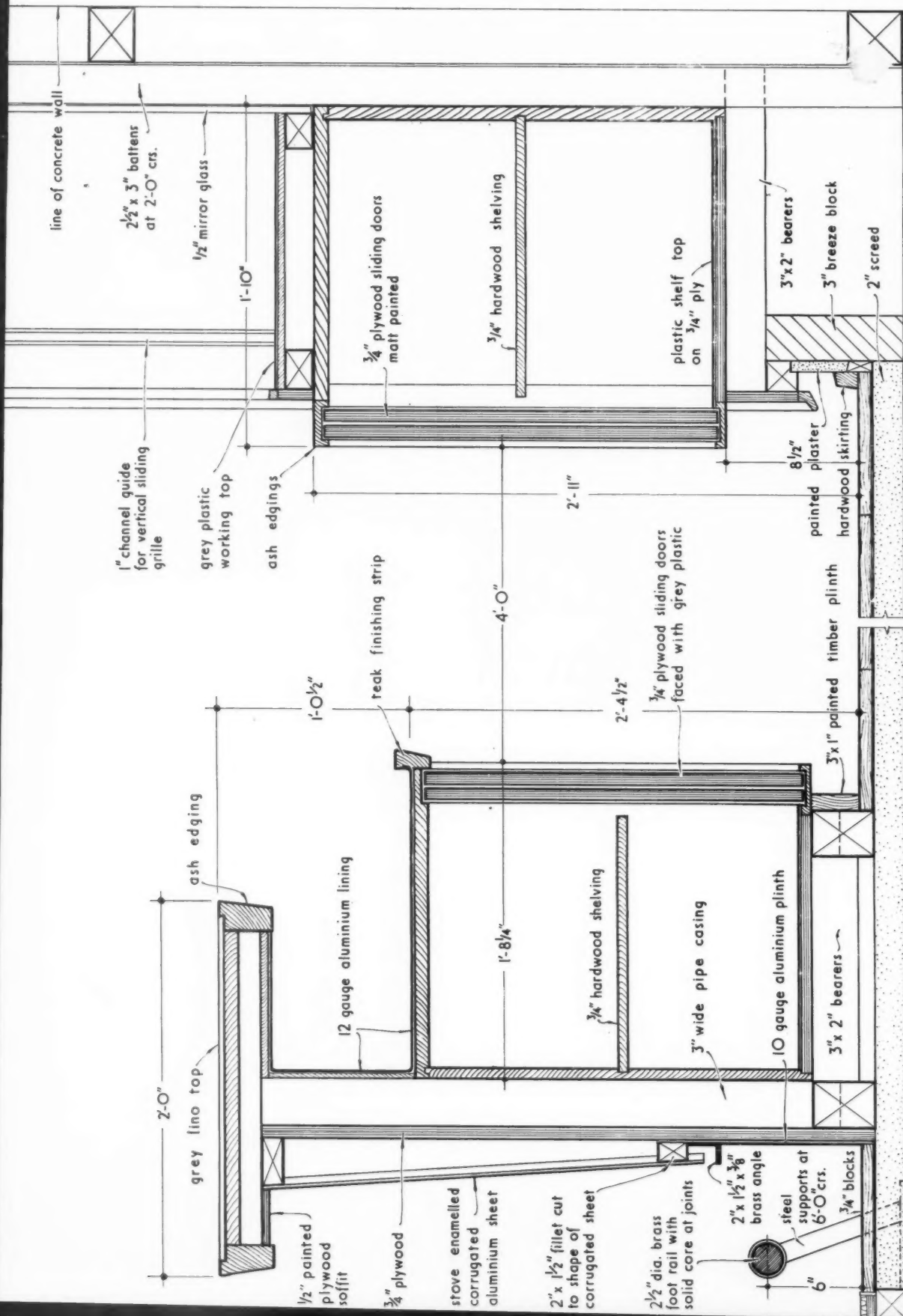
*The counter front is of finely corrugated enamelled aluminium : the fitting behind is veneered in ash.*

## WORKING DETAIL

BAR: ROYAL FESTIVAL HALL

Robert H. Matthew and J. L. Martin, Architect and Deputy Architect, L.C.C.: Edwin Williams, senior architect-in-charge: Peter Moro, associated architect.

## FURNITURE AND FITTINGS: 6



CROSS SECTION THRO' BAR SHOWING COUNTER AND PART OF BACK FITTING. scale 1 1/2" = 1'-0"

## WORKING DETAIL

STAIRCASES : 4

### BALUSTRADE : ROYAL FESTIVAL HALL

*Robert H. Matthew and J. L. Martin, Architect and Deputy Architect, L.C.C. : Edwin Williams, senior architect-in-charge : Peter Moro, associated architect.*



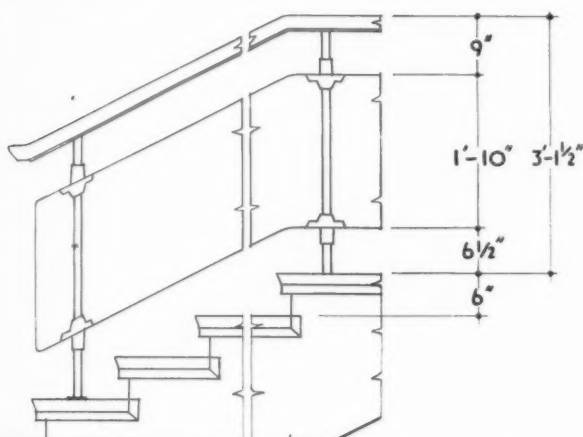
*Panels of toughened glass are held by bronze brackets between the anodised aluminium - and plastic - covered tubular metal balusters: the handrail is in mahogany.*

# WORKING DETAIL

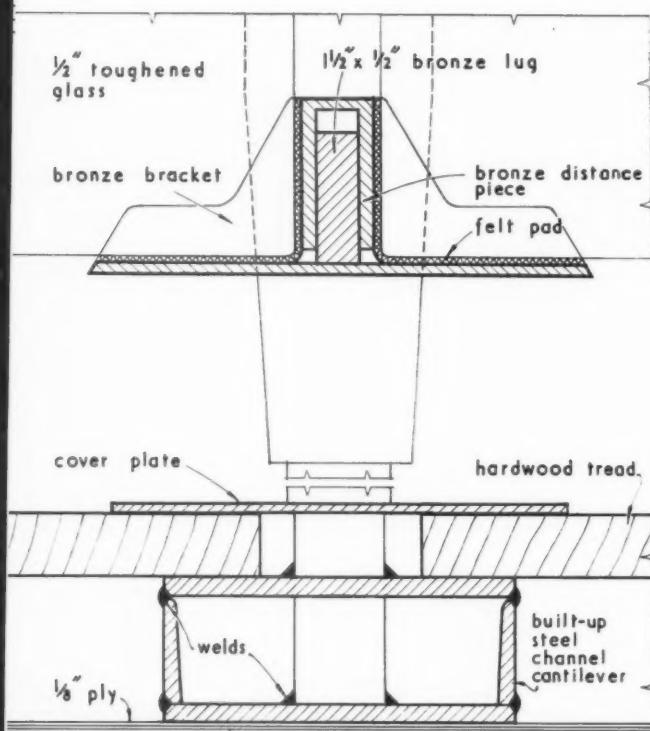
## BALUSTRADE: ROYAL FESTIVAL HALL

Robert H. Matthew and J. L. Martin, Architect and Deputy Architect, L.C.C.: Edwin Williams, senior architect-in-charge: Peter Moro, associated architect.

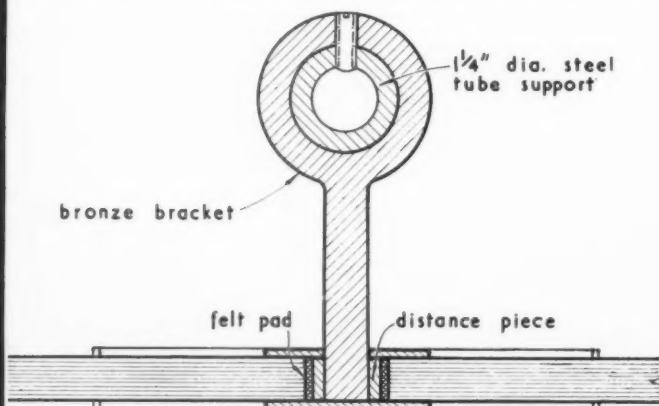
## STAIRCASES: 4



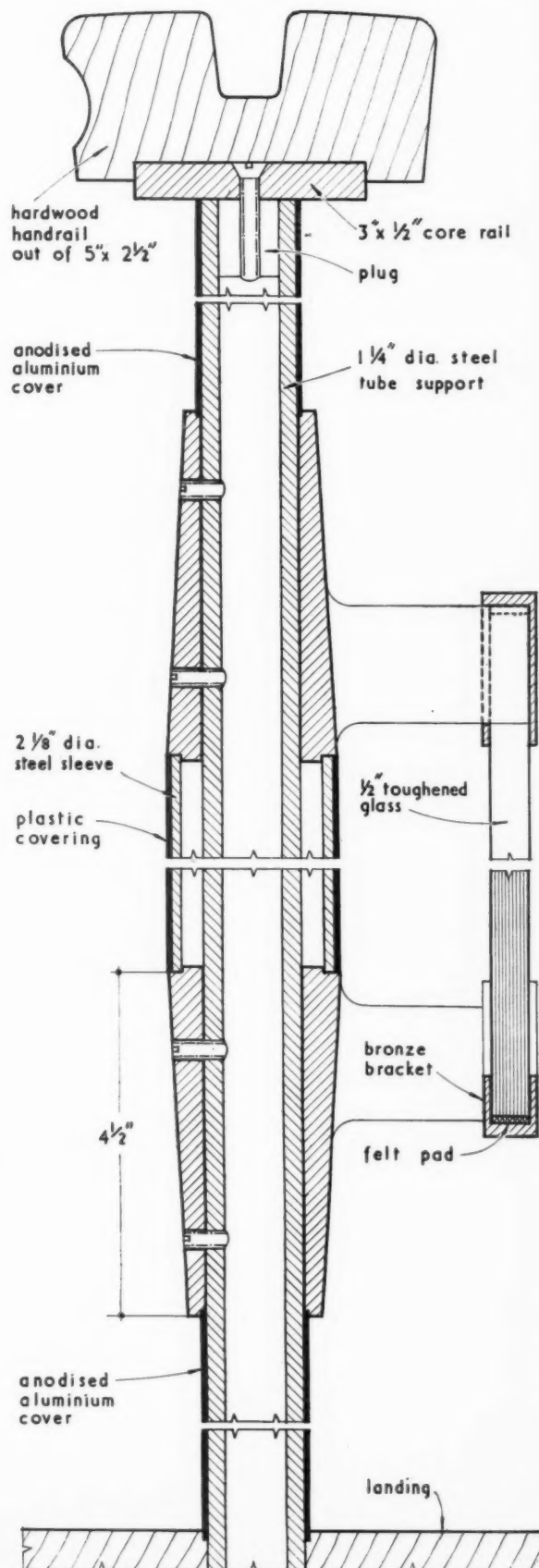
SIDE ELEVATION OF BALUSTRADE. scale 1/2" = 1'-0"



SECTION SHOWING FIXING TO TREAD. scale 1/2 full size

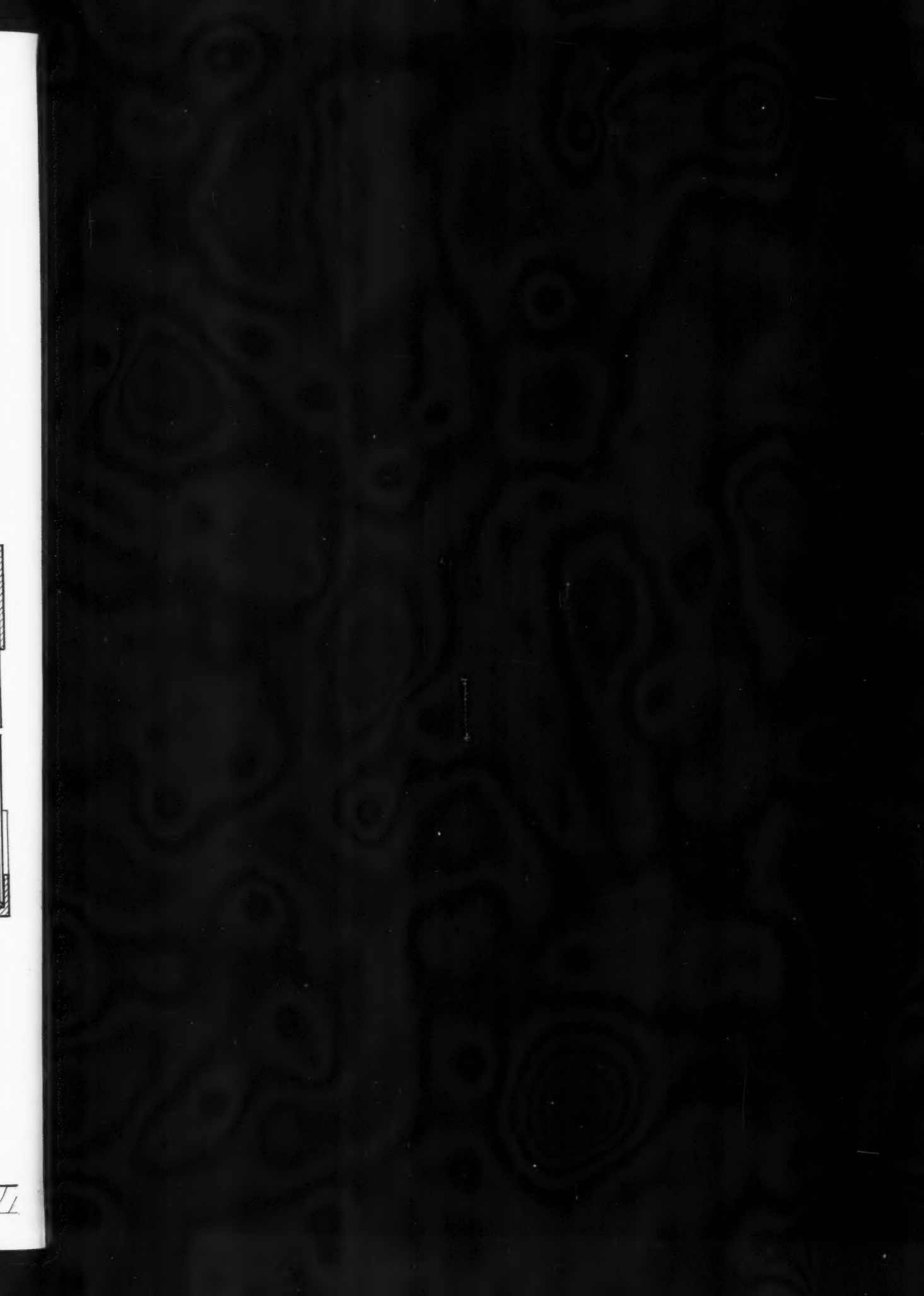


PLAN THRO' BRACKET. scale 1/2 full size

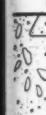


SECTION THRO' BALUSTRADE. scale 1/2 full size

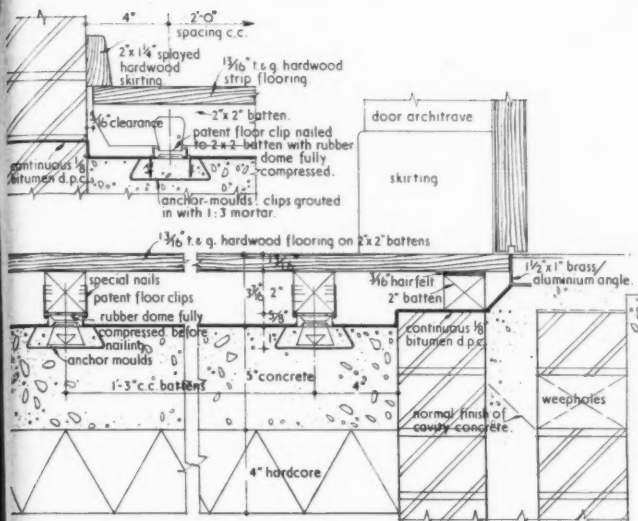




print  
Return

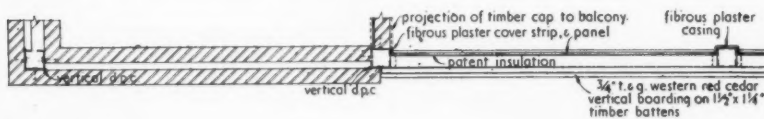


Section

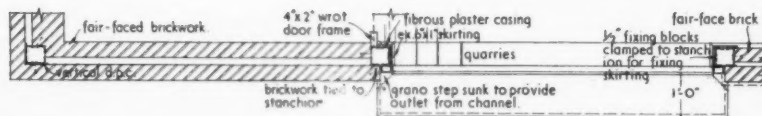


Section through gymnasium floor [Scale: 1 1/2" = 1' 0"]

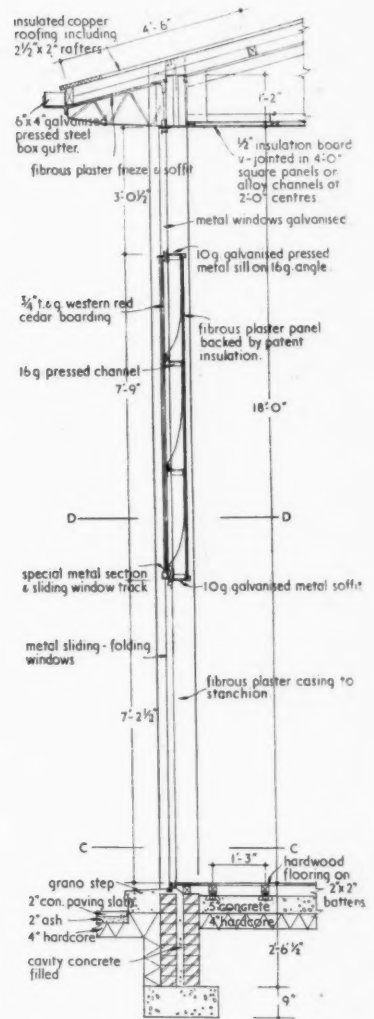
metal trays, the outer ends of which are supported by a latticed steel raker of similar section to the roof beams. The ceiling is of 3-in. insulation board supported by aluminium alloy channels at 2-ft. centres spanning between trusses. Internally, the end walls of the hall are in fair faced cream brick; side walls are plastered and distempered slate blue on the west side and greyish-yellow on the east. The ceiling is white. The strip flooring of Canadian birch is carried on timber battens fixed to the site



Plan at D-D

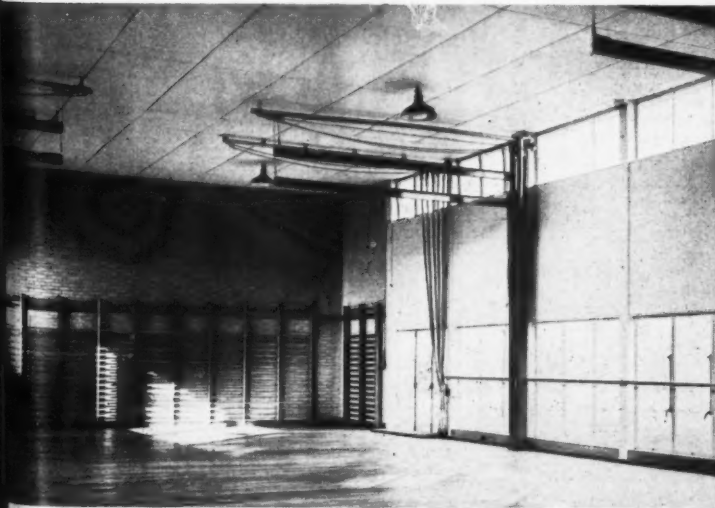


Plan at C-C [Scale: 1" = 1' 0"]



Section through east wall [Scale: 1" = 1' 0"]

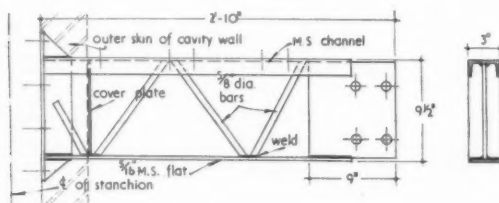
Below left, gymnasium interior.  
Below, the changing room.



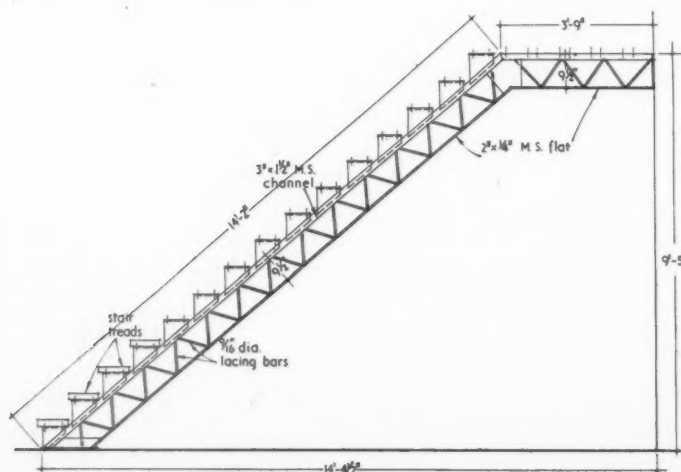


## GYMNASIUM

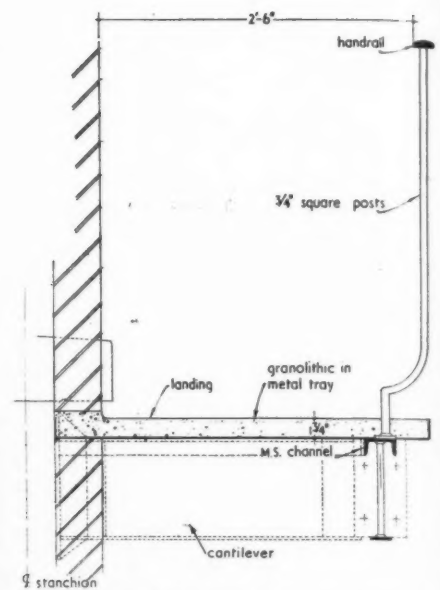
at BALLS PARK TEACHERS' COLLEGE, HERTFORD  
designed by C. H. ASLIN, County Architect



Detail of cantilever [Scale:  $\frac{1}{2}$ " = 1' 0"]



Detail of staircase raker [Scale:  $\frac{1}{4}$ " = 1' 0"]



Section through landing [Scale:  $\frac{1}{2}$ " = 1' 0"]

*Left and below, the staircase to the gymnasium gallery on the south facade. The balustrade is of mild steel.*

concrete by patent floor clips incorporating resilient rubber pads.

