



WALTHAMSTOW CIVIC CENTRE

Hugh Bourne, M.I.E.E., M.I.H.V.E.  
Consulting Engineer.

P. D. Hepworth, F.R.I.B.A.  
Architect.

## AIR-CONDITIONING & PANEL HEATING

By

### MATTHEW HALL

& CO., LTD.

26-28 DORSET SQUARE, LONDON, N.W.1.

Paddington 3488 (20 lines).

GLASGOW · LIVERPOOL · BELFAST · BRISTOL · NEWCASTLE · LEICESTER · CARDIFF  
Central Office for Portsmouth, Bournemouth, Southampton:—ALTON, HANTS



## "HARVEY"

### Adjustable Steel Storage Bins and Shelving

can be arranged to form stacks  
giving accommodation for small  
or large quantities exactly as  
required. NO WASTE SPACE.

## "HARVEY"

### Steel Equipment

is portable, it can be dismantled  
and re-erected by unskilled labour  
without any depreciation what-  
ever. NO fixing to floor or  
ceiling is necessary.

**G·A·HARVEY & Co (LONDON) LTD** **WOOLWICH RD**  
**LONDON SE 1**

**CONSTANT HOT WATER**

**HOTRIC**

**FROM EVERY TAP**

- ★ SIMPLE TO INSTALL
- ★ FULLY AUTOMATIC
- ★ ODOURLESS & FUMELESS
- ★ PROOF AGAINST CARELESSNESS
- ★ REQUIRES NO FLUES
- ★ REQUIRES LITTLE SPACE
- ★ CAN BE USED WITH OR WITHOUT SOLID FUEL BOILER
- ★ MINIMUM MAINTENANCE
- ★ LOW OPERATING COSTS
- ★ NEGLIGIBLE RADIATION LOSSES



THERE are ten reasons why householders will want a Hotric Duplex Electric Storage Heater, and they are given on this page — but there are three additional reasons why Architects and Builders should choose Hotric. It is made by men who for years have been practised in precision engineering, it will increase your prestige in installing good equipment, and once installed will require no further service.

The Hotric Duplex has been designed for the specific purpose of supplying constant hot water in the average household at the lowest possible cost. Women are demanding an easing of the burden of household tasks. The Hotric is one way in which you can meet an already existing and urgent demand. If you will get into touch with us we will be happy to supply you with full details.

**Duplex Electric**  
**THERMAL STORAGE**  
**HEATERS**

**HOTRIC LIMITED**

Head Office: Hotric Works, Broxburn, West Lothian, Scotland  
Sales Office: 198, Fore Street, Edmonton, London, N.18 Tottenham 1321

# NEWSUMS - *now on Home Service.*



## The most modern of all labour saving devices!

The "NEWSUM" PATENT TRADESMAN'S HATCH has already been specified for Municipal and private building schemes in every part of the country.

It is a practical new fitment, and should be used in EVERY home. Perishable goods are kept free from all possible contamination.

The tradesman saves time when delivering and the housewife's frequent distractions to answer the door are abolished. Once the goods have been placed in the hatch they cannot be pilfered from the outside.

There are three compartments designed to receive Bread, Meat and Milk, and once these goods have been deposited from the exterior and the hatch closed, access can only be gained from the interior.

Two loose shelves and a tray for meat are provided, and these can easily be removed for purposes of cleaning.

The hatch is strongly constructed, the doors being faced with resin-bonded (weatherproof) plywood, and it incorporates the Patent Automatic Locking Device.

# NEWSUMS TRADESMAN'S HATCH

Patent in Great Britain.

Foreign Patents applied for.

THE ESSENTIAL STANDARD UNIT OF DOMESTIC EQUIPMENT FOR EVERY HOME.