SERVICES.—Heating of the gymnasium is by two units each comprising a copper-gilled battery with slow running fan, controlled by thermostats; elsewhere heating is by radiators. The contract price was £15,387, but the final account was for £14,950 or 2s. 8d. per cub. ft.

The general contractors were The Universal Housing Co., Ltd. For list of sub-contractors, see page 810.





## WAR MEMORIAL HOUSING SCHEME

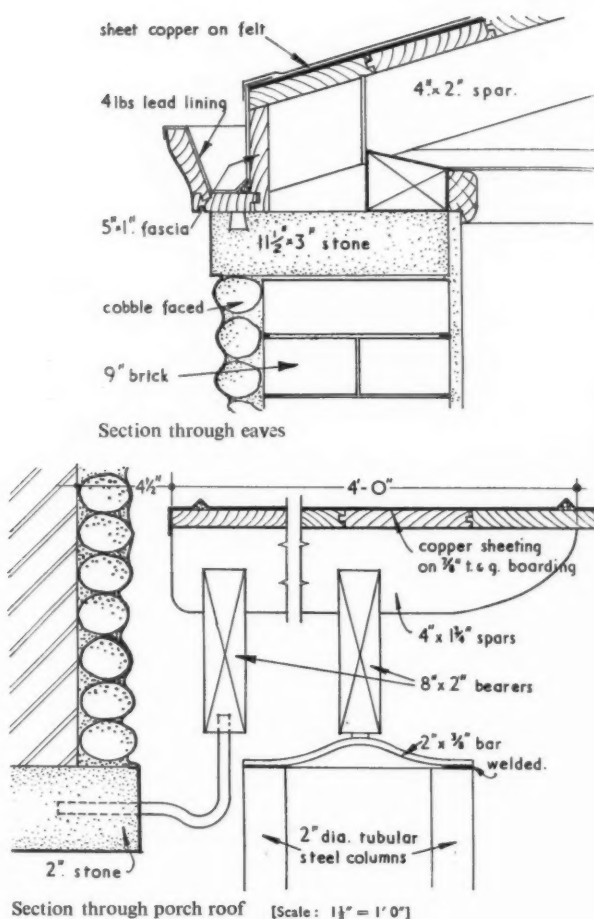
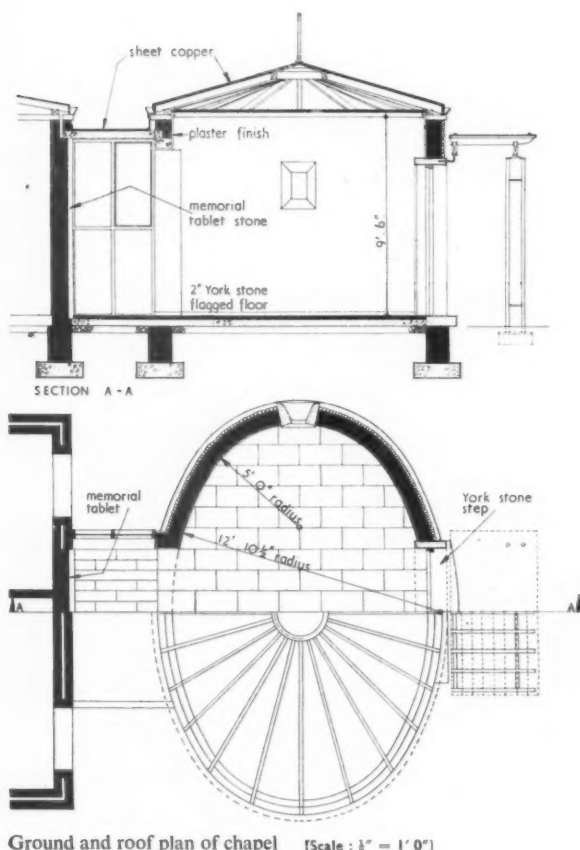
at LYTHAM ST. ANNES, LANCASHIRE

designed by T. MELLOR

The first part of the Lytham St. Annes War Memorial housing scheme is now completed and consists of five houses and five bungalows designed for war disabled men with families or for old people. There is also a small clubroom and memorial chapel. The second part of the scheme will consist of ten flats for old people. The site is completely flat and featureless, and a fairly extensive scheme of planting has been carried out.

*Housing and chapel looking north-east.*

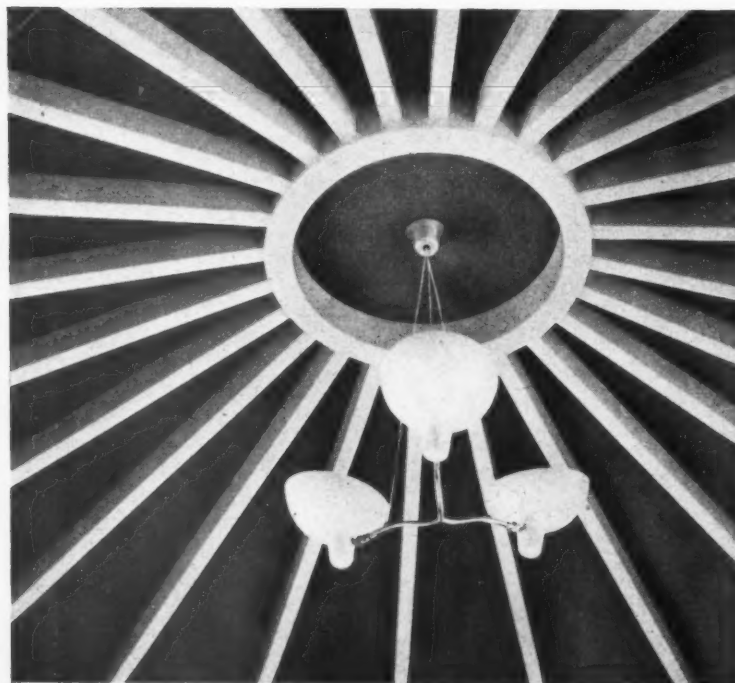




## WAR MEMORIAL HOUSING SCHEME

at LYTHAM ST. ANNES, LANCASHIRE

designed by T. MELLOR



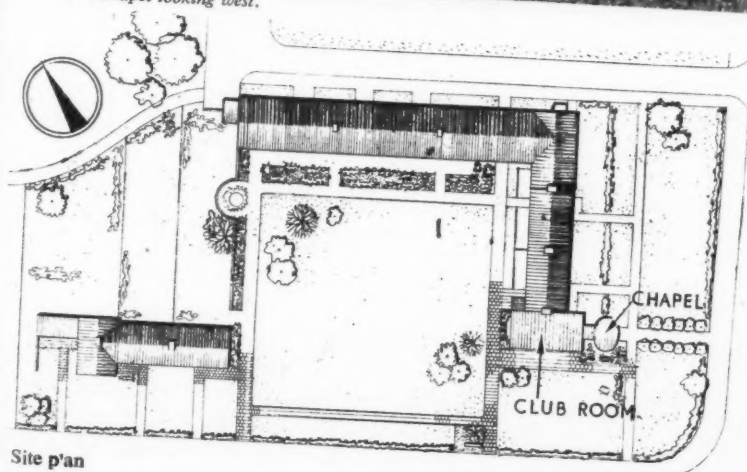
Left, the chapel roof, showing the radiating timber joists, which are left exposed and painted.

**PLAN.**—In view of its "public" and symbolic character, it was necessary to give some formality of treatment and unity to the scheme as a whole, though the layout is designed to give reasonable privacy to the tenants. Stores for invalid chairs and a communal wash-house and drying area are included as special provisions for the tenants.

**FINISHES.**—Cobble walling is a local tradition and cobbles have been used for facing the chapel, screen wall, part of the free standing memorial tablet and as a decorative edging to certain paths. The cobbles, which are generally light buff or grey in colour, are set in ordinary cement and sand of a warm colour. The stones, which are granite, can be found of a uniform size and shape and are being used here for the first time in about 50 years in this



*The chapel looking west.*



Site plan

area. The chapel roof is of radiating timber joists, left exposed on the underside and painted, and both the clubroom and chapel roofs are finished with copper. The chapel floor is of grey York stone flags and the walls are rough textured plaster. Facing bricks used on the housing and clubroom are a mixture of buff, brown, grey and yellow; roofs are covered with dark brown tiles; floors of porches and window cills are of dark brown quarry tiles; external paintwork is ivory and light grey with bright colours on soffits of porches and the covered way; front doors and gates are painted black. Internally, walls and ceilings generally are plastered and distempered in light neutral tones.

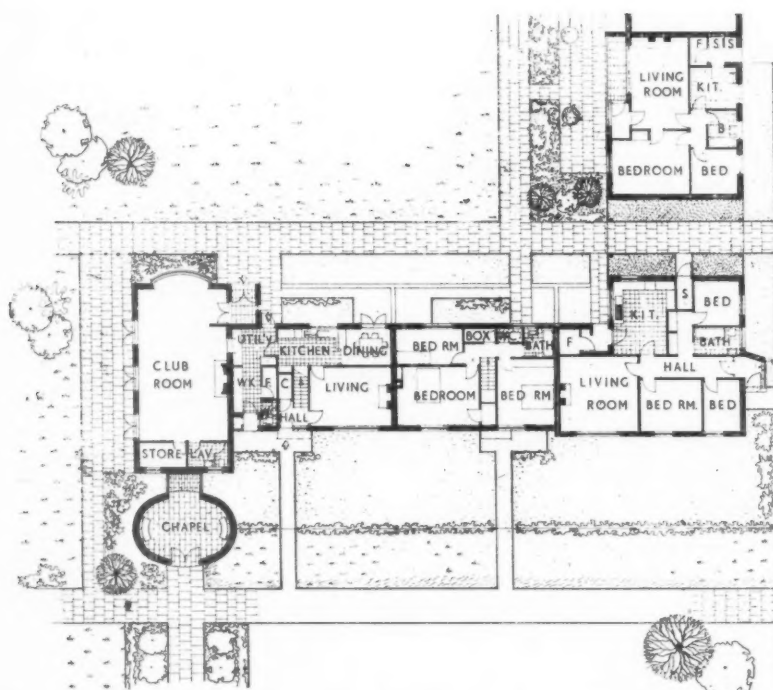


*Above left, view of the houses and bungalows looking east. Above, one of the house porches. Below, the fireplace in the clubroom.*

## WAR MEMORIAL HOUSING SCHEME

at LYTHAM ST. ANNES, LANCASHIRE

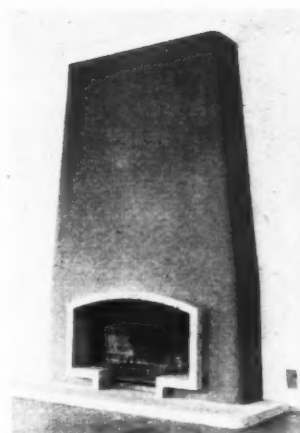
designed by T. MELLOR



Ground and first floor plans of houses and bungalows [Scale:  $\frac{1}{4}$ " = 1'-0"]

Floors in ground floor living rooms are of plastic tiles and in kitchens and bathrooms of dark brown quarry tiles.

The general contractors were P. A. Baines & Sons (Preston), Ltd. For list of sub-contractors, see page 810.





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

## TECHNICAL SECTION

*The following article, the second in a series devoted to this subject, describes some lessons learnt whilst using one particular type of crane, adapted with special equipment, on a building site. There are, of course, other cranes (and other handling devices, such as hoists and elevators) the imaginative use of which can also be a great help to the building industry.*

### THE USE OF MOBILE CRANES FOR HOUSE BUILDING

By R. H. James

In the building industry, which is largely a craft industry, it is probable that any extension of the use of mechanical aids in those operations carried out by craftsmen will, in the main, be confined to powered hand-tools. The handling of material by unskilled labour and the delivery of materials to the craftsman offers better opportunities for the successful use of builders' plant.

Broadly, there are two methods of introducing machines to the building site. One is by using specialist machines, designed to perform particular functions. The other is by using an "all-purpose" machine capable of assisting men of a large number of trades.

Up to the present, specialist machines, such as hoists, conveyors, elevators, mechanical barrows and trenchers, have received most attention in this country. J. F. Eden, in his article, "Mechanisation" (AJ, September 20, 1950), described various types of special purpose machines for concreting, trenching, supplying materials to the bricklayer, etc. He also dealt with the use of cranes, notably the French tower cranes for building non-traditional houses, for many new house-

building systems rely, to a great extent, on mechanical aids for the construction of the carcase.

However, many of those interested in the mechanization of building are considering the all-purpose machine, which would be used for handling the heavier materials in traditional house construction. This article is based on some experience gained in the employment of such a machine on traditional house building in this country.

The answer to the question: should we use specialist machines for particular operations or an all-purpose machine, depends, to a great extent, on the size of the site, its layout, the design of the houses and the terms of the contract. (For example, an all-purpose machine will serve its purpose best when the main trades are in the hands of the main contractor.)

A similar controversy arises over the use of concrete mixers. The use of a central mixing plant (for concrete, mortar, and plastering materials), employing a dumper or other mechanical transport for conveying the materials to the positions required on the site, has many advantages, but it is not practicable on all sites. On the other hand, the more usual method, employing individual mixers moved from point to point on the site, with, consequently, a minimum of handling beyond the mixing stage, also has certain advantages. Some builders swear by the one method, some by the other.

In other countries, particularly in France, mobile cranes, capable of distributing the materials direct on to the scaffolding or other points where they will be used, are being employed increasingly. This technique, however, has been applied chiefly to multi-storey building. Whether or not the use of mobile cranes is applicable to building the traditional two-storey British house has yet to be decided. What is needed is a crane which, without being too cumbersome or expensive, can assist in handling the widest range of materials. In normal brick and tile house construction this can include the laying of hardcore and concrete in the foundations and over-site concrete; the handling of bricks, mortar, lintols and other prefabricated units for the bricklayer; and the handling of roofing materials. This may appear to be a small proportion of the work involved in the construction of the traditional house, but the materials used in these operations represent nearly 90 per cent. of the total weight of the materials in a house. When handling the bricklaying materials, the crane should be capable of depositing the bricks and mortar on every part of the scaffold without moving round the building.



Fig. 2. Crane delivering materials to bricklayers.



Fig. 3. Brick sling being handled by crane.

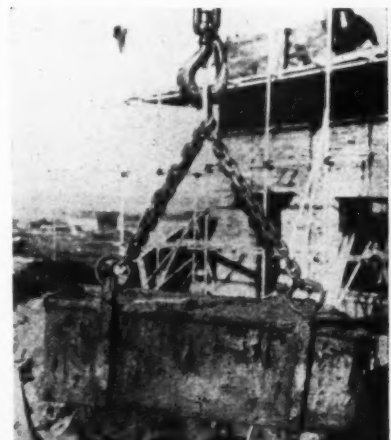


Fig. 4. Mortar skip being handled by crane.

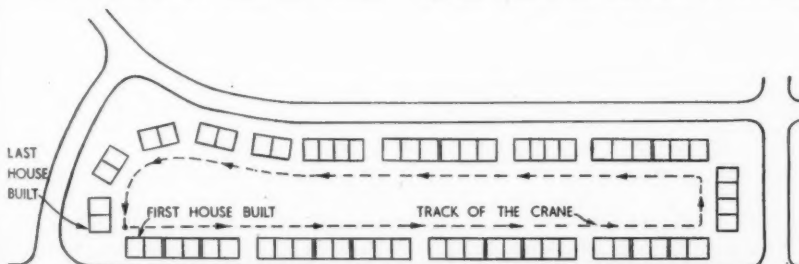


Fig. 1. Site "A," site for 62 houses of traditional design, on which mobile crane was used. (Site "B" was similar.)



## FACTORIES, BEDMINSTER TRADING ESTATE, BRISTOL SCHEMES "A" & "B"



City Architect, J. Nelson Meredith, Esq., F.R.I.B.A.

Contractors: C. A. Hayes & Sons Ltd.

THE inclusion of such a small proportion as 2% of 'PUDLO' Brand waterproofer by weight of the cement, in a 4:2:1 mix of properly graded concrete composed of non-porous aggregate and good clean sand and Portland cement, gives results that are not only very economical but permanent. The factory floor depicted in the above illustration will provide a surface entirely free from rising dampness, and if you are contemplating work of a similar character, write for the Directions Booklet containing specifications for various types of construction—post free.

### 'PUDLO' BRAND CEMENT WATERPROOFER

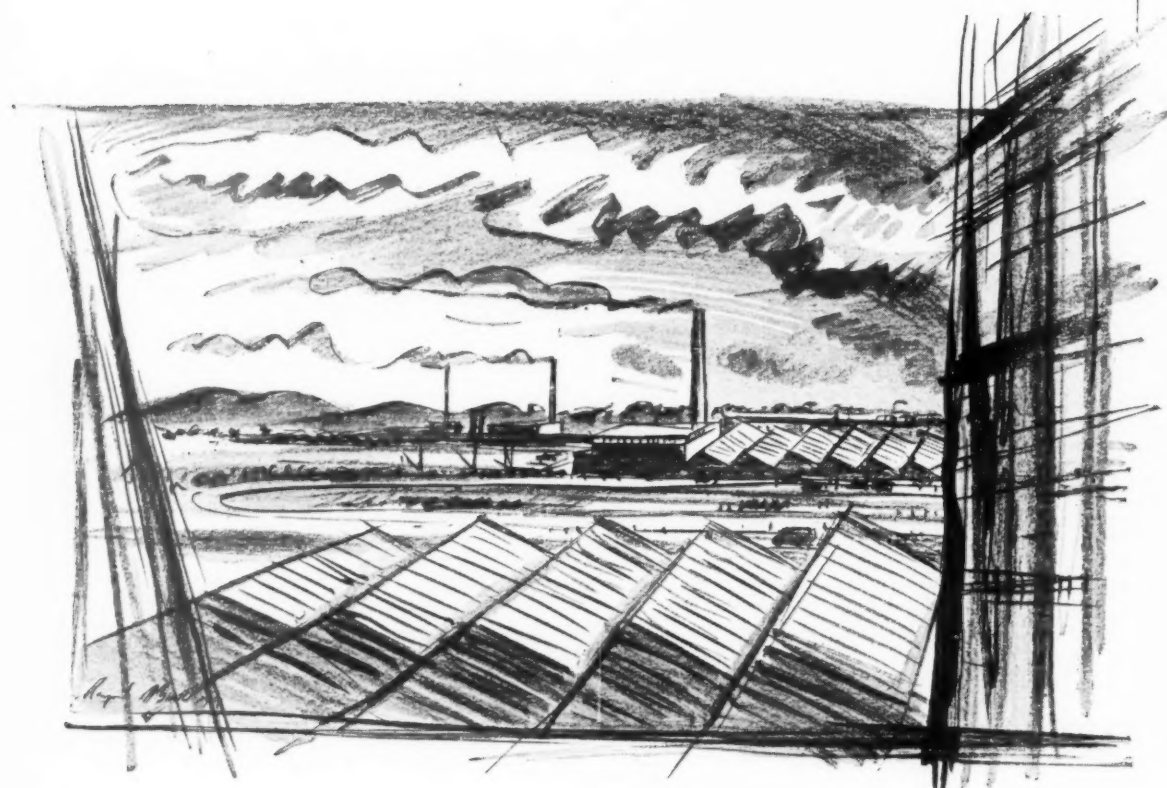
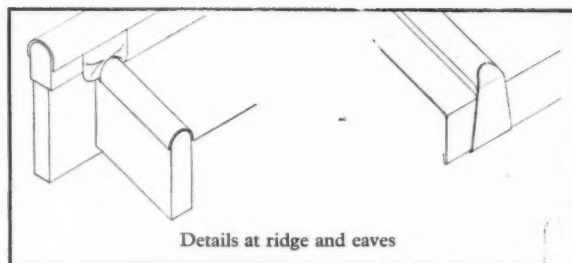
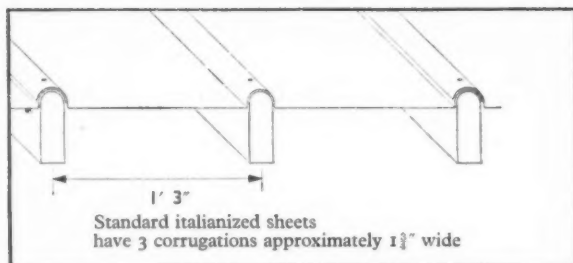
*Also used for Baths, Reservoirs, Tanks, Damp Walls, etc.*

**KERNER-GREENWOOD & COMPANY, LIMITED**  
**KING'S LYNN** **NORFOLK**

*Sole Proprietors and Manufacturers*

The word 'PUDLO' is the Registered Trade Brand of Kerner-Greenwood & Co. Ltd., by whom all articles bearing that Brand are manufactured or guaranteed

# DATA SHEET FOR ARCHITECTS No. 8 ITALIANIZED ZINC ROOFING



Italianized zinc roofing enables zinc roofs to be laid directly on to rafters or purlins without the use of boarding. It is thus both cheaper and easier to lay than other systems, since the sheets are factory-formed; and it is especially suitable for large buildings, such as warehouses, railway stations, etc. It can be adapted to housing, if used with a decking material to provide sound proofing and thermal

insulation. The standard italianized sheet of Z.G.16 (19 I.S.W.G.) measures 8' long by 2' 8" wide, the rolls being spaced at 1' 3" centres. The sheets are fixed by galvanized screws directly to the rafters or purlins. Further information on roofing systems and other uses of zinc in building can be had from the Association, together with a list of publications.

## ZINC DEVELOPMENT ASSOCIATION

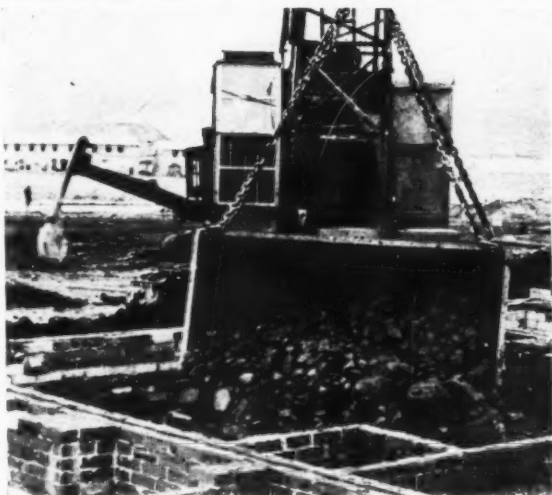
LINCOLN HOUSE TURL STREET OXFORD TELEPHONE OXFORD 47988







Left, Fig. 5, crane lowering lintol.



Left, Fig. 6, crane placing hardcore.

The "Modern Site Organization" exhibition, which is one of the MOW exhibits at the Chester Building Week (see page 785), demonstrates some recent experiences in the use of mobile cranes in house building. The main chart (reproduced on page 804) is based on work carried out by a Scottish building contractor employing a standard crane adapted, with special equipment developed on the site, to handle the principal building materials.\*

The crane employed was a standard excavator with a 60-ft. jib and a 10-ft. swan-neck extension, mounted on crawler tracks. The wide use to which the crane could be put was, however, largely due to the special equipment developed by the contractor on the site, and there is no doubt that the use of similar equipment could increase the usefulness of many other types of mobile crane. Figs. 2-9 show some of this equipment, including the brick sling, mortar skip and concrete hopper.

Individual mixing sites were used, the crane moving the mixer from point to point with the greatest expedition. In deciding on the type of crane to be used, much consideration was given to the question, should the crane run on rails or on crawler tracks? The latter design was adopted in order to provide the maximum freedom of movement.

The fact that the crane, with its long jib and swan neck extension, was capable of depositing materials all round the scaffold from one side of the building, reduced movement about the site to the minimum.

The contractor took into account not only

the work the crane could do on normal house construction but also the uses to which it could be put on other types of work.

The crane and equipment described above has already been employed on three housing sites, and the chart is based on the experience gained on these sites. Fortunately, the contractor had, just previous to his use of the crane, carried out a housing scheme very similar in layout and size to those on which the crane was employed, so that a direct comparison could be made between the labour employed with and without the crane, from which the savings effected by the use of the crane were deduced.

The chart on page 804 and the site plan (shown in Fig. 1) form the centre-piece of this section of the MOW exhibition. Fig. 1 shows the plan of the site on which the crane was employed, and indicates the general movements of the crane. It is not practicable to show how the crane moved between each block or group of houses, but it will be appreciated that the contractor needed to use his ingenuity and experience in the handling of plant to the full in arranging the sequence in which the operations were started and completed, so as to avoid unnecessary movement or delays in the working of the crane.

Furthermore, these experiments confirmed all previous conclusions that the use of particular pieces of plant demands careful planning, in order that the machine may be fully employed during the period it is on the site. Where such a machine is employed, it is more than ever important that, as a result of careful pre-planning, materials are ordered sufficiently early to ensure their delivery at the required times.

Further studies will be required to ensure that the maximum advantage is obtained from the use of the crane.

The progress chart compares the actual progress achieved on two housing sites, each of 62 houses, on one of which the mobile crane was employed on foundations, carcase and roof. The average number of men employed on each of the two sites is also shown and the figures demonstrate the saving in manpower and cost effected by the use of the crane.

As would be expected, the principal economies were in the number of general labourers employed on concreting and laying hardcore, bricklayers' labourers and carpenters' mates. These savings are demonstrated very clearly by the figures given. (It is believed that further savings could be made in handling the roofing tiles but, in the contracts quoted, the tiling and battening was sub-let.) But the saving was not confined to the general labourers and the craftsmen's attendant labourers. Bricklayers, too, were able to work more efficiently with the help of the crane, partly due to the great saving in time

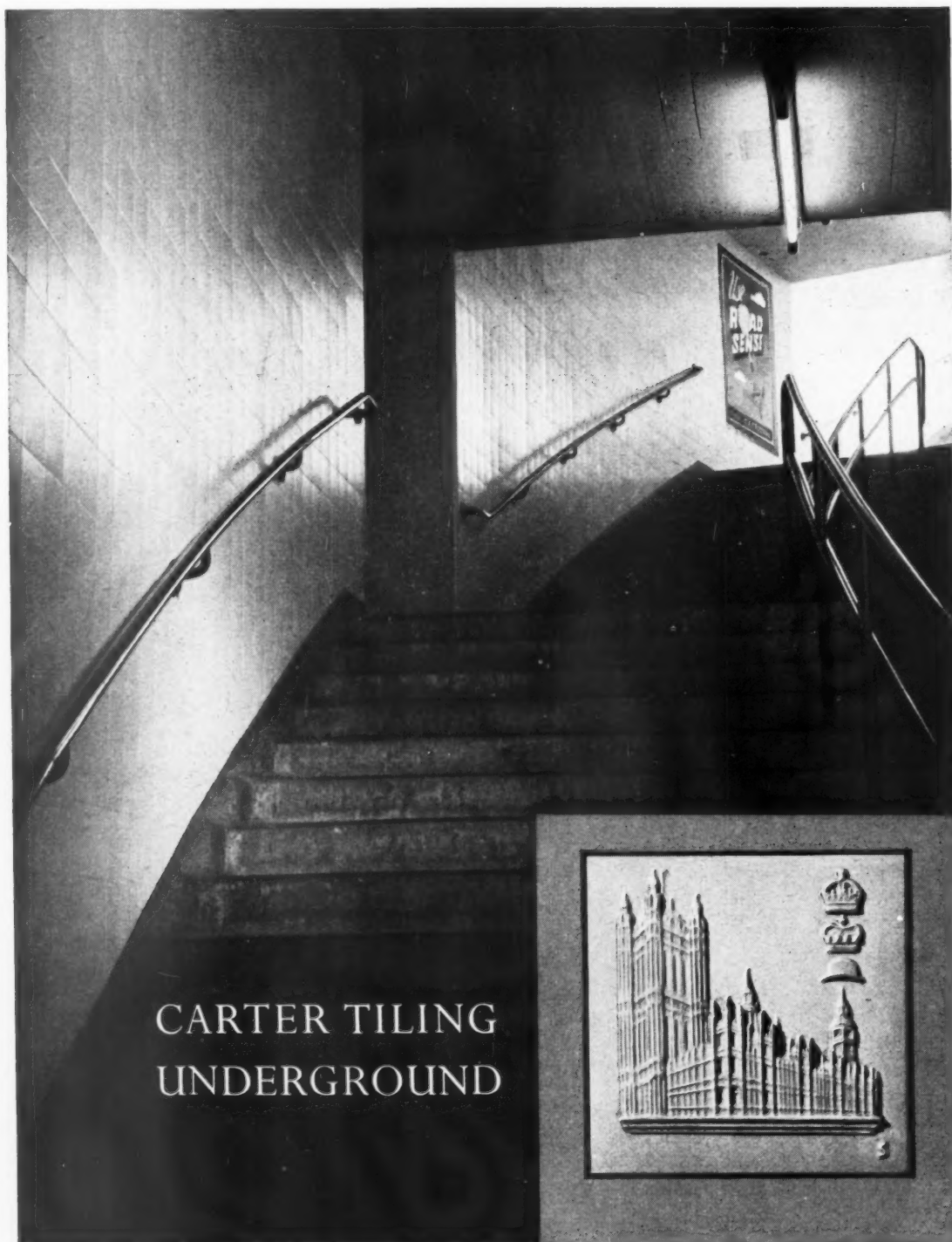


Fig. 7. Hopper discharging concrete.



Fig. 8. Crane carrying roof trusses.

\* The writer is indebted to Messrs. Alexander Hall & Son (Builders) Ltd., Aberdeen, for their generous supply of information and help in producing the charts, and to Messrs. Newton Chambers & Co. Ltd., Sheffield, the makers of the N.C.K. crane described in this article, for their ready collaboration.



## CARTER TILING UNDERGROUND

*Stairway—Perivale Station*

*Architects: F. F. Curtis, D. Ing., A.R.I.B.A. B. B. Lewis, M.A., B.Arch., F.R.I.B.A. Howard Cavanagh A.R.I.B.A. Contractors: Holliday & Greenwood Ltd.*

There is no need to tell a Londoner how widely, or how successfully, glazed tiles have been used throughout his Underground system. The large photograph indicates the extent to which an otherwise depressing stairway can be made more cheerful and attractive by the characteristic texture of glazed tiles. The small inset shows an embossed tile, designed by Harold Stabler, used at St. John's Wood Underground Station. A very high percentage of the tiles used in the London Underground are made and fixed by Carter.

# CARTER

CARTER & CO. LTD., POOLE, DORSET. Telephone: POOLE 125

CARTER & CO., LONDON, LTD., 29 ALBERT EMBANKMENT, S.E.1. Telephone: RELIANCE 1471

COMMERCIAL MARBLE & TILES LTD., NEWCASTLE-ON-TYNE. Telephone: IESMOND 900

in the placing of lintols, cills, chimney copes, etc., and their general tempo of working may have been improved by the fact that they were at all times well served with materials.

Further experience will be required before it can be determined exactly what effect the use of this technique can have on the length of a contract. The progress chart indicates a saving of 9 weeks. This was largely due to the fact that larger trade gangs were employed in order to cope with the tempo of work demanded by the crane. But, according to site records, follow-on-trades, not affected directly by the use of the crane, were started at approximately the same point in both contracts and there seems to be no doubt that later experience will show that, by careful planning of the follow-on trades, it will be possible to start them earlier than is normal. Hence earlier completion of the contract should be achieved as a direct result of the use of a crane.

The progress chart also shows the savings in labour (and, therefore, cost) which may be attributed to the use of the crane. A clear saving of 427 man-weeks, or 7 man-weeks per house, is indicated. Taking into account the on-costs and overheads on the actual wages saved, a gross saving of £3,500 was deduced. This resulted, after allowing for the costs of running the crane, including depreciation, in a net saving of £2,500, or £40 per house.

The value of the technique has, however, yet to be proved conclusively, for it is always extremely difficult to prove that a saving on one contract over another is due to any one particular factor or circumstance. Nevertheless, the fact that the number of concreters' and bricklayers' labourers was reduced so greatly where the crane was used is incontrovertible and certainly encourages the extension of these experiments.

Although it appears that this type of crane can be employed effectively on housing construction of normal design and layout, it is hoped, when more experience has been gained in the use of this and similar techniques, to study those points which the architect should bear in mind when designing his buildings to ensure that the best use can be made of the machines employed. Such studies would embrace not only the general layout and grouping of houses, but also the constructional details.

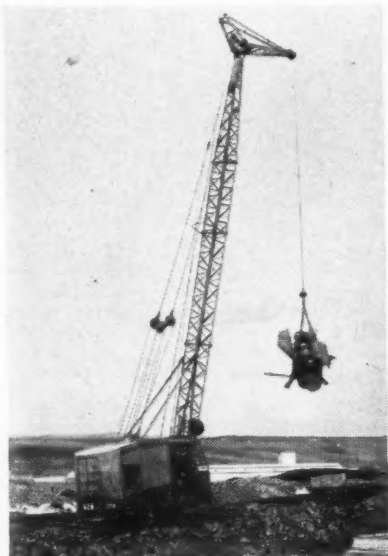


Fig. 9. Crane moving concrete mixer.

The charts and photographs included in this article are Crown Copyright Reserved.

*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

### 3044 RESTRICTIVE COVENANTS

**Q** A client of mine owns a large house, about 4,000 sq. ft. in area, standing in two acres of ground, and having over 400 ft. of frontage to an unmade road. As the house has become too expensive to maintain he wishes to convert it into flats and to sell some of the frontage for the erection of two or three dwelling houses.

The local Council and the Town Planning Authority have no objections to these proposals, but there is a restrictive covenant on the land ruling that it be used for the erection of one dwelling house and subsidiary buildings only.

The house is the largest house in the district and, apart from five larger houses, the remainder of the road has been developed with detached and semi-detached speculatively built houses. My client has tried to sell the house but has found that he cannot obtain a price anywhere near its value or, indeed, the figure he paid.

I should be glad to have your opinion as to whether there is any possibility of overcoming the restrictive covenant. Apart from my client's difficulties, there is a great need for additional accommodation in the area, and a marked lack of land suitable for building that is not in the green belt. The removal of the covenant would therefore benefit several people without damaging the interests of anyone. Incidentally, the original estate owner and the original owner of the house are both dead.

**A** Section 84 of the Law of Property Act, 1925, gives power to discharge or modify restrictive covenants if they would impede the reasonable use of land or if the restriction ought to be deemed obsolete, having regard to the changes in the character of the property or the neighbourhood.

Under the Housing Act, 1936, section 163 gives the county court power to vary the terms of an instrument which imposes restrictions if it is shown that, owing to changes in the character of the neighbourhood, a house cannot be readily let as a single tenement but could be readily let if converted into two or more tenements.

Section 11 of the Housing Act, 1949, gives the county court power to vary the terms of an instrument imposing restrictions, where planning permission has been granted for conversion of a single dwelling house into two or more separate dwelling houses, under the 1937 Town and Country Planning Act.

### 3045 POLISHING TEAK

**Q** We are seeking advice on the best and most lasting method of maintaining polished teak shop fronts exposed to the full force of sun, weather, sea air and traffic dust and would appreciate practical suggestions.

**A** It is frequently difficult to produce an even film of varnish on hardwoods as they sometimes have a "waxiness" or natural oiliness which makes it difficult to fill

the grain and to get the film to dry with an even thickness. We recommend:

1. Wash down with White Spirit.
2. Rub down with fine glass paper.
3. Apply one coat or two coats (as required) of pale hard varnish or undercoating, flattening down between coats until the surface is even and free from hollows.
4. Apply two coats of finishing exterior varnish. Do not flat down between these coats.

### 3046 PLASTERING

**Q** Could you inform me as to whether corkboard can be plastered satisfactorily. Do the same difficulties arise as with insulating (fibre) board? Is a skim coat sufficient?

**A** The Code of Practice on Internal Plastering recommends the following procedure for one or two coat work on corkboard:

1st Coat	Finish
(a) Retarded hemihydrate gypsum plaster/sand.	$\frac{1}{4}$ to $\frac{1}{2}$ Gypsum plaster to 1 of lime putty (either retarded hemihydrate or anhydrous gypsum).
(b) ditto	Retarded hemihydrate gypsum plaster.
(c) ditto	Keene's or Parian.
(d) No undercoat.	Retarded hemihydrate gypsum plaster.

There should be no special difficulty in plastering on corkboard.

*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 advertisements appearing in this issue of "The Architects' Journal." (BLOCK LETTERS, and list in alphabetical order of manufacturers names please).*

.....

.....

.....

.....

.....

*Please ask manufacturers to send further particulars to:—*

NAME.....

PROFESSION or TRADE.....

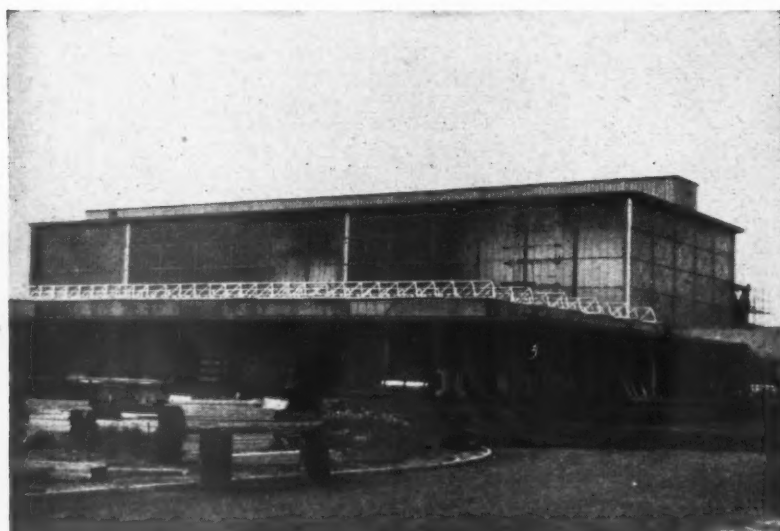
ADDRESS.....

.....

.....

A.J. 21.6.5





## Factory for AERO RESEARCH LTD DUXFORD

*Designed by Messrs. Ove Arup & Partners,  
Consulting Engineers*

*Laboratory roof & floor  
insulated with  
CELL CONCRETE*

### CELL CONCRETE for insulation against heat and cold



**Celcon Limited**

58, Victoria Street, London, S.W.1.  
Telephone: Victoria 3216/7

#### Technical Data

Commercial Density Range 19-85 lbs. per cu. ft.  
"K" Value 0.42-2.60 B.T.U./sq. ft./hr./°F./inch  
Crushing Strength 100-700 lbs. per sq. in.

#### Applications

**CAST IN SITU** — INSULATION OF ROOFS (SCREEDED TO FALLS), FLOORS AND UNDERGROUND HEATING PIPES; **PRECAST UNITS** — FOR INSULATION OF PITCHED ROOFS, WALLS AND COLD STORES.



### CRAFTSMANSHIP & SERVICE



When placing your contracts within the Building Industry, you will wish to receive that precious blend of Craftsmanship, Service and Efficiency which creates lasting value.

We base our ideas on the craftsmanship of the past with the efficiency of the present, and can offer you the benefit of our experience.

We really ENJOY giving advice of such a service as ours and it has often been our pleasure to be entrusted with most important commissions.

## WALTER LILLY

AND COMPANY LIMITED

DECORATORS *Building Contractors* ENGINEERS  
**WESTMINSTER**

ST. ANN'S STREET, WESTMINSTER, S.W.1.

Telephone: ABBEY 4661 (10 lines)

and at Streatham



*The use of modern structural methods in the reconstruction of an old building always presents the architect with a difficult problem. In the case of the famous Vienna Opera House, the use of welded portal frames appears to have provided a most satisfactory solution, in keeping with the general appearance of the building.*

## RECONSTRUCTION OF THE VIENNA STATE OPERA HOUSE\*

By O. Bondy

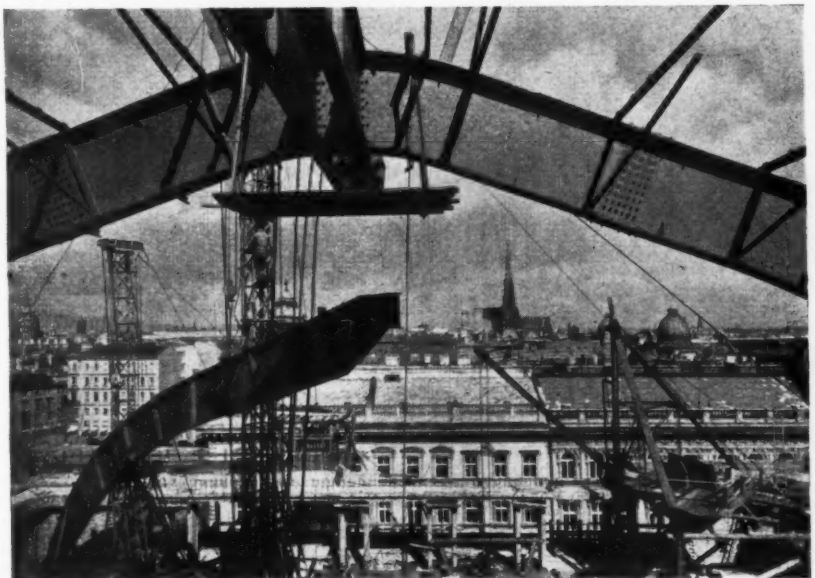
This building, well known in happier days as a world centre of musical culture, was a building of peculiar architectural charm. But it shared the fate of so many famous European buildings, for in March, 1945, it was damaged extensively by bombs and fire. It was built in the 1860's, to the design of the Dutch architects Van der Nüll and Siccardburg, and, in course of time, became a landmark of old Vienna. It was decided, therefore, that it should be rebuilt in its former shape, or at least, that the familiar external features should be replaced. This was an economical suggestion as parts of the outer shell and walls still existing could be utilized. The interior, however, was completely re-designed in accordance with contemporary requirements for stage operation and safety.

Soon after the war, workmen began clearing away the debris and some maintenance work was carried out in order to preserve those parts of the building which remained, including the murals and other decorations of artistic value. The famous open loggia overlooking the Ringstrasse, the monumental staircase and the foyer were restored completely, thereby providing a vivid contrast to the gutted auditorium only a few yards away.

The most urgent need was the provision of a new roof. The old steel roof trusses had been affected by the fire and were, therefore, scrapped. The new roof had to be designed so that it would be erected from above, in order to interfere as little as possible with the reconstruction work taking place in the auditorium below.

A competition was held and, as a result, it was decided to use welded steel portal frames. The new roof, spanning 120 ft. between the load-bearing walls, will have to carry the additional loads of the auditorium ceiling, the ventilating plant, the stage equipment, two intermediate floors above the stage and a 4-storey system of service platforms. A number of 15-ton electric winches will run on tracks suspended from the roof portals, which will also support numerous other pieces of tackle and mechanical equipment used for operating the stage screens and for lighting. One of the portal frames will carry a total load of 320 tons.

Such heavy loading requires special pre-



Erection of the 120-ft. span portal frames, shop welded and site bolted. St. Stephen's Cathedral in the background.

cautions. The load-bearing outer walls have been strengthened and the top portion bonded with reinforced concrete. In order to avoid horizontal thrust from the vertical loads and forces due to friction, the 2-pin portal frames were designed with horizontal ties, thus transforming a statically indeterminate system into a simply supported portal frame, with a rocker bearing on one side.