**H. NEWSUM**  
LINCOLN



**SONS & CO. LTD.**

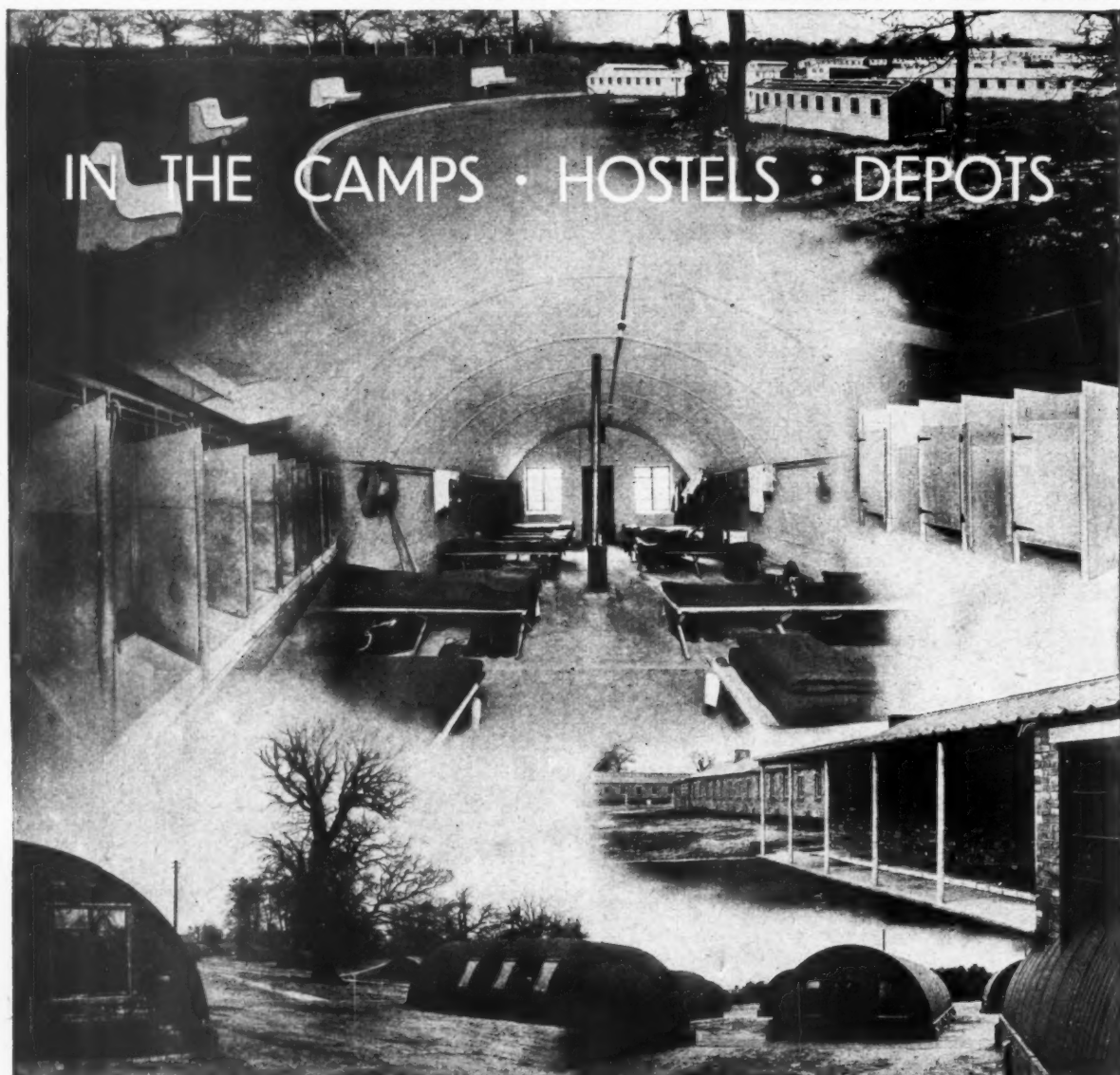
Telegrams: Newsams, Lincoln.  
Telephone: Lincoln 812 (4 lines)

INEXPENSIVE TO INSTALL

ABSOLUTELY FOOLPROOF

# ASBESTOS-CEMENT

THE BUILDING MATERIAL THAT FOUGHT THE WAR



At the outset of the war the call-up of the millions of men and women for the Services demanded the rapid construction of Camps, Hostels, and Depots, and Asbestos-cement was the ubiquitous material that solved the problem, providing the necessary cladding, finishings, roof and soil drainage, service mains, and in addition many parts of the equipment for the many thousands of buildings.

The large stocks of Asbestos-cement that were always maintained in peace time soon disappeared and production had to be stepped up to meet the situation.

What was achieved and it is now exemplified all over the world, testifies to the contribution to the war effort from the Asbestos-cement Industry.