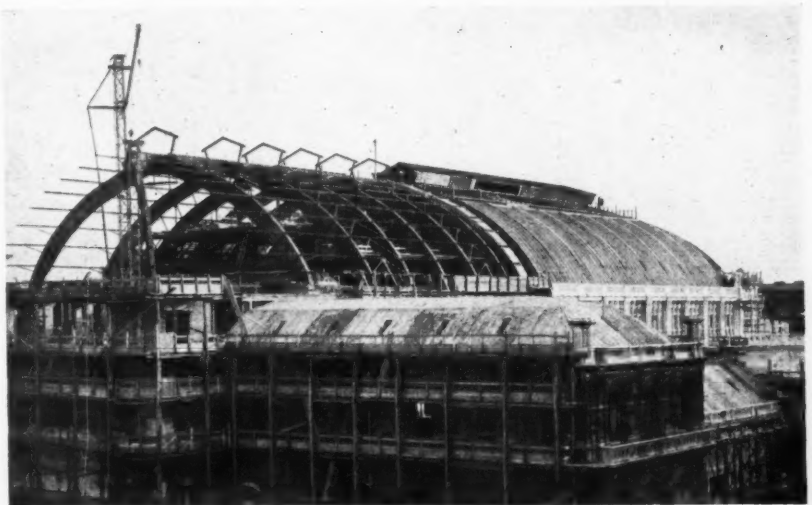
The shape of the portals follows the original conception of the Dutch architects, with straight sections on either side of the ridge, and curved legs leading down to the abutments. They have solid webs 3 ft. 7 in. deep, and the height from abutment to apex is 46 ft. As mentioned above, these portals are of welded construction, but the web and flange splices were bolted on the site. Horizontal reactions will, of course, occur under wind load, and wind bracing is provided in the roof slope, between the portal frames, and by reinforced concrete slabs 3 in. thick and 10 ft. deep, between the abutments.

The roof covering consists of a concrete shell, only 2½ in. thick, sprayed *in situ* on to,

and reinforced by, wire mesh. Shuttering was provided by 1-in. thick fibreboard laid on the 5-in. RSJ purlins. 13,000 copper anchors were concreted in, to hold the outer covering of copper plates. A layer of felt between the concrete and the copper provides sound insulation "against rain and hail." (The architects of the Royal Festival Hall may well envy their Vienna colleagues for the apparent absence of major sources of noise.)

The erection of the steelwork presented certain problems. The open space on the ground was severely restricted and the use of scaffolding inside the building had to be avoided. Derrick cranes of 3-ton and 5-ton capacity were placed at eaves level. Individual portal frames of 20-ton weight were hoisted from the ground and lowered to runways of broad flange beams laid out at the eaves, on the external walls. They were moved longitudinally in groups of three portals, properly braced.

The roof is now completed and work inside, especially in reconstructing the auditorium, is making good progress.



The roof of the Opera House being completed. The lantern is 132 ft. above ground level.

\* This article is based on a report from Wilhelm Schmidt, a correspondent in Vienna.

**WILLIAM  
MALLINSON  
& SONS LTD**

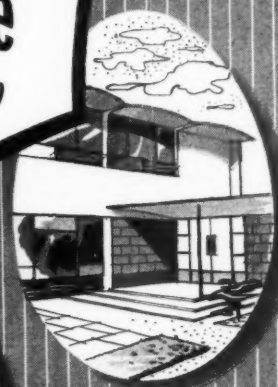
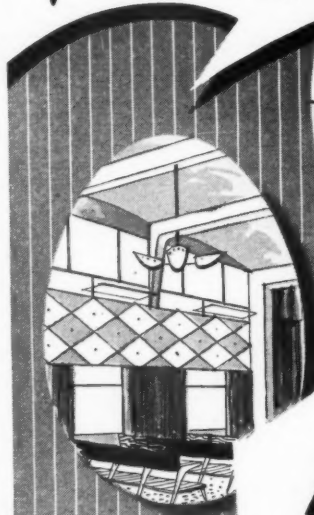
*Timber  
Veneers  
Plywood*

130-150 HACKNEY ROAD  
· LONDON · E.2

TELEPHONES · SHOREDITCH 8888-8811

**TWO NEW**  
*Eggshell Finish Paints*

**Neophane**  
*for wall exteriors*



**Emulsyn**  
*for interior decorating*



Two new paints which claim your attention. The eggshell finish paints which have the qualities of a durable oil paint yet are applied with the ease of a distemper

For exterior walls, Stucco Cement, Plaster etc.—NEOPHANE  
For interior decoration—can be wet scrubbed—EMULSYN

Write for full particulars to the sole manufacturers:—  
**NORTH BRITISH CHEMICAL CO. LTD.**  
(PAINTS DIVISION) DROYLSDEN - MANCHESTER.

## THE INDUSTRY

By Brian Grant

### BALANCED FLUE WATER HEATER

Two illustrations on this page show the external appearance and a section of the new Ascot balanced flue water heater which has already been shown in prototype form at a number of different exhibitions during the last year or more. In effect it does the same job as the normal Ascot, but with the balanced flue design the air for combustion is drawn in through a duct from an outside wall terminal so that it is independent of the amount of ventilation in the room in which it is installed. The section shows the general arrangement of the wall terminal, which is a single unit containing both the inlet and the outlet for the flue gases. The wind condition thus affects the air inlet and outlet to the same extent, but the design problem is not quite so simple as that, a lot of experimental work having been necessary, including the building of a 40-ft. wind tunnel.

The principle of the balanced flue is by no means new, and a small convection heater working on this method was described here several months ago, but it is the first time, so far as I know, that a balanced flue water heater has been produced. From the installation point of view, there are several advantages. It can be mounted on any external wall with the wall terminal beneath a balcony if necessary, an impossible position with the old type of flue terminal and, since the overall height of the heater is low (only 2 ft. 7½ in.), it is particularly suitable for 7-ft. 6-in. ceiling heights.

The new model is known as type 715, and is available in the version illustrated, when the projection into the room is only 5 in., and also as a completely built-in model for



*Two of the Twenty-to-One tables. Four chairs and table supported on one central leg.*

fixing in cupboards or elsewhere. So far, this model is not produced for use with bottled gas, but experiments are proceeding, with an especial eye on the export market.

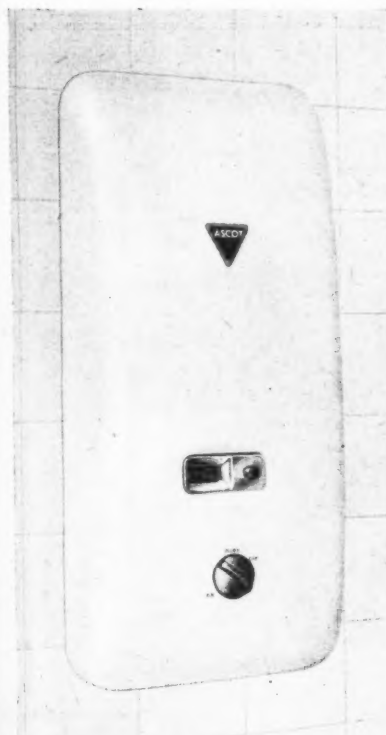
Hot water output is at the rate of 3 gallons a minute raised 40°F. with a gas consumption of 3½ cu. ft. a minute. Dimensions are 2 ft. 7½ in. by 1 ft. 3½ in. wide with case, and a total depth of 10½ in. Installation is comparatively simple: provision must be made for an opening in the external face of the wall 2 ft. 6 in. by 1 ft. 1½ in. for the terminal wall duct and a recess, 2 ft. 2½ in. by 1 ft. 2½ in., for the heater itself. A 9-in. by 3½-in. chase is recommended for gas and water supplies.

The general appearance of the new model is, I think, good. Compared with the other types the gas cocks are much improved as there is now only a simple knob to control both pilot and main supplies. With the balanced flue method the room side of the heater must be sealed and the usual open hole for lighting the pilot is thus replaced with a small glazed port secured by a thumb-screw. (Ascot Gas Water Heaters Ltd., 43, Park Street, London, W.1.)

Since the whole assembly weighs nearly 200 lb. and is bolted down, the possibility is comparatively remote. (Twenty-to-one Tables Ltd., 7, Victoria Street, London, S.W.1.)

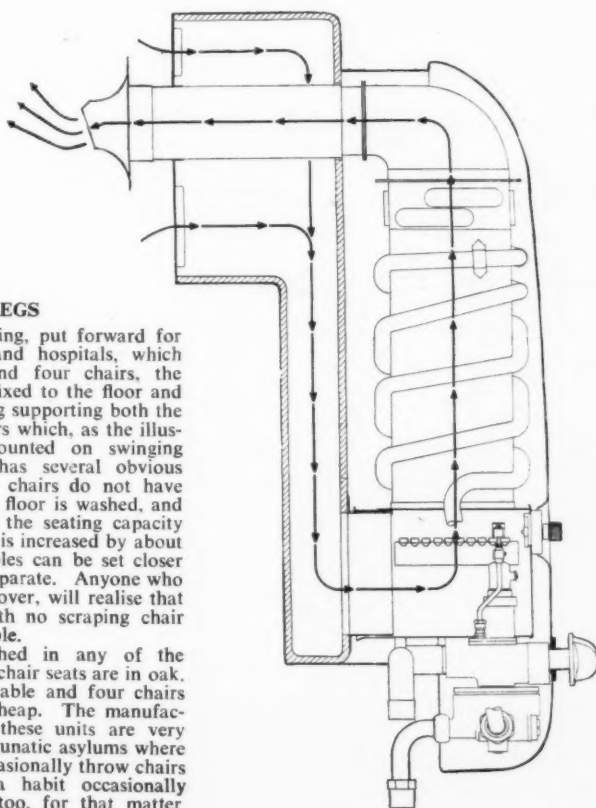
### PEALS WITHOUT BELLS

Not announced until the last minute, the BIF exhibit of Gent & Co. included a device for striking the hours and chiming the quarters without using bells but with electronically generated sound and a loudspeaker system. In many churches and institutions there is a demand for bells which cannot be met either because of the present cost of bells or because of the comparatively large space necessary to house them. This seems, therefore, to be a sensible and money-saving development, however much the purist may disapprove of a synthetic method of reproducing the real thing. But in how many halls are there Hammond or other electric organs, to which nobody seems to object, the result, like Messrs. Gent's bells, being indistinguishable from the genuine article? (Gent & Co. Ltd., Faraday Works, Leicester.)



*The Ascot Multipoint Gas Water Heater, type 715.*

*Right, diagram showing circulation of fresh air and products of combustion through the enclosed ducts and heating body.*



### CHAIRS WITHOUT LEGS

I have just seen a fitting, put forward for restaurants, canteens and hospitals, which consists of a table and four chairs, the whole assembly being fixed to the floor and a centre welded steel leg supporting both the table and the four chairs which, as the illustration shows, are mounted on swinging arms. This method has several obvious advantages in that the chairs do not have to be stacked when the floor is washed, and it is also claimed that the seating capacity of any given floor area is increased by about 10 per cent. as the tables can be set closer than if the chairs are separate. Anyone who eats in a canteen, moreover, will realise that the noise reduction with no scraping chair legs must be considerable.

Table tops are finished in any of the Formica range and the chair seats are in oak. The price of £30 for table and four chairs seems comparatively cheap. The manufacturers point out that these units are very suitable for prisons or lunatic asylums where disgruntled inmates occasionally throw chairs at the management, a habit occasionally found in restaurants too, for that matter.



# Buildings Illustrated

**Gymnasium at Bulls Park Teachers Training College, Hertford.** (Pages 794-798.) Architects: C. H. Aslin, F.R.I.B.A., County Architect, J. T. Pinion, A.R.I.B.A., B.A. (CANTAB.), Assistant Architect. Quantity Surveyors: Gardiner & Theobald. General Contractor: The Universal Housing Co. Ltd. Sub-contractors: Concrete blocks, "Hilcon" precast concrete roof and floor beams, structural steel, casements, external stairs and balustrade, Hills (West Bromwich) Ltd.; bricks, Uxbridge Flint Brick Co. Ltd.; pavings, Croft Granite, Brick and Concrete Co. Ltd.; floor tiles, Carter & Co. (London) Ltd., Dennis Ruabon Ltd.; special roofings, insulated copper roofing, Broderick Insulated Structures Ltd.; roofing felt, Ruberoid Co. Ltd.; strip flooring, R. W. Brooke & Co. Ltd.; floor clips, V. C. Birch Ltd.; patent flooring, Corbulin Ltd.; suspended ceiling, Celotex Ltd., Technifix Regd.; heating and hot water service, Weatherfoil Heating Systems Ltd.; electric wiring, Eastern Electricity Board; electric light fixtures, Benjamin Electric Ltd.; sanitary fittings, Dent & Hellyer Ltd.; door furniture, Comyn Ching & Co. (London) Ltd.; opening gear to high level windows, Aren Controls Ltd.; "Well-rise" door, Westland Engineers Ltd.; fibrous plaster, Claridges (Putney) Ltd.; metalwork, games kit storage and towel drying racks, Clark Hunt & Co. Ltd.; joinery, gymnasium equipment, fixed and portable, The Educational Supply Association Ltd.; flush doors, Geo. M. Hammer & Co. Ltd.; tiling, walls, Carter & Co. (London) Ltd.

SS "Oronsay." (Pages 792-793.) Architect: Brian O'Rourke, A.R.A., F.R.I.B.A. General Contractors: 1st Class: "A" Deck library

and foyer, "B" Deck lounge, galleries and children's nursery, "D" Deck special suite, 14 special cabins, "E" Deck foyer, "F" Deck dining saloon and auxiliary saloons, main staircase, shop, Waring & Gillow Ltd.; "A" Deck restaurant and lounge, "B" Deck café and verandah bar, dance space, "C" Deck entrance, tavern, staircase aft, H. H. Martyn & Co. Tourist Class: "E" Deck entrance, lounge, "F" Deck library and dining saloon, aft tourist staircase, Hampton and Son Ltd. Sub-contractors: Furniture, Maple & Co. Ltd., Beresford & Hicks, Russell Furnishings Ltd., Wrench & Sons Ltd., Collins & Sons Ltd., The Educational Supply Association Ltd., soft furnishings, The Edinburgh Weavers Ltd., The Old Bleach Linen Co., Donald Bros. Ltd., Sanderson Fabrics Ltd.; carpets, John Crossley & Co., Wilton Royal Carpet Co., Heal & Son Ltd.; leather, Bridge of Weir Leather Co., Handford-Greatrex; door furniture, The Dryad Metal Works Ltd., Comyn Ching & Co. Ltd., Roanoid Ltd.; plastics, Warerite Ltd., De La Rue Ltd.; pianos, Chas. H. Challen & Sons Ltd., Chappell Piano Co.; decorative mirrors, London Sand Blast Decorative Glass Works Ltd.; light fittings, Metropolitan-Vickers Ltd., Troughton & Young, Linealux Ltd.; model ship, Universal Scalecraft, Glasgow; prints of Tea Clippers, Wallace Heaton Ltd.; blinds, John Avery & Co.; marble table tops, De Freyne Ltd.

**War Memorial Housing Scheme, Lytham St. Anne's, Lancs.** (Pages 799-802.) Architect: T. Mellor, B.A.R.C.H., A.R.I.B.A., A.M.T.P.L. General Contractors: P. A. Baines & Sons (Preston) Ltd. Sub-contractors: External facing bricks, The Buckley Junction Metallic Brick Company Ltd.; roof tiles, The Manchester Slate Co. Ltd.; floors, The Marley Tile Co. Ltd.; ironmongery, Parker, Winder & Achurch Ltd.; lighting fittings in Clubroom, Troughton & Young Ltd.; lighting fittings in chapel, Merchant Adventurers

Ltd.; sanitary fittings, Rowe Brothers & Co. Ltd.; metal windows, The Pinson Metal Window Co. Ltd.; precast stone, The Liverpool Artificial Stone Co. Ltd.

This list was held over from our issue of June 7.

**Offices for the International Wool Secretariat, Dorland House, Lower Regent Street, London, W.1.** (Page 734.) Architects: Halfhide & Partners. Assistant Architects: Miss M. C. Maples, A.R.I.B.A., Miss J. Hopwood. General Contractor: J. Styles & Son Ltd. Sub-contractors: Partitions, Unirol; glass, Pilkington Bros. Ltd.; electric wiring, electric light fixtures, bells, Phoenix Electrical Co. (London) Ltd., Falk Stadlemann & Co. Ltd.; ventilation, fans, Vent-Axia Ltd.; door furniture, metalwork, signs, Adrian Stokes Ltd.; decorative plaster, G. Jackson & Sons Ltd.; textiles, furniture, office fittings, Heal (Contracts) Ltd.

## Announcements

Mr. Witold Korzeniewicz, A.M.T.P.L., has changed his address to Flat 1, The Gables, Holden Avenue, N.12.

Messrs. R. J. Sparrow & Partner, will continue to practice at 7, North Hill, Colchester, under the style of Sparrow & Clater, A/A.

W. A. Cessford Ball, F.R.I.B.A., is moving to 205, Lavender Hill, Clapham Junction, London, S.W.11. (Tel.: Battersea 2481 and 2482.)

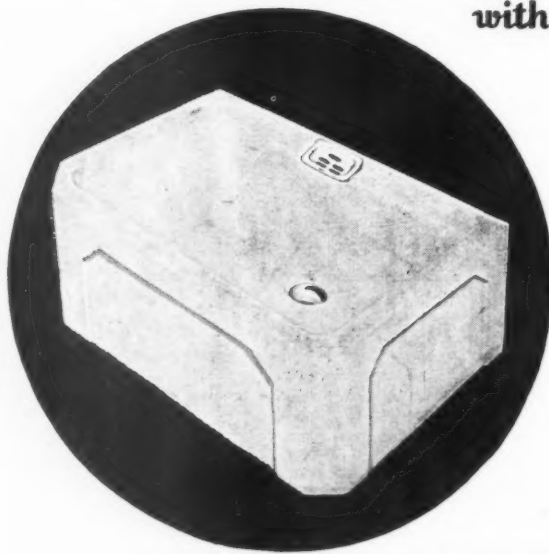
## Correction

Misha Black was not deputy chairman of the Festival Office Presentation Panel as we announced on June 7. This position was, in fact, held by Cecil Cooke.

## The A.B.M. + panelled white fireclay... SINK

with a Stainless Steel SOAP TRAY

Patent No. 448273



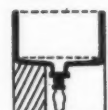
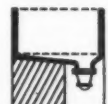
### ★ NON-PROTRUDING OVERFLOW

The A.B.M. Sink has a non-protruding overflow giving more room in the Sink and only four corners to clean.



### ★ EXTRA SPACE BELOW

The centre back outlet improves sink drainage and gives greater under-sink space. When combined with the A.B.M. General Purpose Trap this amounts to 8,640 cubic inches compared with 5,184 cubic inches when ordinary sinks and traps are used.



### ★ EASY CLEAN CORNERS

The A.B.M. Sink has well-rounded easy-clean hospital type inside corners.



24" x 18" x 10" PANEL DESIGN AT ORDINARY PRICE

A.B.M. PRODUCTS ARE OBTAINABLE THROUGH YOUR NORMAL TRADE CHANNELS—SHOULD YOU EXPERIENCE ANY DIFFICULTY, PLEASE WRITE TO:—

Associated Builders Merchants Limited, Peters Hill, Upper Thames Street, London, E.C.4.







INFORMATION SHEETS  
free on request

## MORE HOUSING CUTS

Genes and  
The original original original Building  
Ladder order only was later

## A LOFT LADDER

increases house space

by 20%.

PRICES FROM £12-10-0

Government restrictions on the building of new houses, emphasises the need for using all available space in every home. The loft for instance can increase the living space of the average house by at least 20%. With Loft Ladder access is as safe and easy as walking up the stairs. Information sheets issued on request, show in detail how this space may be made available both in new work and conversion.

Write for full particulars and prices of the various types.

## LOFT LADDERS LTD

The first and original inventors of Loft Ladders and Loft Access Stairs.

BROADWAY WORKS, BROMLEY, KENT

Tel.: RAvensbourne 2624

## Strong...

Pressure proofed by patented process and tested at every stage. Only proven leads go into Venus Drawing Pencils

## SMOOTH...

A patented colloidal process removes all grit and impurities—they must be smooth

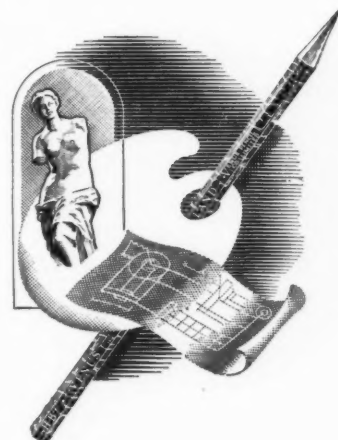
## ACCURATE...

Accurate through and through—graded and tested by experts, Venus Drawing Pencils make the right mark every time

THE PENCIL WITH  
THE CRACKLE FINISH

# VENUS

Perfect PENCILS



THE VENUS PENCIL CO., LIMITED, LOWER CLAPTON ROAD, LONDON, E.5  
lix

## "A.B.S."

### House Purchase Loans ALTERNATIVE SCHEMES

1. Normal Advance: 80 per cent of Valuation.  
Interest: 4 per cent gross. Borrower pays Survey  
Fee and Legal Costs, totalling 1 per cent of loan.

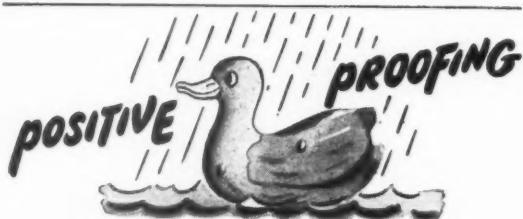
2. Normal Advance: 85 per cent of Valuation.  
Interest:  $4\frac{1}{2}$  per cent gross. (Office pays Survey  
Fee and own Legal Charges.)

Repayment by means of an Endowment Assurance  
term not exceeding 25 years under (1) or 30 years  
under (2).

### Houses in Course of Erection

Advance increased to 90 per cent of the controlled  
selling price.

Particulars from: **The Secretary, A.B.S.  
Insurance Department, 66, Portland Place,  
London, W.1.** (Telephone: LANgham 5721.)



AGAINST DAMP & SEEPAGE  
with

## AQUELLA



- ★ AQUELLA makes porous surfaces damp-proof.
- ★ AQUELLA was the material that kept the Maginot Line dry internally.
- ★ AQUELLA positively damp-proofs wet Basements, Interiors of Pools, and Outside Walls, where stucco is used.

Send a postcard to-day for the AQUELLA folder.

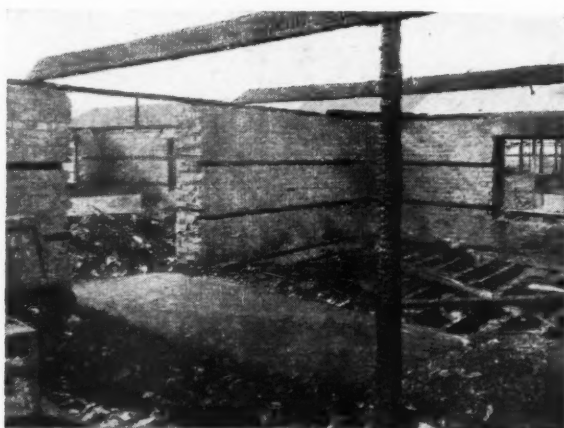
Sole Distributors for Great Britain

## A.D. FOULKES LTD

LIONEL STREET, BIRMINGHAM 3. Tel: CEN 7474 (6 lines)  
And branches throughout the Midlands

3154

## MAGBESTIC JOINTLESS FLOORING



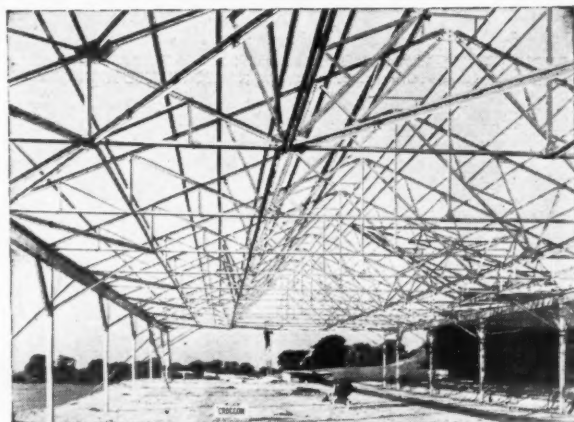
### FIRE RESISTANT!

The corridors in the burnt out building illustrated were covered with our flooring, and the portion shown in the centre bears testimony to its fire resistant value. Specify "MAGBESTIC" for all floors and thus ensure isolation of possible fire outbreaks.

**THE BRITISH MAGNESITE FLOORING CO. LTD.**

60 SILWOOD STREET, LONDON, S.E.16

Telephone: BERmondsey 3031



## STRUCTURAL STEELWORK

for Industrial or Agricultural  
Buildings

## CROGGON

& Co. Ltd.

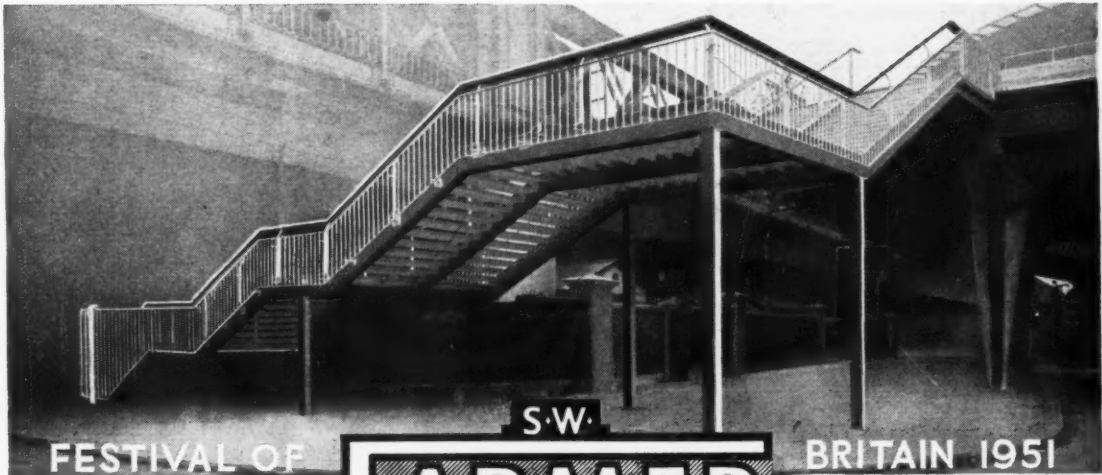
230, UPPER THAMES ST., LONDON, E.C.4  
Central 4381/3

Works: Colnbrook

ESTD.

1835

# CONSTRUCTIONAL IRON & STEELWORK



The illustration is one of two Bailey Bridge approach stairways and balustrading at Charing Cross, constructed and erected by Farmers.

Telegrams: FIRESCAPES, SOUPHON, LONDON

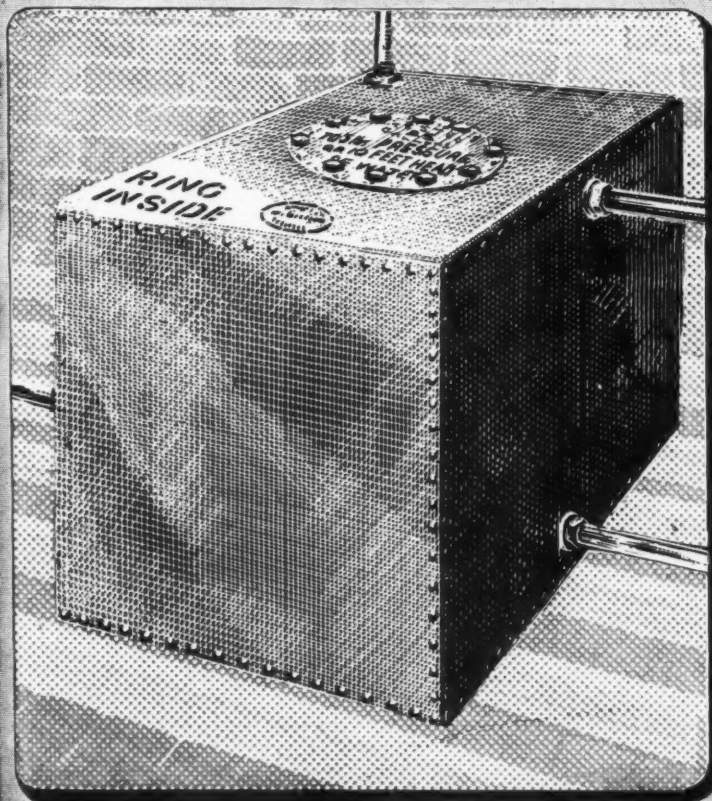
S.W.  
**FARMER**  
& SON LIMITED

LEWISHAM, LONDON S.E.13

Details of other constructions and erections by Farmers on the Festival of Britain site will be gladly given to principals at request.

Telephone: LEE GREEN 4334 (9 lines)

A FAMILY BUSINESS FOR OVER HALF A CENTURY



TO THE ARCHITECT-SURVEYOR AND BUILDER

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

Whenever the question of where-to-get, not only Tanks, but Cisterns and Cylinders arises—remember Harveys. Our illustration shows a typical "Harco" product—unsurpassed for soundness of construction and galvanized after manufacture for lasting use. Get all supplies from your Builders' Merchant. For full information of all ranges write for Pocket List A.J.118.

**Harvey**

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

GH/GH32/46

GH/GH32/46



# MOULDEX FOR RUBBER PLASTIC OR JOINTLESS FLOORS

IMMEDIATE INSTALLATION  
AND DELIVERIES FROM STOCK

MODERATE ESTIMATES  
CAN BE SUBMITTED  
AT PRE-INCREASE PRICES

OUR EXPERT WILL CALL UPON REQUEST

**BRITISH MOULDEX RUBBER CO. LTD.**  
28/30 HYTHE ROAD, WILLESDEN, N.W.10  
Tel.: LADbroke 2454

If you intend to specify  
Sash Windows, avoid future  
Cord troubles by ordering . . .



Sash Cords do not  
break — they rot.  
Stop the Rot—fit  
"EVERLASTO"

## "EVERLASTO"

BRITAIN'S SUPER SASH CORD

- ★ Weatherproofed by special process
- ★ Non Stretch AT NO EXTRA COST
- ★ Rot Proof ★ Durable
- ★ Long Life ★ Low Cost



Registered  
Trade Mark  
No. 519412

Specified by  
Housing Directors,  
Architects, and  
Builders

Weatherproof and Rot Proof

## SASH CORD



ENDLESS CORD  
STRONG • DURABLE  
Ask for details and prices

Also Ideal for Colour  
Poles, Aerial Poles, Inside  
Clothes Alrer Rails, etc.

Made in all lengths  
Write for details

**JAMES LEVER & SONS LTD**  
Everlasto Cordage Works • Delph St. Bolton



★ We shall welcome the opportunity  
to tell you more in our Brochure  
"A" about Paragon Glazing.

**PARAGON GLAZING CO. LTD.**  
1 VICTORIA STREET, LONDON, S.W.1  
Telephone: ABBey 2348 (P.B.X.)  
Telegrams: "Eclairage, Sowest," London

## Overhead Efficiency without Overhead Expense!

We may justifiably claim that a Paragon Glazed Roof or Lantern Light, once installed, "stays put" for the lifetime of the building without any necessity for that periodical maintenance characteristic of less thorough installations. The reason is that all products used in our manufactures, as well as the process of manufacture itself (which is carried out entirely in our Works), are subject to the closest scrutiny as to quality and detail. May we suggest that the experience of upwards of 40 years of all the varied aspects of roof glazing are not without value?

# PARAGON GLAZING



## THE LONDON SAND BLAST DECORATIVE GLASS WORKS LIMITED

ALL THE 'DECORATIVE GLASS AT  
THE SOUTH BANK EXHIBITION  
FESTIVAL OF BRITAIN

ALSO

THE DECORATIVE FEATURES &  
MIRRORS 'ON' S. S. "ORONSAY"

SEAGER PLACE, BURDETT ROAD, E.3.  
TELEPHONE: ADVANCE 1074

## LONDON NIGHT AND DAY

a guide to where the other books don't take you

**illustrated by OSBERT LANCASTER**

**edited by SAM LAMBERT**

*The whole of the contents of the special  
issue of The Architects' Journal for  
May 3, 1951 is now published in  
pocket-book form with a coloured cover  
designed by Osbert Lancaster. If you  
want copies for yourself or your  
friends, it is available in all bookshops,  
at the price of 3s. 6d.*

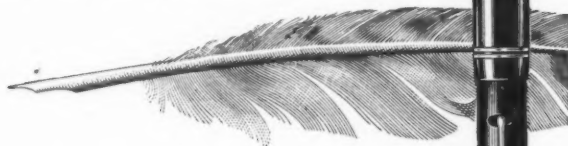
This book is different from all other books, guides, encyclopædias: it tells you what the others don't tell you; it takes you where the others won't take you; and it covers a wider range of subjects in its 100 close-set pages than any comparable volume—how to see a murder trial or a newspaper printed; where to find a jazz club, a tartan kilt or a Turkish Bath; City taverns and ducal homes to visit; where to buy caviar or a hat, glass eyes or riding boots and a thousand other things. It has been compiled by a team of experts and research-workers, all ardent Londonophiles, writing factually but affectionately of the London of 1951, the greatest man-hive in the world. Its accent is personal and practical and the London it reveals is the hidden, secret, under-the-surface London, a place alive and to be enjoyed rather than the on-the-surface London of the standardised guides.

Its presentation is, we think, original too in that it takes the reader round the 24 hours of the clock giving suggestions, where to go, what to do, for each hour of the day and night. And throughout its pages Osbert Lancaster supports our stream of good advice with drawings that eloquently evoke London's under-the-surface look.

Size: 5½" x 8½", bound in stiff card. 100 pages with over 40 drawings and a cover by Osbert Lancaster. Price 3s. 6d. net.

**THE ARCHITECTURAL PRESS** · 9 Queen Anne's Gate · London · S.W.1

This beautiful handwriting is called Chancery Script, the style which made Sixteenth Century manuscripts so cultured in appearance and so delightfully readable. In recent years, a growing number of people have revived it as a delightful hobby - creative, easy to learn and inexpensive.



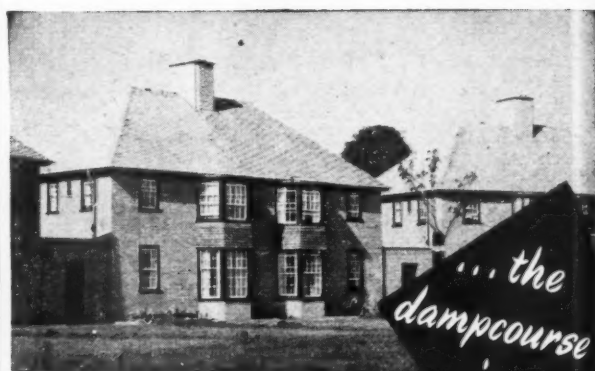
Now, in response to increasing pressure from writers, Mabie, Todd have produced the new Swan Calligraph pen, with a nib specially ground in the shape of the old-time quill! Now everyone can learn the simple art of writing Chancery Script, to give themselves a fascinating pastime and enrich the grace of their handwriting. ♦ A Swan "Manuscript Ink" has been created for use in the new Swan Calligraph pen. It is delightfully even in flow and dries with the characteristic black which is so much part of the clarity and attractiveness of the Script.

THE *Swan Calligraph*



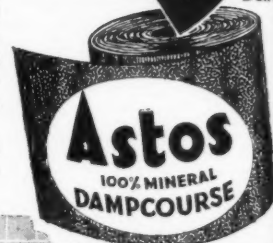
**41/-** INCLUDING PURCHASE TAX  
Ask your Stationer for particulars

Mabie, Todd & Co. Ltd., Swan House, Whitby Avenue, Park Royal, London, N.W.10



Rushmere Hall Farm Estate, Ipswich.  
Dampcourse: Standard Astos.

Astos Asbestos Dampcourse is regularly specified by Municipal Authorities for Housing Schemes, Schools and Public Buildings as it is imperishable and yet able to withstand normal foundation settlement. Fully described in leaflet No. 555. Standard or Lead-lined in all wall widths up to 36 inches. Rolls contain 24 lineal feet.



"The Astos Line"

The permanent barrier against rising damp

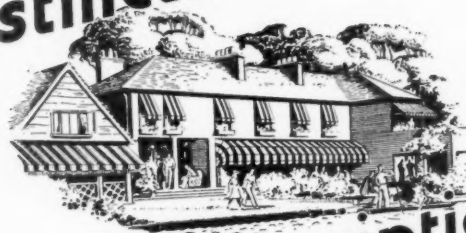
THE RUBEROID COMPANY, LIMITED,  
2, COMMONWEALTH HOUSE, NEW OXFORD STREET, LONDON, W.1

*Important*

Once again  
**PARQUET FLOORING**  
of traditional quality  
and craftsmanship is  
freely at your disposal

**HOLLIS BROS LTD.**  
FLOORING CONTRACTORS  
**HULL - LONDON**  
LEICESTER - BIRMINGHAM

**dean's  
distinctive blinds**



**of every description**

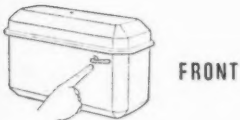
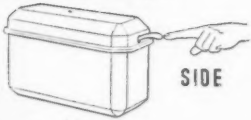
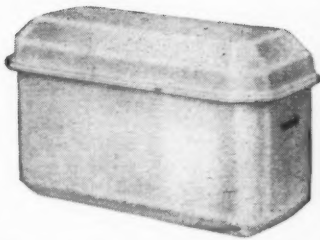
Sunblinds & Weather Blinds • Awnings  
Inside Blinds & Curtains • Revolving  
& Roller Shutters • Venetian Blinds  
Hospital & Sick Room Shutters.

**for buildings of  
all types**

Established 1894. Three generations of Deans  
offer you co-operation and friendly advice.

**DEAN'S BLINDS (PUTNEY) LTD**  
329, PUTNEY BRIDGE RD., PUTNEY S.W.15. Tel: PUTney 3772

*This is the  
New Fordham  
Low-Level  
Syphonic  
Cistern for*



Extending the famous Fordham range, the low-level syphonic cistern is now available with side (LS) or front (LSF) handles, or with push-button (LSPB) operation (the only one of its kind operating a syphon). Send today for the fully illustrated catalogue sheet to complete your files, or we shall be happy to send you details of the entire range, if you prefer.

**Fordham**

Creators of the first — makers of the latest seamless steel cisterns.

FORDHAM PRESSINGS LTD.  
DUDLEY ROAD, WOLVERHAMPTON  
Telephone: Wolverhampton 23861

*All-round warmth*



**FOR HOME,  
OFFICE  
OR WORKSHOP**

**THERMOVENT**

Space Heaters distribute uniformly agreeable warmth into every corner. The elements are not exposed, there are no fans, the casing remains quite cool and there is no wall blackening: inset models can safely be built into walls or furniture. Specify Thermovent for domestic, commercial or industrial heating.

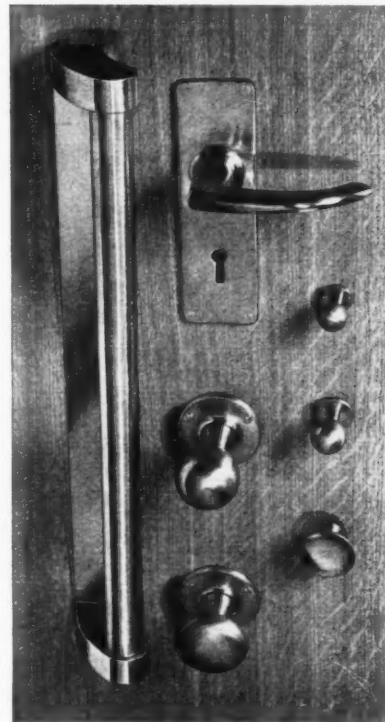


**Thermovent**

● **ELECTRIC SPACE HEATING**

The Thermovent Technical Advisory Service offers assistance in the planning and testing of space heating equipment for buildings of all kinds. Write for details.

E. K. COLE LTD., 5 VIGO STREET, LONDON, W.1.



**DRYAD  
FITTINGS  
SELECTED**

for

**R.M.S.  
ORONSAY**

by the  
Architect

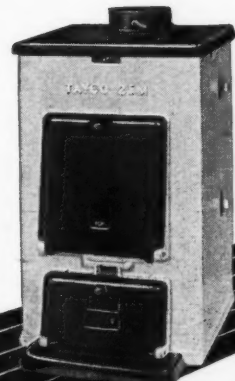
E. Brian O'Rorke  
M.A. Cantab.  
F.R.I.B.A.

**DRYAD METAL WORKS LIMITED**  
40-42, SANVEY GATE, LEICESTER

Ironmongery of Good Design, Construction and Finish



**THE  
REMEDY FOR  
INADEQUATE  
HOT WATER SYSTEMS  
AND CHILLY KITCHENS**



Designed in accordance with  
B.S.S. No. 758.

Available in 7 capacities  
from 21,000 to 80,000 B.T.U's.

Approved by Fuel Efficiency  
Dept. of Ministry of  
Fuel and Power.

**TAYCO  
DOMESTIC BOILERS**

**Robert Taylor & Co.**  
(Ironfounders) Ltd.  
Muirhall Foundry, Larbert, Stirlingshire  
London Office & Showrooms—  
66 Victoria Street, S.W.1  
Also at Building Centre—9 Conduit Street, W.1



# NOEL WOOD MOSAIC FLOORING

OFFICES  
SCHOOLS  
CANTEENS  
HOSPITALS

**E. J. ELGOOD LTD**

FLOORING SPECIALISTS

INSULCRETE WORKS, YEOMAN ST.,  
LONDON, S.E.8

\*phone BERmondsey 1144 (6 lines)

DURABLE  
DECORATIVE  
ECONOMICAL  
GUARANTEED

## WOODWORM AND DRY ROT



**RENTOKIL**

TIMBER and DRY ROT  
FLUID FLUID

Both fluids conform to the highest specifications. Colourless. Deep penetration by brush treatment. Permanent. Officially approved and recommended, Rentokil Ltd., Dept. A.J., Fatcham, Leatherhead, Surrey. Telephone: Leatherhead 4021/2.

## HALL WIDE SPAN BUILDINGS

For CANTEENS • STAFF RECREATION  
ROOMS • WORKSHOPS for LIGHT WORK



Hall's are renowned for their timber buildings not only as manufacturers but as prime designers and pioneers.

Your needs receive the personal attention of those responsible for the high Hall standard and any building purchased is backed by the reputation, skill, and integrity of Halls of Paddock Wood. Building for Industry, Education, Sport, Municipal or Constructional needs. Site offices and Contractors' Huts also supplied.

NO MATERIAL LICENCES NEEDED.

*Let us quote you for your requirements, write.*

**HALL'S** Dep. A.J. **PADDOCK WOOD  
TONBRIDGE KENT**

Quality . . . like character . . . Endures

**Durtnell**

Builders since 1591



R. DURTNELL & SONS, LTD., BRASTED, Nr. Sevenoaks, Kent

Tel. : Brasted 105-6.

SEVENOAKS, St. John's Hill. Tel. : Sevenoaks 3186.  
OXTED, Station Road East. Tel. : Oxted 498.

*The ASPHALTE with a Service  
that Excels in every way*

ON APPROVED  
LIST OF ALL  
GOVERNMENT  
DEPTS

# EXCEL ASPHALTE

LAMINATED FELT ROOFINGS WITH VARIOUS  
FINISHES • PITCHMASTIC • TAR PAVING • ASPHALTE  
ROOFING, TANKING ETC., IN NATURAL ROCK OR  
MASTIC ASPHALTE COLOURED ASPHALTE ROOFING

EXCEL ASPHALTE CO LTD Broadway Chambers, Hammersmith,

Telegrams: "CESLYM", LONDON.

Telephone: RIVerside 6052 (4 lines)



## A selection of Architectural Press BOOKS

**Exhibition Design.** Edited by Misha Black, O.B.E. Contributors: Misha Black, O.B.E., Basil Spence, F.R.I.B.A., James Holland, F.S.I.A., Adrian Thomas, Richard Guyatt, Lynton Fletcher, M.A., J. Mortimer Hawkins, M.I.E.S., H. F. Clark, A.I.L.A., Dorothy Goslett, Austin Frazer.