**TURNERS ASBESTOS CEMENT CO. LTD.**  
TRAFFORD PARK • MANCHESTER 17



G.G.114



# CONSTRUCTORS

## STEEL EQUIPMENT

CONSULT US FOR ALL  
TYPES OF FABRICATED  
STEEL EQUIPMENT



1  
—  
'VISPANS' AND RACKS

2  
—  
'ADJUSTEEL' SHELVING  
FOR ALL  
STORAGE PURPOSES

3  
—  
STEEL  
CLOTHES LOCKERS

4  
—  
STEEL 'ARC'  
WORK BENCHES

5  
—  
STILLAGES AND  
JACK TRUCK  
PLATFORMS

6  
—  
STEEL  
TOOL STANDS

7  
—  
STEEL  
TOOL CUPBOARDS

8  
—  
'MAXIM' RACKS

*Send for Catalogue A/J*

**CONSTRUCTORS LTD**

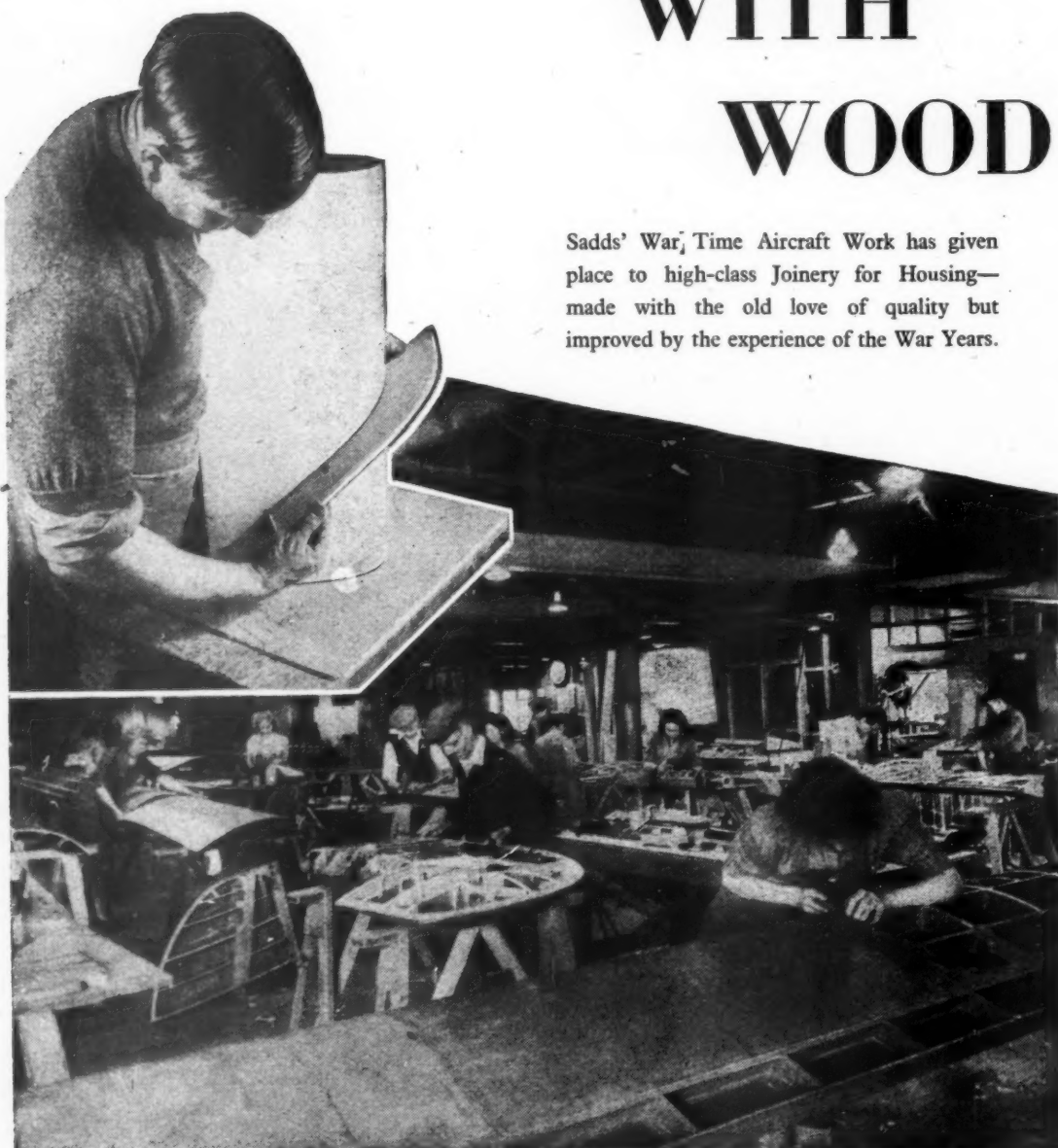
TYBURN ROAD · ERDINGTON · BIRMINGHAM 24

TELEPHONE: ERDINGTON 1616

TELEGRAMS: EQUIPSTORS · BIRMINGHAM 24

# ADAPTABILITY WITH WOOD

Sadd's War Time Aircraft Work has given place to high-class Joinery for Housing—made with the old love of quality but improved by the experience of the War Years.