THE PURPOSE of this book is to show what are the essential qualities of a good exhibition, and how to achieve them. It contains over 270 illustrations—photographs, drawings and plans—of well-designed recent exhibitions grouped under 'Trade Fairs', 'Public Exhibitions', 'Propaganda Exhibitions', 'Travelling Exhibitions', and 'National and International Exhibitions'. The technique of exhibition design is covered comprehensively and in detail. Each chapter is written by an expert in his own field. The mass of information the book contains will be of value to the professional exhibition designer and equally to the exhibition promoter. *Bound in full cloth boards. Size 9½ ins. by 7½ ins.; 188 pages; 274 illustrations. Price 25s., postage 10d.*

**Town and Country Planning Textbook.** Edited by APRR. Foreword by Professor W. G. Holford.

THIS BOOK PROVIDES the only comprehensive textbook available for students of town and country planning, and at the same time a complete reference book for the practising planner and for other professional workers in allied fields. Compiled under the editorship of both the Association for Planning and the School of Planning, it covers the entire new syllabus of the Town Planning Institute. It affords an opportunity of systematic study in physical planning and is divided into sections on 'Geography', 'Planning Survey', 'Social Survey', 'Transport', 'Industry and Power', 'Law and Economics', all of which are contributed by leading experts. *Bound in full cloth boards. Size 8½ ins. by 5½ ins.; 634 pages; a good bibliography. Price 42s., postage 10d.*

**Building Materials: Science and Practice.** By Cecil C. Handisyde A.R.I.B.A., A.A.Dip. With a Foreword by A. H. Moberly, Chairman of the Text and Reference Books Committee of the Royal Institute of British Architects.

THIS, THE FIRST of three books written and published at the recommendation of the Royal Institute of British Architects, provides up-to-date information on building materials in a form most useful to architectural students and to practising architects. Mr. Handisyde deals both with traditional materials and the many new materials which have come into use during the past two decades and takes full account of the very considerable amount of recent scientific research which has been brought to bear on all materials, old and new alike. He examines thoroughly those problems of increasing concern to architects today—to what extent alternative materials will provide comfortable buildings, warm and quiet and secure against fire, as well as weatherproof and durable. *Bound in full cloth boards. Size 9 ins. by 5½ ins.; 336 pages; 58 diagrams and photographs. Price 25s., postage 8d.*

**Switzerland Builds: Its Architecture Modern and Native.** By G. E. Kidder Smith. Introduction by Siegfried Giedion

THIS IS THE ONLY BOOK ever published in English recording the development and contribution of one of the chief sources of authentic contemporary architecture. Sixty pages are devoted to a fascinating survey of native types, the simple functional quality of which is in complete sympathy with the contemporary forms that follow. In the design of churches Switzerland stands alone: in her philosophy and building of schools, foremost in Europe; and the public buildings generally rank with the world's finest since the war. Mr. Kidder Smith is 'amongst other things, a photographer of genius' says the ARCHITECTURAL REVIEW. *Bound in full cloth boards. Size 11½ ins. by 8½ ins.; 234 pages; 40,000 words; 6 pages in full colour; nearly 500 monochrome illustrations. Price 42s., postage 11. 0d.*

**The Canals of England.** By Eric de Maré, A.R.I.B.A. With a Foreword by A. P. Herbert

THIS IS A BOOK FOR EVERYONE who likes discovering the lovely, unknown corners of our island. Its author, well known as a writer on architecture, is a photographer with a growing reputation. In his own boat he recently explored 600 miles of English canals from London to Llangollen and back, recording with his camera the little-known life, landscape and buildings of a lost world that lies in the heart of the English countryside. His photographs brilliantly capture the beauty of these old waterways traversing some of the finest landscapes in England. His text explains how canals are made and how they work; it discusses their history, their present condition and their great future possibilities for both commerce and pleasure. Old prints from the

author's collection support the text. *Bound in full cloth boards. Size 10 ins. by 7½ ins.; 124 pages; nearly 200 illustrations. Price 18s., postage 7d.*

**Inside the Pub.** By Maurice Gorham and H. McG. Dunnett. With a Foreword by J. M. Richards

THIS BOOK WILL INTEREST EVERYONE concerned with the past, present and future of the English pub. Maurice Gorham writes authoritatively on the history and development of this peculiarly English institution and describes the people who use pubs. H. McG. Dunnett examines and analyses the development of the pub interior from the point of view of appearance. The book is superbly illustrated—with reproductions after Cruikshank, Rowlandson and many other famous artists and with plans, diagrams and numerous photographs. Gordon Cullen contributes a unique feature: a group of drawings in colour showing how traditional pub 'atmosphere' can be retained in contemporary settings. *Bound in full cloth boards. Size 9½ ins. by 7½ ins.; 138 pages; over 140 illustrations in colour, half-tone and line. Price 18s., postage 7d.*

**Buildings and Prospects.** By John Piper

A COLLECTION of articles on architectural and topographical subjects illustrated with photographs and drawings by the author. *Bound in full cloth boards. Size 9½ ins. by 7½ ins.; 146 pages; 136 illustrations. Price 18s., postage 8d.*

**A History of the English House.** By Nathaniel Lloyd, O.B.E., F.S.A. F.R.I.B.A.

THIS IS THE MOST AUTHORITATIVE and exhaustively illustrated history of the English house ever published. *Bound in buckram, blocked in real gold. Size 12½ ins. by 9½ ins.; 498 pages; nearly 900 illustrations. New Edition. Price £3 13s. 6d., postage 11. 4d.*

**The Modern School.** By C. G. Stillman, F.R.I.B.A., and R. Castle Cleary, A.R.I.B.A.

THIS BOOK EXAMINES the contemporary architectural problem in relation to the Education Act and deals with each special aspect of school design in detail. *Bound in full cloth boards. Size 9½ ins. by 7½ ins.; 152 pages; over 110 illustrations of plans, drawings, half-tones. Price 21s., postage 7d.*

**The Architecture of Denmark.** Contributors: Preben Hansen, Kay Fisker, G. Anthony Atkinson, G. Biilmann Petersen, Troels Erstad, E. Kindt-Larsen, H. J. Hitch

THIS BOOK BY DANISH AND ENGLISH contributors gives a complete picture of the history and of the contemporary achievement of Danish architecture, town planning and garden design. *Bound in full cloth boards. Size 12½ ins. by 9½ ins.; over 230 half-tone and line illustrations. Price 12s. 6d., postage 7d.*

**Gardens in the Modern Landscape.** By Christopher Tunnard, A.I.L.A.

THE FIRST BOOK to deal with contemporary garden design as a parallel movement to the development of modern architecture. Professor Tunnard traces the history of garden design, shows its relationship to life and landscape and then indicates how a new conception of landscape and garden planning could arise out of modern ideas on townscape and countryside. Dean Hudnut (Harvard University) contributes a note on 'The Modern Garden'. *Bound in full cloth boards. Size 10 ins. by 6½ ins.; 184 pages; over 190 photographs, drawings, plans. Second, revised, edition. Price 18s. 6d., postage 8d.*

**The Modern Flat.** By F. R. S. Yorke, F.R.I.B.A., and Frederick Gibberd, F.R.I.B.A.

A COMPREHENSIVE, AUTHORITATIVE SURVEY of the new type of flat in its relation to social needs. The book illustrates the evolution of its plan and presents carefully chosen examples of the best recent work in 16 countries. *Bound in full cloth boards. Size 11½ ins. by 8½ ins.; 208 pages; over 590 illustrations, including scale plans, diagrams and photographs of exteriors, interiors and details. Third, revised, edition. Price 35s., postage 10d.*

a catalogue will be sent on application:

**THE ARCHITECTURAL PRESS**

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

## CLASSIFIED ADVERTISEMENTS

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

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

## Public and Official Announcements

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

### LONDON COUNTY COUNCIL

Applications are invited for positions of ARCHITECTURAL ASSISTANT (salaries up to £580 basic a year) in the Housing and Valuation Department. Commencing salaries 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.

All rates of pay up to £600 a year (basic) are at present subject to an addition of 10 per cent.

Successful candidates will be required to assist in 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.

Forms of application may be obtained from the Director of Housing, The County Hall, Westminster Bridge, S.E.1 (stamped addressed envelope required and quote reference A.A.1). Canvassing disqualifies. (816) 2615

### BRITISH ELECTRICITY AUTHORITY. EASTERN DIVISION.

Applications are invited for the following appointments in the Generation (Construction) Department at Divisional Headquarters in North London:—

(a) SENIOR DRAUGHTSMEN (ARCHITECTURAL).

(b) SENIOR DRAUGHTSMEN (STRUCTURAL).

The initial salaries for these appointments will depend upon experience and qualifications, but will be within the following salary range—£525-£735 per annum (which includes London allowance).

Applicants should have had experience in one of the following: (a) Design and alteration of industrial buildings; (b) design of structural steel work and reinforced concrete structures.

The appointments will be Superannuable in accordance with the British Electricity Authority and Area Boards Superannuation Scheme.

Applications, stating age, experience, present position and salary required, and endorsed with the appointment sought, should be submitted to arrive not later than 29th June, 1951, to the Divisional Controller, British Electricity Authority, Eastern Division, Northmet House, Southgate, N.14.

W. N. C. CLINCH,

Controller.

Northmet House, Southgate, N.14. 2806

**SHEFFIELD REGIONAL HOSPITAL BOARD.** The Board invites applications for the following permanent and superannuable appointment on its Headquarters' Staff:—

**PRINCIPAL ASSISTANT ARCHITECT.** Candidates must be members of the Royal Institute of British Architects, and experience must include hospital planning and construction and the relative professional, administrative and executive duties. The person appointed will be required to assist the Architect to the Board on architectural matters concerned with hospitals in the Board's area. The salary scale at present applicable will be £800-£25-£950 per annum, and the appointment will be terminable by two months' notice on either side.

Applications, stating age, present appointment and salary, and including a detailed statement of qualifications and experience, together with the names of three persons to whom reference may be made, and endorsed "Principal Assistant Architect," should be addressed to the Secretary, Sheffield Regional Hospital Board, Fulwood House, Old Fulwood Road, Sheffield, 10, to be received not later than 9th July, 1951. 2817

### BOROUGH OF FINCHLEY. HOUSING AND TOWN PLANNING DEPARTMENT.

#### APPOINTMENT OF TEMPORARY JUNIOR ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of Temporary Junior Architectural Assistant, in the above Department, at a salary in accordance with Grade II, A.P. & T. Division, plus London weighting, according to age.

Candidates must be suitably qualified and have had practical experience in housing or general architectural work.

The appointment is subject to the provisions of the National Scheme of Conditions of Service and to the provisions of the Local Government Superannuation Act, 1937, for which purpose the successful candidate will be required to pass a medical examination.

Applications, giving full particulars of qualifications and experience, and accompanied by copies of two testimonials (of which one at least should be recent), should be sent to the Borough Housing and Town Planning Officer, The Avenue, Finchley, N.3, by not later than first post on Monday, the 2nd of July, 1951.

R. M. FRANKLIN,

Town Clerk.

Municipal Offices, Finchley, N.3. 2879

### COUNTY COUNCIL OF THE WEST RIDING OF YORKSHIRE.

#### COUNTY LAND AGENT'S DEPARTMENT.

Applications are invited for the post of ARCHITECTURAL ASSISTANT (salary range £635-£750).

Applicants should be qualified Architects and have had extensive experience in design and layout of Farmhouses, Cottages and Farm buildings, preparation of working drawings, specifications, bills of quantities, supervision and final settlement of accounts. A practical knowledge of agriculture will be an advantage.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937 (as amended by the West Riding County Council (General Powers) Act, 1948), and the person appointed will be required to pass a medical examination.

Application Forms should be obtained from the undersigned, to whom they must be returned so as to reach him not later than 26th July, 1951.

J. C. BOWER, F.L.A.S., A.R.I.C.S.,  
County Land Agent.

County Hall, Wakefield. 2867

### COUNTY BOROUGH OF WIGAN.

#### BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT.

#### APPOINTMENT OF CHIEF PLANNING ASSISTANT.

Applications are invited for the appointment of Chief Planning Assistant, under the Borough Engineer and Surveyor, at a salary in accordance with Grade A.P.T. VII (£685-£760).

Applicants should have had considerable experience in all aspects of statutory planning and interim development control in urban areas, and preference will be given to applicants holding the diploma of the Town Planning Institute. Additional qualifications in architecture, engineering or surveying will be an advantage.

Forms of application may be obtained from the Borough Engineer and Surveyor, Municipal Buildings, Library Street, Wigan, and should be returned to him, together with copies of three recent testimonials, not later than 9th July, 1951.

ALLAN ROYLE,

Town Clerk.

Municipal Buildings, Wigan. 2868

### NEWCASTLE REGIONAL HOSPITAL BOARD.

#### ARCHITECTS' DEPARTMENT.

Applications are invited for the following appointments on the permanent headquarters staff of the Board's Architect in Newcastle. The appointments relate to the section of the staff which is concerned with practical architectural work throughout the Region.

To Architectural Assistants who wish to gain experience of hospital practice the appointments offer an excellent opportunity for doing good-class work full of interest and variety and in a developing Service.

The appointments are:—  
**ARCHITECTURAL ASSISTANT.** (Grade A.P.T. IV, £480 to £525 p.a.)

Applicants should have passed the Intermediate Examination of the Royal Institute of British Architects and be studying for the Final Examination. Good general experience in design and construction are essential, and a knowledge of hospital work is desirable.

**TWO GENERAL ARCHITECTURAL ASSISTANTS** (Grade A.P.T. III, £450 to £495 p.a.)

Applicants must produce evidence of having had a sound architectural training and should have passed or reached the standard of the Intermediate Examination of the Royal Institute of British Architects. Some practical experience in an architect's office is essential.

Evening study-facilities are available at the University of Durham, King's College, Newcastle-upon-Tyne.

The appointments will be subject to the provisions of the National Health Service (Superannuation) Regulations, 1947. Successful candidates will be required to pass a medical examination.

Applicants should state: (1) Name and full address; (2) age and whether married; (3) professional qualifications; (4) experience; (5) present appointment and salary; (6) war service; (7) date available if appointed; and (8) names and addresses of three referees.

Applications are to be received by the undersigned not later than the 6th July, 1951.

E. B. JENKINS,

Secretary.

"Dunira," Osborne Road,  
Newcastle-upon-Tyne, 2. 2869

### FLINTSHIRE COUNTY COUNCIL.

Applications are invited for the appointment of a QUANTITY SURVEYOR, in the County Architect's Department, at a salary according to qualifications and experience up to Grade A.P.T. VII (£685, rising to £760 per annum). Applicants should be Members of the Royal Institute of Chartered Surveyors (Quantities), and should be capable of preparing Bills of Quantities, Estimates, measuring up and dealing with Contractor's accounts for large contracts, and should preferably have had good experience in the office of a Local Authority. The appointment is superannuable and subject to the passing of a medical examination. Applications will be considered from registered disabled persons.

Applications on a form to be obtained from the undersigned, should be returned so as to be received not later than the 2nd July, 1951.

W. HUGH JONES,

Clerk of the County Council.

County Buildings, Mold. 2816

### COUNTY BOROUGH OF BARNSELY.

#### BOROUGH ENGINEER AND SURVEYOR AND PLANNING OFFICER'S DEPARTMENT.

#### SECOND PLANNING ASSISTANT.

Applications are invited for the above appointment, at a salary in accordance with A.P.T. Grades IV and V, of the National Scales, i.e., £530-£620.

Applicants should hold a recognised qualification in Town Planning or Architecture, and should have had considerable experience in the detailed planning of Urban Areas, and in administrative work under the 1947 Act. The appointment is subject to the National Scheme of Conditions of Service, Local Government Superannuation Acts, the passing by the successful candidate of a medical examination, and to termination by one month's notice on either side.

Applications, stating age, present and previous appointments and salaries, qualifications and experience, together with copies of two recent testimonials, should reach the Borough Engineer and Surveyor and Planning Officer, Town Hall, Barnsley, not later than 27th June, 1951.

Canvassing will be a disqualification, and relationship to any member or senior officer of the Council must be disclosed.

A. E. GILFILLAN,

Town Clerk.

Town Hall, Barnsley. 2807

### SHEFFIELD REGIONAL HOSPITAL BOARD.

#### CITY GENERAL HOSPITAL, SHEFFIELD.

The Board proposes to commission a practising ARCHITECT or FIRM OF ARCHITECTS for work of extension and improvement to the above hospital, which is likely to include:—

1. The up-grading and extension of existing Ward Units;
2. The provision of connecting covered ways between Blocks with Lifts and Staircases;
3. Accommodation for a Nurses' Training School;
4. A building to provide accommodation for:—  
(a) Non-resident Staff Canteen,  
(b) Nursing Staff Dining Room,  
(c) Physiotherapy and Occupational Therapy Departments;
5. Extensions and Improvements to Central Kitchen Unit;
6. Provision of an Operating Theatre Unit with four Theatres;
7. Conversion of existing Theatre Block into Casualty and Admission Department;
8. Remodelling of existing combined Casualty and Out-patients' Department into an improved Out-patients' Department;
9. Provision of a Paraplegic Unit of approximately 50 beds.

It is intended to execute the work over a period of years, and the cost is likely to be between £400,000 and £500,000.

Architects who are willing to receive an invitation to act for the Board are desired to submit to the undersigned not later than 21st July, 1951, particulars of their qualifications and special experience in hospital design and construction, quoting where possible works which they have undertaken in the past.

L. W. FAULKNER,

Secretary to the Board.

Fulwood House, Old Fulwood Road,  
Sheffield, 10. 2882

### RICKMANSWORTH URBAN DISTRICT COUNCIL.

#### ARCHITECTURAL ASSISTANT.

Applications are invited for the above permanent appointment in the Engineer and Surveyor's Department. Salary A.P.T. III (£500-£545). Applicants must be experienced in the preparation of plans and specifications, with particular reference to the design of Council houses. Applicants must state whether they wish the Council to provide housing accommodation, and any such request will be considered. Applications, endorsed "Architectural Assistant," giving the names and addresses of two referees, to be delivered to the undersigned by the 30th June, 1951.

C. G. RANSOME WILLIAMS,

Clerk of the Council.

Council Offices, Rickmansworth, Herts. 2881

### HIS MAJESTY'S COLONIAL SERVICE, TANGANYIKA.

A vacancy exists for an ARCHITECTURAL ASSISTANT, in the Public Works Department, Tanganyika, to prepare designs, constructional drawings and specifications for public buildings under supervision. Appointment is on agreement for 2 to 3 years, and may lead to pensionable employment. The salary scale is £550 to £940, the point of entry depending on war service and experience. An emergency allowance of 15 per cent. of salary is also payable. Free passages are provided for the officer, his wife and children up to a maximum of the cost of one adult passage. Quarters, if available, are provided subject to a rent of 10 per cent. of salary, and leave is granted at the rate of 30 days for each month of service in a tour of 2 to 3 years.

Candidates under the age of 40 should hold the qualifications of (1) A.R.I.B.A. or (2) the Final or Intermediate Examination of the Institute of British Architects, with 2 years' subsequent experience in general architectural work.

They should apply to the Director of Recruitment (Colonial Service), Colonial Office, Sanctuary Buildings, Great Smith Street, London, S.W.1, giving brief details of age, qualifications and experience, and quote No. 27301/40. 2887



# ISLE OF ELY COUNTY COUNCIL. COUNTY PLANNING DEPARTMENT.

Applications are invited for the appointment of **CHIEF PLANNING ASSISTANT, Grade VI, A.P.T.**, the commencing salary to be fixed within that grade, according to qualifications and experience; and for the appointment of **DRAUGHTSMAN** in the General Division. Both appointments are for work on the preparation of the County Development Plan.

For the post of Chief Planning Assistant, applicants should be Corporate Members of the Town Planning Institute by examination, and applicants for the post of Draughtsman should have had good general experience in draughtsmanship and cartography.

Application forms for these posts may be obtained from the County Planning Officer at this address, to whom they should be sent not later than 30th June, 1951.

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

R. F. G. THURLOW,  
Clerk of the County Council.

County Hall, March, Cambridgeshire. 2851  
8th June, 1951.

## CITY OF WESTMINSTER-DEPUTY DIRECTOR OF HOUSING.

Salary £950-£1,200 per annum, commencing salary dependent on the experience of the person appointed. Applicants to be Registered Architects, not over 45 years, with good architectural and administrative experience, including housing. The appointment is subject to a satisfactory medical report and to the provisions of the Council's Standing Orders, General Regulations and Superannuation Scheme. Canvassing will disqualify.

Applications, marked "Deputy Director of Housing," stating name, address, age, war service, professional and academic qualifications, architectural, housing and administrative experience, whether related to any member or chief officer of the Council, with copies of three recent testimonials, must be received by the undersigned not later than 2nd July, 1951.

PARKER MORRIS,  
Town Clerk.

Westminster City Hall,  
Charing Cross Road, W.C.2. 2861  
11th June, 1951.

## COUNTY BOROUGH OF GREAT YARMOUTH. APPOINTMENT OF GENERAL ASSISTANT ARCHITECT.

Applications are invited for the appointment of a General Assistant Architect in the Borough Engineer's Department, for housing, seaside and general work, at a salary in accordance with A.P.T., Grade IV, £480-£525 (subject to revision). Applicants should have passed the Intermediate Examination of the R.I.B.A. The appointment will be terminable by one month's notice on either side, subject to the provisions of the Local Government Superannuation Act, 1937, and to the passing of a medical examination.

Applications, stating age, qualifications and experience, together with the names of three persons to whom reference may be made, should be enclosed in an envelope endorsed "General Assistant Architect" and must be received by me not later than Friday, the 29th June, 1951.

Candidates must disclose in writing whether they are related to any member or officer of the Council. Canvassing, directly or indirectly, will disqualify.

FARRA CONWAY,  
Town Clerk.

Town Hall, Great Yarmouth,  
7th June, 1951. 2847

## HUYTON-WITH-ROBY URBAN DISTRICT COUNCIL. BUILDING MANAGER.

Applications are invited from persons who have had considerable experience in the erection, repairs and maintenance of houses of other public building works by direct labour, for the appointment of whole time Building Manager in the Engineer and Surveyor's Department, at a salary in A.P.T., Grades Va-VI, £600-£20-£660 and £645-£20-£20-£25-£710, as laid down by the National Joint Council, and the Scheme of Conditions of Service approved by this body will apply.

Applicants must have had considerable experience in the building industry and possess a sound knowledge of all building trades, and should possess recognised qualifications by examination. He should be able to carry out detailed estimating, costing, purchasing of stores and materials and control workmen engaged in direct labour workshops and on sites. He will be required to report to and attend at appropriate Committees. Housing accommodation will be provided if necessary.

The appointment is subject to the Local Government Superannuation Act, 1937, and the passing of a medical examination.

Applications, stating full name, age, present and past appointments and qualifications, and giving full particulars of experience and giving the names of two persons to whom reference can be made, should reach the undersigned in envelopes endorsed "Building Manager," by not later than the first post on the 29th June, 1951. Applicants must state whether they are related to any member or senior officer of the Council, and canvassing directly or indirectly will be a disqualification.

H. E. H. LAWTON,  
Clerk of the Council.

Council Offices, Derby Road, Huyton  
near Liverpool. 2859

## CITY OF OXFORD. CITY ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

Applications are invited for the under-mentioned posts on the Permanent Staff of the City Architect and Planning Officer's Department:-

(a) SENIOR ASSISTANT SURVEYOR  
(ESTATES AND PROPERTY PURCHASES).  
Grade VII, A.P.T. Division (£685-£225 (3)-£760 p.a.).

Applicants must be capable of preparing surveys, plans, specifications and schedules of dilapidations, and have had experience in the negotiation of purchases, sales and lettings in connection with the City Property and Estates.

Applicants must have passed the Final Examination of the Royal Institution of Chartered Surveyors (Valuations and/or Estate Management sub-division), and possess a sound knowledge of recent legislation, including the Town and Country Planning Act, 1947.

(b) SENIOR ARCHITECTURAL ASSISTANTS.  
Grade VI, A.P.T. Division (£645-£230 (2)-£25 (1)-£710 p.a.).

Applicants must be Registered Architects, capable of preparing sketch designs, full working drawings, specifications, etc., and competent to undertake educational, housing, and general architectural work.

It may be possible to assist the successful applicants in finding housing accommodation.

(c) SENIOR PLANNING ASSISTANT, Grade VI, A.P.T. Division (£645-£230 (2)-£25 (1)-£710 p.a.).

The successful applicant will be required to carry out work in connection with the preparation of the Development Plan and planning administration in the City, and must have passed the Final Examination of the Town Planning Institute.

The appointments will be subject to the National Conditions of Service, the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination.

Further details of the duties and Application Forms, which must be used in applying for the posts, may be obtained from E. G. Chandler, A.R.I.B.A., A.M.T.P.I., City Architect and Planning Officer, Town Hall, Oxford.

When writing for Forms, applicants must state clearly for which post they wish to apply, and these forms must be returned to the City Architect and Planning Officer not later than 7th July, 1951.

HARRY PLOWMAN,  
Town Clerk.

Town Hall, Oxford. 2850

## BOROUGH OF ST. MARYLEBONE.

Applications are invited for the appointment of ARCHITECTURAL ASSISTANT, on the permanent staff of the Housing Department, at a salary between A.P.T. II (£470-£515 per annum) and A.P.T. III (£570-£620 per annum), plus London weighting, according to the qualifications and experience of the successful candidate, as laid down in the National Scheme of Conditions of Service.

Applicants should have passed the R.I.B.A. Intermediate or Final Examination.

The appointment, terminable by one month's notice on either side, will be subject to satisfactory medical examination by the Council's Medical Officer; to proof of age by production of birth certificate; to the National Scheme of Conditions of Service as adopted by the Council; and to compliance with the provisions of the St. Marylebone Borough Council (Superannuation) Acts, 1908-1936, and any modifications thereof.

Forms of application are not issued, but candidates must write stating age, qualifications, present position and salary, particulars of past appointments and all other essential information, and giving the names of three referees.

Applications must be received by the Town Clerk, Town Hall, St. Marylebone, W.1, not later than Friday, the 29th June, 1951.

Canvassing will disqualify. 2860

## ARCHITECTS, MAINTENANCE SURVEYORS, QUANTITY SURVEYORS, AND LANDS OFFICERS.

THE CIVIL SERVICE COMMISSIONERS invite applications for permanent appointments to the basic (Assistant) grades given above, in a number of Departments in England and Scotland. Applications will be accepted at any time up to and including 31st December, 1951. Selected candidates will be interviewed as soon as possible after the receipt of their application forms. Successful candidates may expect early appointments. Candidates are advised to apply as early as possible.

All candidates must be at least 25 and under 35 years of age on 1st January, 1951, with extension for regular service in H.M. Forces, and up to two years for permanent Civil Servants. All candidates must have the appropriate professional qualifications and experience.

The London salary scale for men aged 30 and over is £600-£25-£750. Lower starting salary for younger entrants (from £475 at age 25).

The next higher grades are:-Main Grade, £750-£25-£1,000; Senior Grade, £1,050-£35-£1,270.

Salaries for women and for officers appointed to the provinces will be somewhat lower.

Forms of application and copies of the regulations, with full details of qualifications required from the Civil Service Commission, Scientific Branch, Trinidad House, Old Burlington Street, London, W.1, quoting No. 3405TA. Completed application forms should be returned as soon as possible. 2877

## CIVIL SERVICE.

QUANTITY SURVEYORS and ASSISTANT QUANTITY SURVEYORS are required throughout the United Kingdom by the Admiralty, War Department, Air Ministry, The Ministry of Works, The War Damage Commission, and occasionally overseas by the Admiralty, Air Ministry and War Department. Although these are not established posts, some of them have long term possibilities, and competitions are held periodically to fill established vacancies.

Salaries for these professional posts in London for Officers over 26 years of age range from £500 to £750 per annum in lower grades and from £750-£1,000 per annum in the higher grades. They are slightly lower in the provinces. Salary on entry will be in accordance with age, qualifications and experience.

Vacancies also exist for QUANTITY SURVEYING ASSISTANTS and others having some experience in a quantity surveyor's office, at salaries ranging from £300 per annum upwards.

Applicants should write, quoting Ref. J.Q.S., to Room 366, Ministry of Labour and National Service, Technical and Scientific Register, York House, Kingsway, London, W.C.2. 2892

## BOROUGH OF BEXLEY.

BOROUGH ENGINEER'S DEPARTMENT.  
Applications are invited for the following posts:-

ASSISTANT ARCHITECT (GENERAL). Salary within Grade A.P.T. VI (£645-£710 per annum), plus London "weighting" allowance (£30).

ASSISTANT ARCHITECT (GENERAL). Salary within Grade A.P.T. Va (£600-£660 per annum), plus London "weighting" allowance (£30).

ARCHITECTURAL ASSISTANT. Salary within Grade A.P.T. III (£500-£545 per annum), plus London "weighting" allowance (£30).

Forms of application with Conditions of Appointment may be obtained from the Borough Engineer and Surveyor, West Lodge, Bexleyheath, to whom completed applications must be returned by noon, Saturday, 14th July, 1951.

Canvassing, directly or indirectly, will disqualify.

W. WOODWARD,  
Town Clerk.

2888

## LONDON ELECTRICITY BOARD.

DRAUGHTSMEN.  
Applications are invited for positions as Draughtsmen in the Architect's Section of the Chief Engineer's Department in Central London. Applicants should be neat draughtsmen, and preferably have had several years' experience in an Architect's office.

Pending grading of the posts under the national agreement of the appropriate negotiating body, the commencing salary will be from £400 per annum inclusive, according to qualifications and experience.

Application forms obtainable from Establishment Officer 46, New Broad Street, London, E.C.2, to be returned completed within 10 days. Please enclose addressed foolscap envelope and quote Ref. EST/V/1256/A on all correspondence. 2889

## NORTH RIDING EDUCATION COMMITTEE.

Applications are invited for the post of ASSISTANT ARCHITECT, Grade A.P.T. V. Salary £570, rising to £620. Preference will be given to Associate Members of the Royal Institute of British Architects. Previous experience will be taken into account in fixing the commencing salary. The post is subject to the Local Government Superannuation Act, and the successful applicant will be required to pass a medical examination by the County Medical Officer.

For further particulars and application form, send stamped addressed envelope. Completed applications required by Saturday, 7th July, 1951. Canvassing disqualified.

F. BARRACLOUGH,  
Secretary for Education.

Education Offices, County Hall,  
Northallerton. 2891

## GLENROTHES DEVELOPMENT CORPORATION.

Applications are invited from suitably qualified persons, under 45 years of age, for the appointment of ARCHITECT (HOUSING). Salary £620-£630, with placing according to qualifications and experience.

Applicants should be Corporate Members of the R.I.B.A. and should have had experience of the design and construction of large housing developments.

The Corporation will give every assistance in securing housing accommodation.

The post will be superannuable under the Local Government (Scotland) Act, 1937, and the successful candidate will require to pass a medical examination. No canvassing.

Applications, with details of age, qualifications and experience, together with copies of three recent testimonials, must reach the Secretary, Glenrothes Development Corporation, Woodside, Glenrothes, by Markinch, not later than 5th July, 1951. 2890

## DERBYSHIRE COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for appointments of Architects on A.P.T., Grade VIII, to assist with the work in connection with New Schools, Police Houses, Smallholdings and Homes for Aged Persons, etc., and for one of the appointments experience in the administration side of an Architect's Department is desired.

Applications to reach this office not later than 30th June, 1951. Forms to be obtained from F. H. Crossley, St. Mary's Gate, Derby. 2858  
21st June, 1951.

**SUNBURY-ON-THAMES URBAN DISTRICT COUNCIL.**

A vacancy exists in the office of the Council's Architect and Surveyor for an ARCHITECTURAL ASSISTANT. Salary in accordance with Grades III and IV of the A.P. & T. Division of the National Scales of Salaries (£500 to £575 per annum), plus London allowance.

The provision of housing accommodation will be considered if necessary.

Applications, giving the names of two persons to whom reference may be made, should be sent to the Architect and Surveyor, Council Offices, Sunbury-on-Thames, Middlesex, not later than Tuesday, 2nd July, 1951.

**MINISTRY OF WORKS.**

ARCHITECTURAL ASSISTANTS are required for drawing office duties at Aldermaston, near Reading, Berks.

Candidates should have had a recognised Architectural training and fair experience.

Hostel accommodation adjacent to the site is available for men at a reasonable cost, and there is a possibility of housing being available in the near future.

Salary on range £320 to £545 per annum, according to age and experience.

Apply in writing, stating age and full details of experience, to Chief Architect, Ministry of Works, Abell House, John Islip Street, London, S.W.1, quoting reference WG10/BP, on envelope and application.

**Partnership**

6 lines or under, 12s. 6d.; each additional line, 2s.

A.R.I.B.A. (36) seeks Partnership or position leading thereto. Capital available. Box 2825.

PARTNERSHIP available in long established General Practice, town and country, in North-West. Both architectural and surveying experience desirable. Replies in confidence to Box 2827.

**Tenders for Contracts**

lines or under, 12s. 6d.; each additional line, 2s.

**COUNTY BOROUGH OF READING. TO BUILDERS AND CONTRACTORS.**

The Corporation of Reading invite tenders for the erection of Two Pairs of Houses in Salisbury Road, Reading.

The General Conditions of Contract and Drawings may be inspected at the office of the Borough Architect, Town Hall, Reading, and Bills of Quantities, Form of Tender, and endorsed envelope may be obtained on application to him, accompanied by a cheque (made payable to the Reading Corporation) for two guineas, which will be refunded on receipt of a bona fide tender.

Tenders must be delivered to the undersigned not later than Monday, the 16th July, 1951.

No tender will be considered unless enclosed in the endorsed envelope provided and sealed, but not bearing any name or mark indicating the sender.

The Corporation do not bind themselves to accept the lowest or any tender.

G. F. DARLOW,

Town Clerk.

Town Hall, Reading.  
23rd June, 1951.

**Sale by Auction**

6 lines or under, 10s.; each additional line, 1s. 6d.

**EAST WEALD BISHOPS AVENUE, HIGHTATE.**

A residence of outstanding architectural beauty in lovely grounds of OVER 4 ACRES.

16 bedrooms, 4 bathrooms. Imposing reception hall. 5 receptions. Domestic offices. 2 s/c staff

flats. Garage, 3/4 cars. All principal accommodation on 2 floors. Carriage sweep. 465 ft. frontage. Central heating throughout. Every modern labour saving appointment. All in first-class condition.

Auction 4th JULY, 1951.  
GOLDSCHMIDT & HOWLAND,  
15, Heath Street, N.W.3.  
HAM. 4404.

2848

**Architectural Appointments Vacant**  
4 lines or under, 7s. 6d.; each additional line, 2s.

BIRMINGHAM.—Architects require keen ASSISTANT, qualified or approaching R.I.B.A. Final; commercial and industrial work. Watson, Johnson & Stokes, Victoria Square. 2465

A.R.I.B.A./A.R.I.C.S. (age 30-35) wanted in busy London office in the Temple area. Architectural ability should be predominant. Forward full particulars of previous experience and salary required to Box 2599.

ARCHITECTURAL ASSISTANT required in Slough office. Intermediate or Final standard. Box 2738.

REQUIRED, urgently, a qualified ARCHITECTURAL ASSISTANT for Housing. Reply, giving full particulars, to Thomas & Morgan & Partners, Architects, 23, Gelliwastad Road, Pontypridd. 2811

ASSISTANTS required in Architects' Department of large commercial organisation, London office. Sound all-round training in the profession essential, including supervision of work. Excellent opportunities for men of initiative. Apply in writing, giving details of experience, age and salary required, to Box No. 618/1, Foster Turner & Everetts, Ltd., 11, Old Jewry, E.C.2. 2826

EXPERIENCED ASSISTANT, preferably qualified but not essential, for Slough Architect's general practice. Permanent position with good prospects. Salary by arrangement. Apply Box 2842.

SLOUGH ESTATES LTD., require an ARCHITECTURAL ASSISTANT with at least three years' experience and capable of preparing working drawings of factories and other buildings, estate layouts, etc., with the minimum of supervision. The work is interesting and carries the benefits of pension and sickness schemes. Five day week except for one Saturday in four. Brief particulars please of age, experience and salary required to the Architect, Slough Estates Ltd., Trading Estate, Slough. 2840

SENIOR ASSISTANT required for Norfolk office. Single. Car driver. Not necessarily qualified, but must be office trained and a good Draughtsman. Salary £500, rising to £600 per annum. Reply, with full details of experience, to Box 2829.

JUNIOR ASSISTANT required for general private Practice. Telephone HOL 5695 for appointment. 2845

URGENTLY required, qualified ARCHITECTURAL ASSISTANT, with post-war knowledge of schools and hospitals. Good prospects. Salary according to experience. Gatch, Saunders & Surridge, F./A.R.I.B.A., Bank Chambers, Kettering. Telephone: Kettering 3165/6. 2870

ARCHITECTURAL ASSISTANTS (Senior grade) urgently required, with experience in modern design of industrial buildings and contract management. Apply, with full details, to Messrs. J. Stanley Beard, Bennett & Wilkins, 101, Baker Street, London, W.1. 2871

ARCHITECT, Coventry, requires JUNIOR ARCHITECTURAL ASSISTANT of not less than three years' experience. Industrial schemes and work of general and interesting character. Opportunity for individual initiative. Salary in accordance with experience and qualifications, and will be reviewed in the light of proved ability. Box 2874.

A SENIOR ARCHITECT urgently required for Liverpool practice by London firm of Architects. Administrative experience essential. Salary up to £1,000 per annum, depending on qualifications and experience. Please write, giving full details and particulars, to Box 2875.

ASSISTANT required. General practice and interesting work. Some office experience essential. Salary according to experience, qualifications and ability, especially ability. Johnson and Crabtree, 8, Robert Adam Street, W.1. Tel.: WELbeck 8918. 2884

ASSISTANT of Intermediate grade required by well-known London Architects. Permanent position with good prospects offered. Varied work. Write, giving full details of experience, salary, etc., to Box 2885.

**ASSISTANT ARCHITECT.**

APPLICATIONS are invited for a fully qualified Assistant Architect, with experience in Urban and Rural District Council Housing and Industrial work of a varied nature.

Salary offered £750-£800 per annum, subject to qualifications and experience.

The successful candidate will be required to work under the direction of the Senior Chartered Architect in charge of the Architects Department.

Full details in writing to Husband & Co., Chartered, Civil, Structural and Mechanical Engineers, 388, Glossop Road, Sheffield, 10. 2886

ARCHITECTURAL ASSISTANTS (TEMPORARY), with good general practice experience, wanted for Railway Civil Engineer's office in Glasgow. State age, qualifications, and experience. Box 2887.

J. SAINSBURY, LTD., require JUNIOR ARCHITECTURAL ASSISTANTS, up to Intermediate standard, to fill vacancies in their Building Development Department. Commencing salary up to £550. Applicants must be free of obligation for National Service. Practical office experience required, together with sound knowledge of building construction, ability to survey existing premises and prepare working drawings and details. Contributory superannuation scheme. Apply, giving age, qualifications and experience, to Personnel Manager, J. Sainsbury, Ltd., Stamford House, Blackfriars, S.E.1. 2876

ARCHITECTURAL ASSISTANT, with experience, required for general practice. Reply, stating experience and salary required, to Thomas Worthington & Sons, 178, Oxford Road, Manchester, 13. 2884

ARCHITECTURAL ASSISTANT required in City office. Permanent post for energetic young man. Salary according to age and experience. Apply to Messrs. Westmore & Sanders, 121, Cheapside, E.C.2. Telephone No.: MONarch 3337. 2885

ARCHITECTURAL ASSISTANTS required. Capable of work up to Intermediate standard R.I.B.A. Permanent and well paid positions will be offered to experienced men. Write fully to Chief Staff Architect, Ilford, Limited, Romford, Essex. 2882

ASSISTANT ARCHITECT, view early Partnership. Old-established business, North-West town. Qualified, not over 40. Box 2863.

EXPERIENCED ARCHITECTURAL ASSISTANTS required for Works Engineers' Department of large Midland Aero Engine Manufacturers. Capable of surveying, designing, and detailing all types of industrial buildings and with experience of Factory Services. Only first-class men need apply. Applications giving details to Box 2864.

**Architectural Appointments Wanted**

QUALIFIED SENIOR ARCHITECTURAL AND SURVEYING ASSISTANT (31) seeks position with responsibility and prospects in Sussex general area, Brighton, Chichester, Portsmouth. Very wide experience. Box 2783.

Expert  
treatment of

**timber decay**

Send for free Technical Brochure  
"The Control of INSECT  
and FUNGAL DESTROYERS OF  
TIMBER."

For advice and further  
details write to

● The insidious workings of the Death Watch beetle are often not apparent until serious damage has been done. Only scientific use of a penetrating and persistent insecticide will eradicate these borers.

"WYKAMOL"

polychloronaphthalene can be confidently recommended and the experience and technical skill of our staff is at your disposal.

**RICHARDSON & STARLING LTD.**

Members of the British Wood Preserving Assn.  
HYDE STREET, WINCHESTER. Tel.: 2537

**books**

an illustrated catalogue of books on architecture, planning building practice and kindred subjects will be sent on application to

THE ARCHITECTURAL PRESS  
9-13 Queen Anne's Gate Westminster SW1



required firm of essential. ing on write. x 2873.  
ice and experience. e, quali- Johnson. Tel.: 2881  
required Per- offered. exper-

**ASSOCIATE, A.A.Dip.** (29), married, wishing to return to South-West, seeks post as ASSISTANT, or with prospects of Partnership. 4 years' general experience. Available August. Box 2875.

**A.R.I.B.A., A.R.I.A.S., M.R.San.I.** desires responsible position or Partnership, London or Provinces. Outstanding business ability, with extensive experience of successful office organisation and the handling of large scale contracts, including hospitals, universities, and industrial buildings. Box 178.

**FULL-TIME STUDENT**, finishing 5-year Architectural course July, 18 months' private office experience (25 years), excellent draughtsman, requires progressive position in small office, London area, where ability and initiative are essential. Box 177.

**EXPERIENCED ARCHITECT** requires responsible appointment. G. Shields, 27, Inverness Terrace, W.2.

**ASSISTANT** (34), 6 years' office experience, completing full-time course for A.R.I.B.A. next month, requires position in southern coastal area. Salary about £600 p.a. Box 2895.

**A.R.I.B.A., Dip.**, experienced, bored neo-classicism, seeks job with design prospects. State salary. Box 2894.

### Other Appointments Vacant

4 lines or under, 7s. 6d.; each additional line, 2s.

**DRAUGHTSMAN** required by London firm of Estate Developers and House Builders. Write, giving details of experience, age, and salary required, to Box 612, c/o George Murray (Advertising), 184, Strand, London, W.C.2. 2735

**SECRETARY**, part-time, experienced with Architects practice required. Apply Box 2845. State salary.

**REPRESENTATIVE** required by London firm of Engineers and Ironfounders to the Building Trade. Main contacts Civil Engineering and Architectural Profession. To cover Northern Counties. Domicile Sheffield area preferred. Write, giving full details experience, age, and salary, to Box 2853.

### Services Offered

4 lines or under, 7s. 6d.; each additional line, 2s.

**OUTSTANDING ACADEMY DRAWINGS** now being completed, further commissions can be undertaken by Perceptivist, Winston Walker, F.R.I.B.A., A.A.Dip., Dipl.T.P., A.R.Ae.S., 107, Moane Street, S.W.1. Telephone 81040. 2175

**ARCHITECTURAL MODELS** and Dioramas. Edward J. Ashenden, A.R.C.A., 18, Chenil Studios, 183, Kings Road, S.W.3. Tel.: Vaux 6103. 2566

**QUANTITY SURVEYORS** offer services to Architects: Taking off, working up, preparing bills, specifications and schedules, settling difficult Builders' accounts, measuring works on sites (London or Provinces), valuations for interim certificates, etc. Leonard & Partners, 350, Camberwell New Road, S.E.5. 'Phone Brixton 6940. 2872

**SPARE-TIME ASSISTANCE** offered by competent, reliable, qualified Architect. Fully conversant modern requirements. Postal or personal. Resident S.W. Midlands—own car. Box 2849.

**PERSPECTIVES** by M. N. Mason, 32, Chalcot Road, N.W.1. Tel. Primrose 4607 after 7 p.m. 2852

**YOUNG A.R.I.B.A.** seeks evening work, Drawings, etc., in Lewes, Haywards Heath, East Grinstead area. Box 2866.

### LITERARY

**AUTHORS** invited submit MSS all types (including Poems) for book publication. Rockwell, Ltd., Elms Court, Ilfracombe. (Est'd. 1898.) 2865

### Miscellaneous

4 lines or under, 7s. 6d.; each additional line, 2s.

**A. J. BINNS, LTD.** Specialists in the supply and fixing of all types of Fencing, Gates and Classroom Equipment. Harvest Works 9-107, St Paul's Road, N.1. Canonbury 2861.