## JOHN SADD & SONS, LTD.

**HIGH-CLASS JOINERY**

**Windows, Doors, Mouldings, Staircases, Dressers, Kitchen Units**

**MALDON**

**ESSEX**

Telephone: Maldon 131.

London Office: ALDWYCH HOUSE, W.C.2.

Telephone: Holborn 7225

# DEVELOPMENTS

## in Parkerizing and Bonderizing

### ARE SIGNIFICANT

Pyrene Metal Surface Treatment Processes made their initial appearance in the nineteen-twenties when Parkerizing was introduced. Since then the following significant advancements have been made:—

**1931** "BONDERIZING" for Paint Anchorage.

**1935** "PYLUMINIZING" for the protection of Aluminium.

**1936** "SPRA-BONDERIZING" for Paint Anchorage by conveyorized and mechanically-controlled production methods.

**1937** "D" Process for "PARKERIZING" and "BONDERIZING" of Iron and Steel, also for treatment of Zinc and Cadmium surfaces or mixtures of these with ferrous metal assemblies.

**1938** "PYROGRIP" Cold cement for dressing mops and bobs used for scurfing and polishing.

**1939** "PARKERIZING" for Lubrication.

**1942** "BONDERITE" 'K' for treatment of continuous steel strip and sheet production.

IT CANNOT BE PARKERIZED OR BONDERIZED  
(Registered) (Registered)

WITHOUT  CHEMICALS

The Pyrene Company Limited • Metal Finishing Division • Great West Road, Brentford, Middx.



## AIRWAY • SEAWAY • HIGHWAY

Launches, Minesweepers, Landing Craft, Aircraft, Torpedo Boats, Invasion Barges, 'Dukws,' Trucks, Airborne Lifeboats, these and many other vessels and vehicles needed the protection of Cellon Finishes to enable them to face arctic seas, tropic sun, and the wear and tear of assault and battery. Throughout the war, the Cellon output was reserved for tasks in

which durability of finish was essential to the efficiency of the weapon, vehicle or craft. The necessary high quality ingredients of Cellon Protective Finishes are now gradually becoming available for commercial purposes, and meanwhile Cellon's experience is making the best of those materials which are permitted.



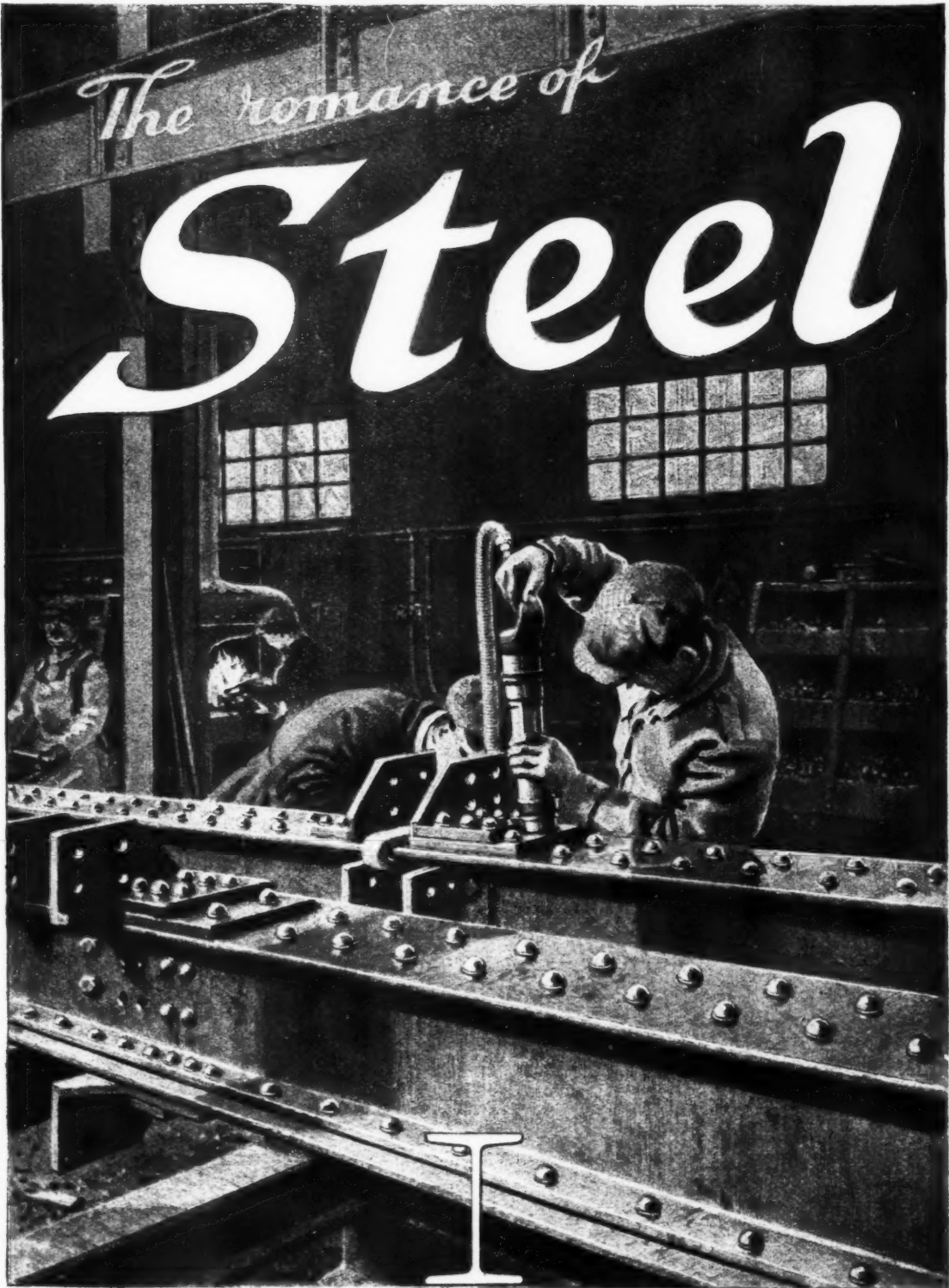
FULL DETAILS OF FINISHES FOR ANY SPECIFIC PURPOSE FROM CELLON LTD., KINGSTON-ON-THAMES. TELEPHONE : KINGSTON 1234 (5 LINES)  
Thorp-Hambrook Co., Ltd., Montreal, Canada. Cellon Corporation Pty. Ltd., Sydney, Australia