**WINKFIELD MANOR NURSERIES**, ASCOT, lay out Rock and Formal Gardens and Labourless "Allweather" Tennis Courts. Eight Chelsea Gold Medals since 1947. Contractors to the Festival of Britain. Winkfield Row 393. 1716

**ABOUT 1,300 square feet FOR PROFESSIONAL OFFICE USE ONLY** on Ground Floor of modern building within 10 minutes of West End and 20 minutes City. Rent £450 p.a. inclusive, central heating, and constant hot water, exclusive of rates. Apply to the Owners, 51, South Audley Street, W.1. 2883

**FRENCH POLISHERS**—Wm. Burton's, for every style of polishing. 26, Foulser Road, Upper Tooting, S.W.17. BAL. 3968. 2517.

### 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.P. (Tutor in the School of Arch. Lon. Univ.), and Mr. G. A. Crockett, B.A., A.R.I.B.A. (Medallist), A.M.T.P.I., F.R.S.A., prepare Students by correspondence tuition. Stuart Stanley & Crockett, 10, Adelaide Street, Strand, W.C.2. TEM. 1603/4.

### RIBA INTER, FINAL & SPECIAL FINAL

Postal Courses in all subjects of the 1951 exam 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. 103B, OLD BROMPTON RD., LONDON, S.W.7 Phone: KEN 8641 and at Worcester

### QUALIFYING EXAMINATIONS

**R.I.B.A. AND T.P.I. INTER & FINAL FINAL**

Courses of Instruction by Correspondence and Personal in Studio, including TESTIMONIES OF STUDY AND PROFESSIONAL PRACTICE

### C. W. BOX

F.R.I.B.A., A.I.STRUCT.E., M.R.SAN.I. 115 GOWER STREET, W.C. Euston 3906

### QUANTITY SURVEYING

Postal Courses for R.I.C.S., I.A.A.S., and I.Q.S. Exams in all subjects of each syllabus. Tuition by well qualified tutors under the direction of the Principal, A.B. Waters M.B.E., G.M., F.R.I.B.A. Descriptive booklet on request.

### THE ELLIS SCHOOL

103B, OLD BROMPTON RD., LONDON, S.W.7 Phone: KEN8641 and at Worcester

## PROFESSIONAL ADVANCEMENT

through **ICS** STUDY COURSES

I.C.S. Home Study Courses help the professional man to further his career. They include many courses for Membership Examinations of the various technical bodies. Brilliant successes have been recorded in the spheres of architecture, building, and surveying.

Here are some of the subjects in which we offer fully qualified instruction:—

Architecture  
Architectural Drawing  
and Designing  
Building Contracting  
Building Construction  
and Interior Work  
Building Construction  
and Quantities  
Building Specifications  
Quantity Surveying  
Civil Engineering

Surveying and Mapping  
Plan and Map  
Draughtsmanship  
Structural Engineering  
Concrete Engineering  
Structural Drawing  
Construction Draughtsmanship  
Sanitary Engineering  
Air Conditioning  
Heating and Ventilation

Special Courses for the examinations of the R.I.B.A. I.O.B., R.I.C.S., Inst.C.E., I.M.E. (Building Inspect.) Inst.Struct.E., I.Q.S., Inst. Clerk of Works, etc. Examination students are coached till successful.

Write to-day for free booklet describing our Course in any of the subjects mentioned above.

Generous Discount granted to members of H.M. Forces

## International CORRESPONDENCE SCHOOLS

Dept. A.J. International Buildings, Kingsway London W.C.2.



## FLOOR PRODUCTS

NON-SLIP · HARDWEARING  
GRAIN · PRESTILE · SAFETY  
TREADS · FLOORING

### THE ADAMITE COMPANY LIMITED

MANFIELD HOUSE, Gd. 1, STRAND, W.C.2

## LINOLEUM

Information Sheets  
19/GI, 2, 3 & 4

Reprints available on application to:—

Linoleum Manufacturers' Association, 273/287, Regent Street, London, W.1.

COMPLETE FRAME-WORKS  
NEW STEEL ROOF TRUSSES  
STANCHIONS PURLINS ETC.  
TRUSSES 20'-0" TO 100'-0" SPAN  
**NORTHARC ORGANISATION**  
760, LANGHAM ROAD, WEST GREEN, LONDON, N.15  
PHONE: BOWES PARK 3757 & 7548

## SPECIFY ELLISON

for HIGH VOLTAGE SWITCHGEAR—  
CIRCUIT BREAKERS of up to 3,000 amps. and STARTERS for electric Motors of up to 1,000 H.P.

MADE BY GEORGE ELLISON LIMITED · PERRY BARR · BIRMINGHAM · 21B

**KINNEAR PATENT STEEL ROLLING SHUTTERS**  
Head Office: Kinnear Works, Tinsley, Rotherham, Yorkshire  
Sole Manufacturers: **ARTHUR L. GIBSON & CO LTD**  
Branch Offices: Birmingham, 116, Yardley Road; Manchester, 10, Chorley Road; Glasgow, 1, Loan Road; London, 205, Tottenham Court Road

## WHITE FACING BRICKS

(S. P. W. BRAND)

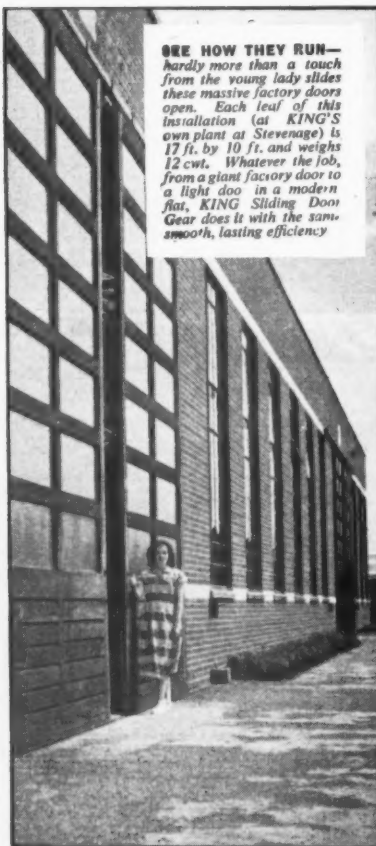
TELEPHONE & TELEGRAMS  
BULWELL 78237-8

**M. MCCARTHY & SONS, LTD**  
BULWELL · NOTTINGHAM

# Alphabetical Index to Advertisers

	PAGE		PAGE		PAGE
Abbey Building Supplies Co. ....	lxxi	Floor Quarry Association .....	viii	Peglers, Ltd. ....	xxxviii
Adamite Co., Ltd., The .....	lxxi	Fordham Pressings, Ltd. ....	ix	Pennycook Patent Glazing & Engineer- ing Co., Ltd. ....	xliv
Adhead, Ratcliffe & Co., Ltd. ....	lxxi	Foulkes A. D. Ltd. ....	ix	Pilkington Bros., Ltd. ....	xxii, xxiii
Anderson Construction Co., Ltd. ....	lxxi	General Electric Co., Ltd., The .....	xxxiv	Pilkington Tiles, Ltd. ....	xxx
Architects' Benevolent Society .....	ix	Gibson, Arthur L., & Co., Ltd. ....	lxxi	Porn & Dunwoody, Ltd. ....	xvii
Architectural Press, Ltd., The .....	lxiii, lxvii	Guest, Keen & Nettlefolds (Midlands), Ltd. ....	xxi	Pritchett & Gold E.P.S. Co., Ltd. ....	xvii
Armstrong Cork Co., Ltd. ....	lxliii	G.W.B. Electric Furnaces, Ltd. ....	xxxii	Prodorite, Ltd. ....	—
Ashwell & Nesbit, Ltd. ....	lxliii	Gyproe Products, Ltd. ....	lxxiii	Radiation Group Sales, Ltd. ....	x
Associated Builders Merchants, Ltd. ....	lxviii	Halden, J., & Co., Ltd. ....	—	Rentokil, Ltd. ....	lxvi
Austins of East Ham, Ltd. ....	vi	Hall, J. & E., Ltd. ....	xx	Richardson & Starling, Ltd. ....	ix
Berry, Z. D., & Sons, Ltd. ....	xxii	Hall, John, & Sons (Bristol & London), Ltd. ....	—	Rownsdon, Drew & Clydesdale, Ltd. ....	lxxiii
Birmingham & Blackburn Constructions Ltd. ....	lxxiii	Hall, Robert H., & Co., Ltd. ....	lxvii	Royat Tank Co., Ltd., The .....	xxxvi
Bitulac, Ltd. ....	—	Hammond & Champness, Ltd. ....	xxvii	Ruberoid Co., Ltd. ....	lxiv
Blackburn, Thomas, & Sons, Ltd. ....	—	Harper & Tunstall, Ltd. ....	xiv	Rubery Owen & Co., Ltd. ....	—
Booth, James, & Co., Ltd. ....	—	Harvey, G. A., & Co. (London), Ltd. ....	lxi	Sadd, John, & Sons, Ltd. ....	xix
Booth, John, & Sons (Bolton), Ltd. ....	—	Heywood, W. H., & Co., Ltd. ....	—	Saunders & Taylor, Ltd. ....	lxvi
Box, C. W. ....	lxxi	Hollis Brothers, Ltd. ....	lxiv	Scaffolding (Great Britain), Ltd. ....	v
Braby, F., & Co., Ltd. ....	ix	Holloway Bros. (London), Ltd. ....	—	Sealcoat St. Helens, Ltd. ....	—
Briggs, Wm., & Sons, Ltd. ....	lxxiii	Holloway, W. F., & Brother, Ltd. ....	xxx	Seamastic, Ltd. ....	—
British Insulated Cables, Ltd. ....	—	Hope, Henry, & Sons, Ltd. ....	lii	Simplex Electric Co., Ltd. ....	—
British Magnesite Flooring Co., Ltd. ....	ix	Horseley Bridge & Thomas Piggott, Ltd. Hydro Engineering, Ltd. ....	—	Smith & Parkes, Ltd. ....	—
British Mouldex Rubber Co., Ltd. ....	lxii	International Correspondence Schools .....	lxxii	Smith & Rodgers, Ltd. ....	—
British National Electricies, Ltd. ....	xxvi	Jackson Electric Stove Co., Ltd., The .....	lxiii	Smith's Fireproof Floors, Ltd. ....	—
British Plaster Board, Ltd., The .....	—	Kent, John (London), Ltd. ....	ii	Sollignum, Ltd. ....	—
British Plumber, Ltd. ....	xii	Kerner-Greenwood & Co., Ltd. ....	liii	Southern Lime Association, The .....	xxxvii
Britmae Electrical Co., Ltd. ....	xi	Kingfisher, Ltd. ....	—	Standard Patent Glazing Co., Ltd., The .....	—
Broad & Co., Ltd. ....	lxv	King, George W., Ltd. ....	lxxii	Steele (Industrial Floors), Ltd. ....	—
Carter & Co., Ltd. ....	lxv	Kinnear Shutters .....	lxxi	Storry, Smithson & Co., Ltd. ....	xlii
Celcon, Ltd. ....	lxvi	Laing, John, & Son, Ltd. ....	—	Stramit Boards, Ltd. ....	xlix
Cellon, Ltd. ....	xxv	Leatherfor, Ltd. ....	xxxii	Sundeala Board Co., Ltd. ....	—
Cole, E. K., Ltd. ....	lxv	Lever, James, & Sons, Ltd. ....	lxii	Tarmac, Ltd. ....	—
Colt Ventilation, Ltd. ....	lii	Lilly, Walter, & Co., Ltd. ....	lxii	Taylor, R. & Co. (Ironfounders), Ltd. ....	lxv
Croogson & Co., Ltd. ....	ix	Lion Foundry & Co., Ltd. ....	xlii	Tentek Fibre Board Co., Ltd. ....	xxxvii
Crompton Parkinson, Ltd. ....	—	Linoleum Manufacturers' Association .....	lxxi	Thermalite, Ltd. ....	—
Davidson, C., & Sons, Ltd. ....	xxxviii	Loft Ladders, Ltd. ....	lix	Thorn, J., & Sons, Ltd. ....	—
Dawnays, Ltd. ....	—	London Sand Blast Decorative Glass Works, Ltd., The .....	—	Timber Development Association, Ltd. ....	xxxix
Deans Blinds (Putney), Ltd. ....	lxiv	Mable Todd & Co., Ltd. ....	lxiii	T.M.C. Harwell (Sales), Ltd. ....	—
De La Rue, Thomas, & Co., Ltd. ....	—	MacAndrews & Forbes, Ltd. ....	lxviii	Tretol, Ltd. ....	xxxvi
Denny, Mott & Dickson, Ltd. ....	xxxix	McCarthy M. & Sons, Ltd. ....	lxxi	Truett & Steel, Ltd. ....	—
Dignus, Ltd. ....	—	Mallinson, Wm., & Sons, Ltd. ....	lvii	Turners Asbestos Cement Co., Ltd. ....	xxxiii
Docker Brothers .....	—	Mander Bros., Ltd. ....	xxxv	United Paint Co., Ltd., The .....	—
Dryad Metal Works, Ltd. ....	lxv	Marley Tile Co., Ltd., The .....	iv	Venus Pencil Co., Ltd. ....	lix
Durable Asphalte Co., Ltd. ....	ii	Marryat & Scott Ltd. ....	lxviii	Versil, Ltd. ....	xiv
Durtnall, R., & Sons, Ltd. ....	lxvi	McCall & Co. (Sheffield), Ltd. ....	xv	Wadsworth, Wm., & Sons, Ltd. ....	—
Elgood, E. J., Ltd. ....	lxvi	Merchant Trading Co., Ltd. ....	xiv	Wardle Engineering Co., Ltd. ....	—
Ellis, John, & Sons, Ltd. ....	—	Mills Scaffold Co., Ltd. ....	lxxiv	Ward, Thomas W., Ltd. ....	—
Ellison, George, Ltd. ....	lxxi	M.K. Electric, Ltd. ....	xxviii	Wareite, Ltd. ....	—
Ellis School of Architecture, The .....	lxxi	Northern Organisation .....	—	Wellington Tube Works, Ltd. ....	—
Empire Stone Co., Ltd. ....	xiii	North British Chemical Co. ....	lvii	West, A., & Partners, Ltd. ....	—
Esauian, Ltd. ....	—	Northern Aluminium Co., Ltd. ....	xxiv	Wheatley & Co., Ltd. ....	—
Evode, Ltd. ....	xi	Paragon Glazing Co., Ltd. ....	lxii	Wheeler, F. H., & Co., Ltd. ....	—
Excel Asphalte Co., Ltd. ....	lxvi			Wimpey, George, & Co., Ltd. ....	xvi
Farmer, S. W., & Son, Ltd. ....	lxj			Zinc Alloy Rust Proofing Co., Ltd. ....	—
Farniloe, T. & W., Ltd. ....	—			Zinc Development Association .....	liv
Fibreglass, Ltd. ....	i				

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices,  
Miscellaneous Property, Land and Sales, see lxvii, lxviii, lxix, lxx, lxxi.

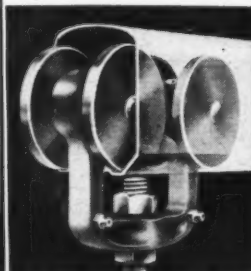


SEE HOW THEY RUN—  
hardly more than a touch  
from the young lady slides  
these massive factory doors  
open. Each leaf of this  
installation (at KING'S  
own plant at Stevenage) is  
17 ft. by 10 ft. and weighs  
12 cwt. Whatever the job,  
from a giant factory door to  
a light door in a modern  
flat, KING Sliding Door  
Gear does it with the same  
smooth, lasting efficiency.

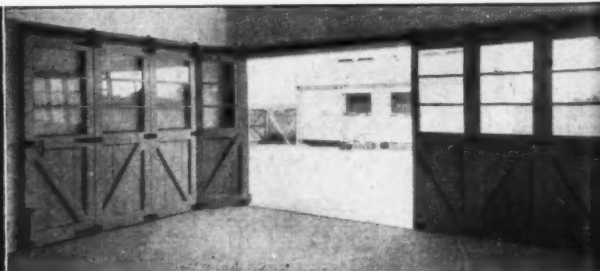
## PLAN NEW BUILDINGS FOR EFFICIENCY— Modernise old ones with KING SLIDING DOOR GEAR

The planning of modern factories, schools, hospitals, houses, farm buildings and garages, and the modernising of old buildings increasingly recognise the advantage of well-designed sliding doors. When you specify sliding door gear, bear in mind the precision engineering that makes KING door gear so easy to operate through

its long, trouble-free life. The "plus" features that give it its silky-smooth action are the product of long experience. They have been proved in thousands of installations large and small. Find out more about the wide range and varied applications of KING door fittings—send for illustrated booklets and the name of your nearest stockist.



THIS 'X-RAY' CLOSE-UP of a Kingway door hanger shows why KING Door Gear does its job with such lasting easy-running action. Note the flat wheel-treads, which spread the load at the wearing surface; the lubrication nipples; the ease of vertical and lateral adjustment. The domed top of KING tubular track and rustproof finish of KING fittings give exceptional life in exposed conditions.



THESE GARAGE DOORS are mounted on KING "Major" Out-of-the-way and Around-the-Corner Gear, sliding to either side of the opening. KING'S wide range covers every requirement.

**KING**  
SLIDING DOOR GEAR

Write for Illustrated Booklets to GPO, W. KING LTD., 201 WORKS, HITCHIN, HERTS. TEL: HITCHIN, 960

viii  
xlii  
xliii  
xxx  
xvii  
xvii  
x  
xxvi  
lxx  
xliii  
xxvi  
xix  
xlii  
v

xlii  
xxii  
xlii  
xlix

lxv  
xxvii

xxix  
xxvi  
xxiii

lix  
xiv

xvi  
liv

7-

on  
ey  
ons  
he  
IG  
ets



R







**HOT AIR**  
*We sell it!*

But not in a form that involves you in any risk—When ordering heating and ventilating plant take advantage of the services of our designers and engineers. Further details are given in our Booklet No. 10 a copy of which will be gladly sent to you.

**BIRMINGHAM & BLACKBURN**  
CONSTRUCTION · COMPANY · LIMITED

ARMOURY CLOSE, BORDESLEY GREEN, BIRMINGHAM 9  
AND AT HARLEY ST., BLACKBURN



*put it there!*

**Briggs AQUALITE**  
Bitumen Dampcourse

Laid in a minute... lasts as long as the wall... Briggs Aqualite Dampcourse is famous for its perfect damp-resisting qualities.

WILLIAM BRIGGS & SONS LTD. · DUNDEE · LONDON: Vauxhall Grove, S.W.8  
Offices & Depots at Aberdeen, Bristol, Edinburgh, Glasgow, Leicester, Liverpool, Norwich.

*By using*

**Cretestone**

CONCRETE BONDING GYPSUM PLASTER

you save the cost of  
hacking concrete to  
provide a mechanical bond

Full information and complete specifications  
available on request.

**GYPROC PRODUCTS LIMITED**

Head Office: Westfield, Upper Singlowell Road, Gravesend, Kent.  
Telephone: Gravesend 4251-4. Telegrams: Gyproc, Gravesend.

Glasgow Office: Gyproc Wharf, Shieldhall, Glasgow, S.W.1.  
Telephone: Govan 2141-3. Telegrams: Gyproc, Glasgow.

London Office: Morris House, 1-5 Jesmyn Street, London, S.W.1.  
Telephone: Whitehall 9073/4

Makers of "PARISTONE" Browning Plaster (Haird,  
Unhaird and Metal Lathing Qualities),  
"PARISTONE" Wall Finishing Plaster,  
"GYPCSTONE" Board Finishing Plaster.

G.C.3.

FOR INFORMATION ON

**COPPER TUBES**

*Write for this 16 page publication*

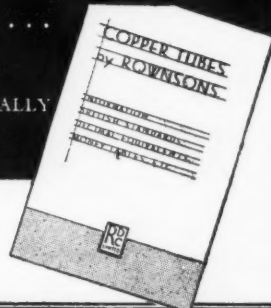
PRESENTING IN CONCISE FORM

- PROPERTIES
- B.S.S. SPECIFICATION DETAILS
- APPLICATION DETAILS
- WEIGHTS OF VARIOUS GAUGES

ETC. ....

**ROWNSON'S TUBES**

ARE THE MOST ECONOMICALLY  
PRICED TUBES AVAILABLE



**ROWNSON DREW & CLYDESDALE LTD**

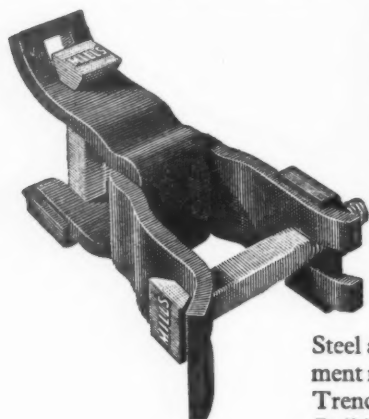
Established 1819

Telephone: Waterloo 6321-6

225 UPPER THAMES STREET, LONDON, E.C.4

**MAKE SURE THAT THE SCAFFOLDING WILL  
BE STARTED AND COMPLETED  
TO YOUR SCHEDULE**

# **Make a date with MILLS**



Steel and Aluminium Scaffolding for sale, contract, or hire. Every requirement met also for ancillary equipment, including: Shuttering • Steel Props • Trench Struts • Splitheads • Hoists • Concrete Mixers • Cradles • Builders' Hand Carts • Barrows • Trestles, etc.

**TO SAVE TIME, SIMPLY PHONE  
YOUR NEAREST MILLS DEPOT**



BELFAST • BIRMINGHAM • BOURNEMOUTH • BRIGHTON  
BRISTOL • CANTERBURY • CARDIFF • COVENTRY • DUBLIN • EXETER • GLASGOW  
HULL • ILFORD • LIVERPOOL • LOWESTOFT • MANCHESTER • NEWCASTLE  
NORWICH • PLYMOUTH • PORTSMOUTH • SOUTHAMPTON • SWANSEA • YARMOUTH

**MILLS SCAFFOLD CO. LTD.,** *Head Office and Depot:* TRUSSLEY WORKS, HAMMERSMITH GROVE, LONDON, W.6 • Tel: RIVerside 5026/9

L

re-  
ps  
les

OW  
LE  
TH

6/9