CVS-548



cy  
gh  
w  
es,  
he





RIVETING WITH PNEUMATIC POWER

DAWNAYS OF BATTERSEA

"GET MOVING!"



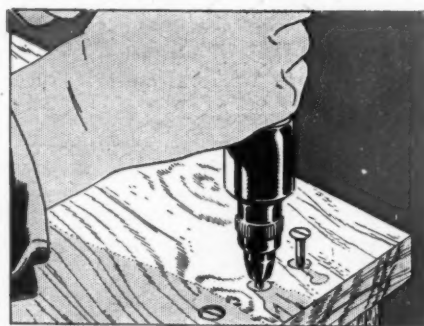
## THE BLACK & DECKER

PORTABLE ELECTRIC

## SCREWDRIVER

Joe was given a portable electric screwdriver to screw down metal plates on flooring. "What difference will this make?" said Joe. But as the powerful Black & Decker tool drove home screws one after another, quickly and easily, Joe had to admit that he'd done the job far quicker than ever before, and with less effort. "I guess there's no doubt about it," said Joe, "if you want to get moving on these jobs you've got to use the right tools."

Builders "get moving" with B & D Tools because they save time, labour and money.



PORTABLE ELECTRIC TOOLS  
FOR THE  
**BUILDING TRADE**

Obtainable only from B & D Distributors

BLACK & DECKER LTD · HARMONDSWORTH · MIDDLESEX

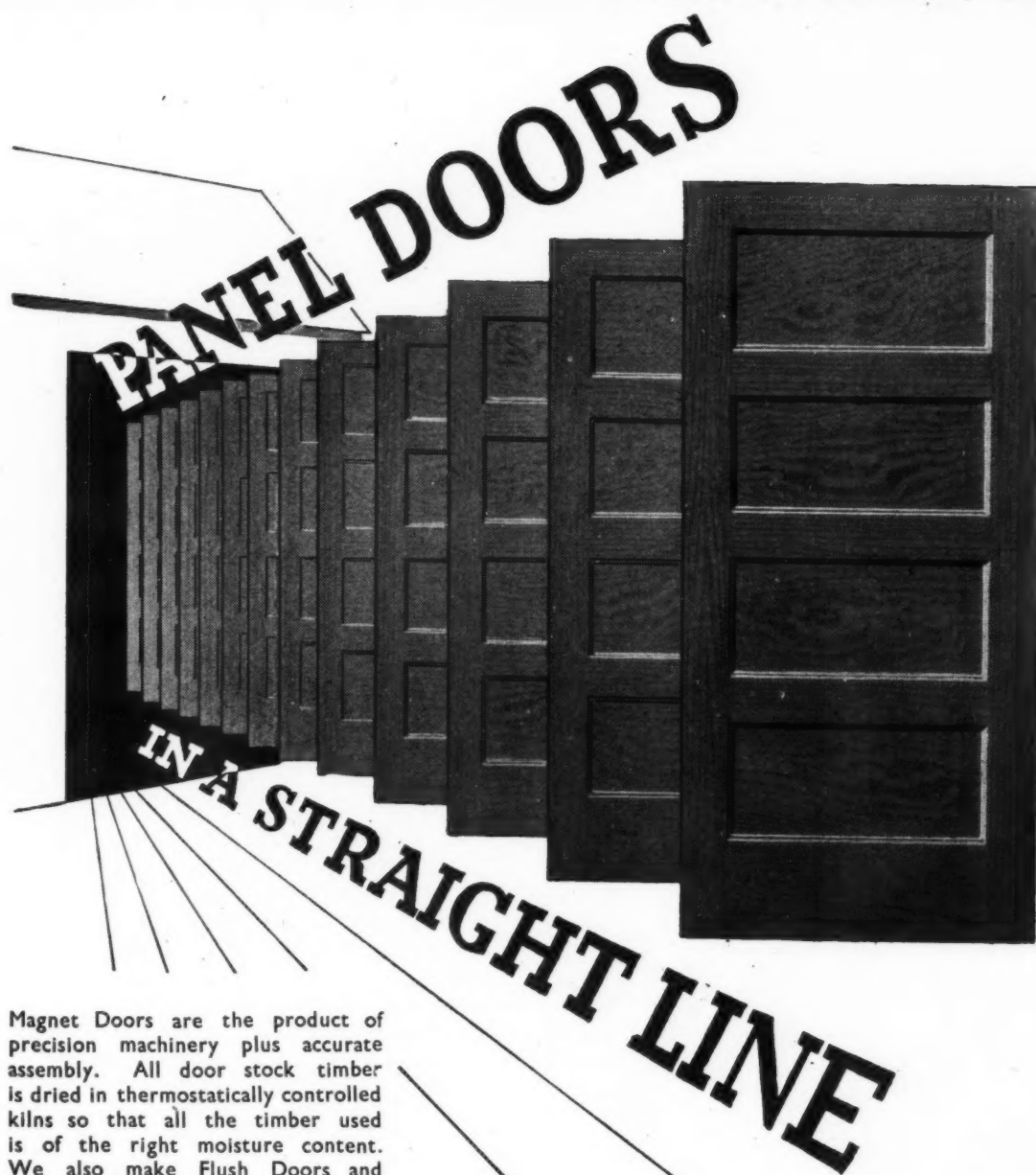
'Phone: West Drayton 2681/6

BRANCH SERVICE STATIONS: LONDON, BIRMINGHAM, BRISTOL, GLASGOW, LEEDS, MANCHESTER, NOTTINGHAM

'Grams: 'Blacdeck' West Drayton.

Smee's





Magnet Doors are the product of precision machinery plus accurate assembly. All door stock timber is dried in thermostatically controlled kilns so that all the timber used is of the right moisture content. We also make Flush Doors and High Grade Joinery in the same way—but still at the same competitive prices.

# MAGNET JOINERY

LIMITED

WHITLEY STREET, BINGLEY, YORKS

Telephone 547 (3 lines)

LONDON ROAD, GRAYS, ESSEX

Telephone 77 (5 lines)

Branches also at

ANNE ROAD, SMETHWICK, BIRMINGHAM, AND KNARESBOROUGH, YORKS

Stoneham & Kirk

## WIMPEYS AT WORK

Local control in planned building construction



### THE REGIONAL OFFICE

The Wimpey Regional Office is the first link in project-planning — and the last. Before central planning begins at Wimpey's general headquarters, the Regional Office reports on local resources and problems. And eventually, as work proceeds, it is the Regional Office that enables headquarters to keep daily check on progress.

The Regional Offices are Wimpey's field-headquarters. They are at Bristol, Birmingham, Cardiff, Manchester, Newcastle, Nottingham, Plymouth, Wakefield, Worthing, Edinburgh and Glasgow. Each has its Managerial, Estimating,

Administrative and Executive Staffs — its direct contact with Architects and Surveyors — its local foremen and access to local labour. Each has the knowledge of local supplies, conditions and difficulties that is only fully available to a local organisation.

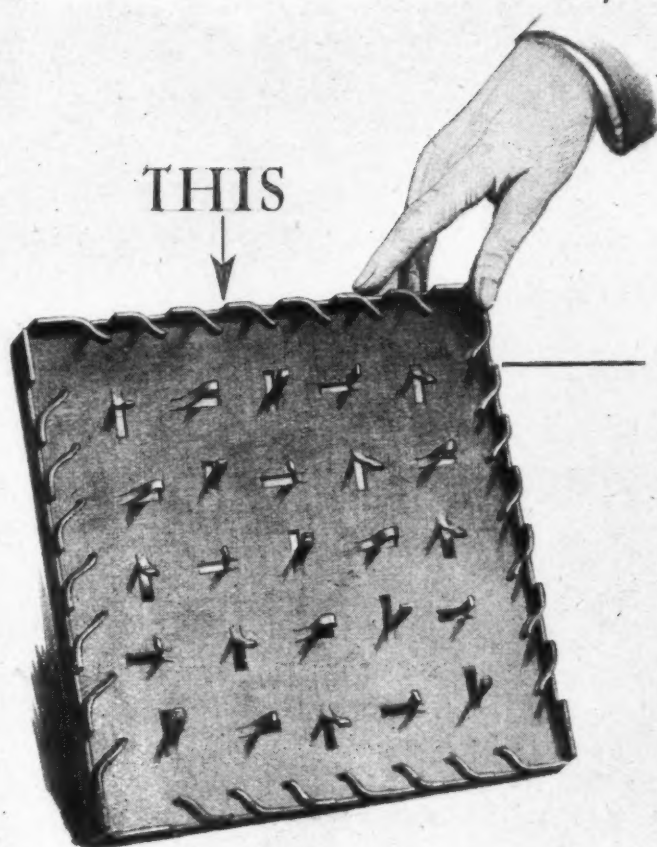
These offices are the circumference of the Wimpey wheel. The hub is Wimpey's 'G.H.Q.' : Operations Control Room, Central Engineering Staff, Central Laboratory and great pools of transport and plant. And along each spoke of the wheel there is constant collaboration. This combination — of central planning and unified supervision with local information and control at close quarters

— ensures that a job of any size in any part of the country can be carried through economically to a predetermined time and progress schedule.

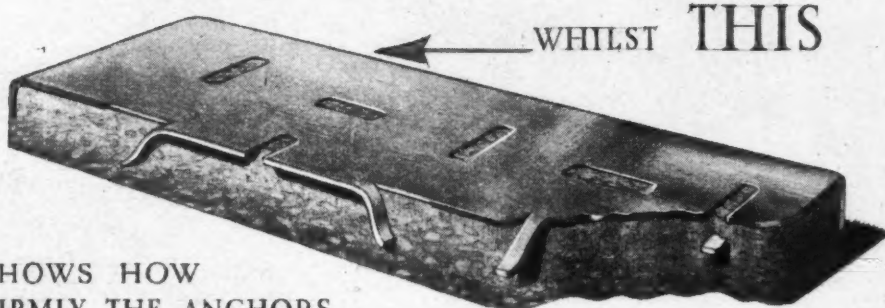
It is on widespread organisation of this type that Wimpey's sixty years of steady progress have been built.

# WIMPEY

GEORGE WIMPEY & COMPANY LIMITED  
TILEHOUSE LANE, DENHAM, MIDDLESEX



IS THE  
UNDERSIDE  
OF A  
*Stelcon*  
ANCHOR  
PLATE  
AND SHOWS  
THE POSITION  
OF THE  
53 ANCHORS

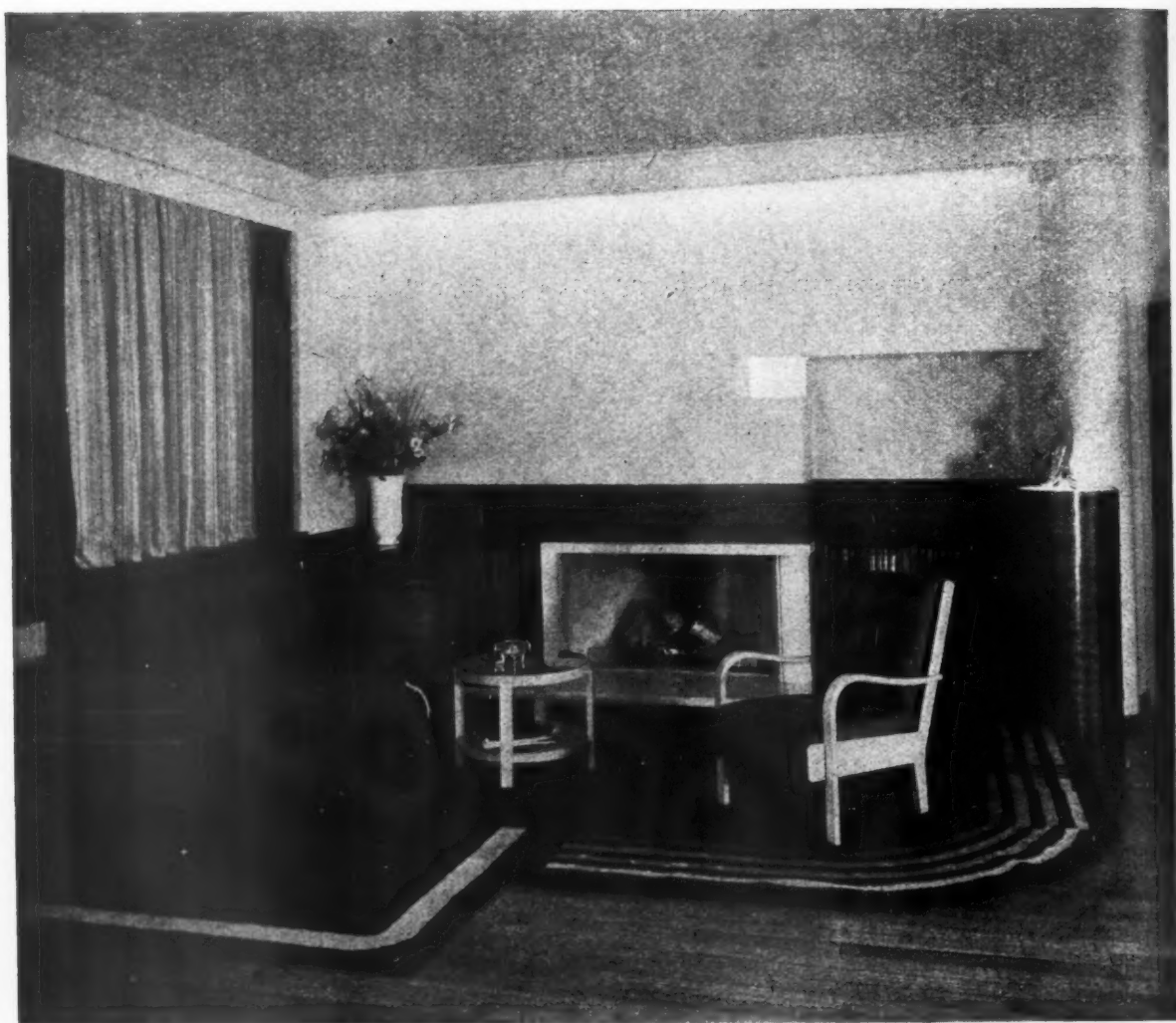


SHOWS HOW  
FIRMLY THE ANCHORS  
GRIP THE CONCRETE SUB-FLOOR  
AND THUS PROVIDE ...

ONE OF BRITAIN'S BEST FLOORS FOR FACTORIES

*Stelcon* (INDUSTRIAL FLOORS) LTD.,  
CLIFFORDS INN LONDON, E.C.4.

TELEphone: HOLBORN 2916



It is in the practical interpretation of the details of the Architect's conception that the Bath Cabinet Makers have for many years given successful evidence of their experience, taste, and quality. The opportunity of more fully outlining to Architects the range of our usefulness will be appreciated.

# *Bath* CABINET MAKERS AND ARTCRAFT LIMITED

CONTRACTORS FOR MODERN INTERIORS  
FURNISHINGS FOR SHIPS, HOTELS, PUBLIC BUILDINGS, OFFICES

LOWER BRISTOL ROAD · BATH + LONDON SHOWROOMS · 4 CAVENDISH SQ. W.1



W  
—say  
desig  
the v  
many  
BEAC  
cation  
quali  
the ta  
JO  
BE  
Bilston  
Lon



**H**ARMONY . . . . "Completeness and order in the relation of things"  
—says the Dictionary. With what freedom windows can now be used in  
designing the general mass and line of structures! . . . . To emphasize  
the verticals, as in this case, or to add breadth to the horizontals, and in  
many other ways to create harmony, both outside and inside the building.  
BEACON Metal Windows lend themselves to the widest possible appli-  
cation while remaining intrinsically sound in detailed design and enduring  
quality. The special design of the Staircase Window is interesting and  
the tall Bay Window gives the required relief to the elevation.

**JOHN THOMPSON BEACON WINDOWS LTD.  
BEACON WORKS WOLVERHAMPTON**

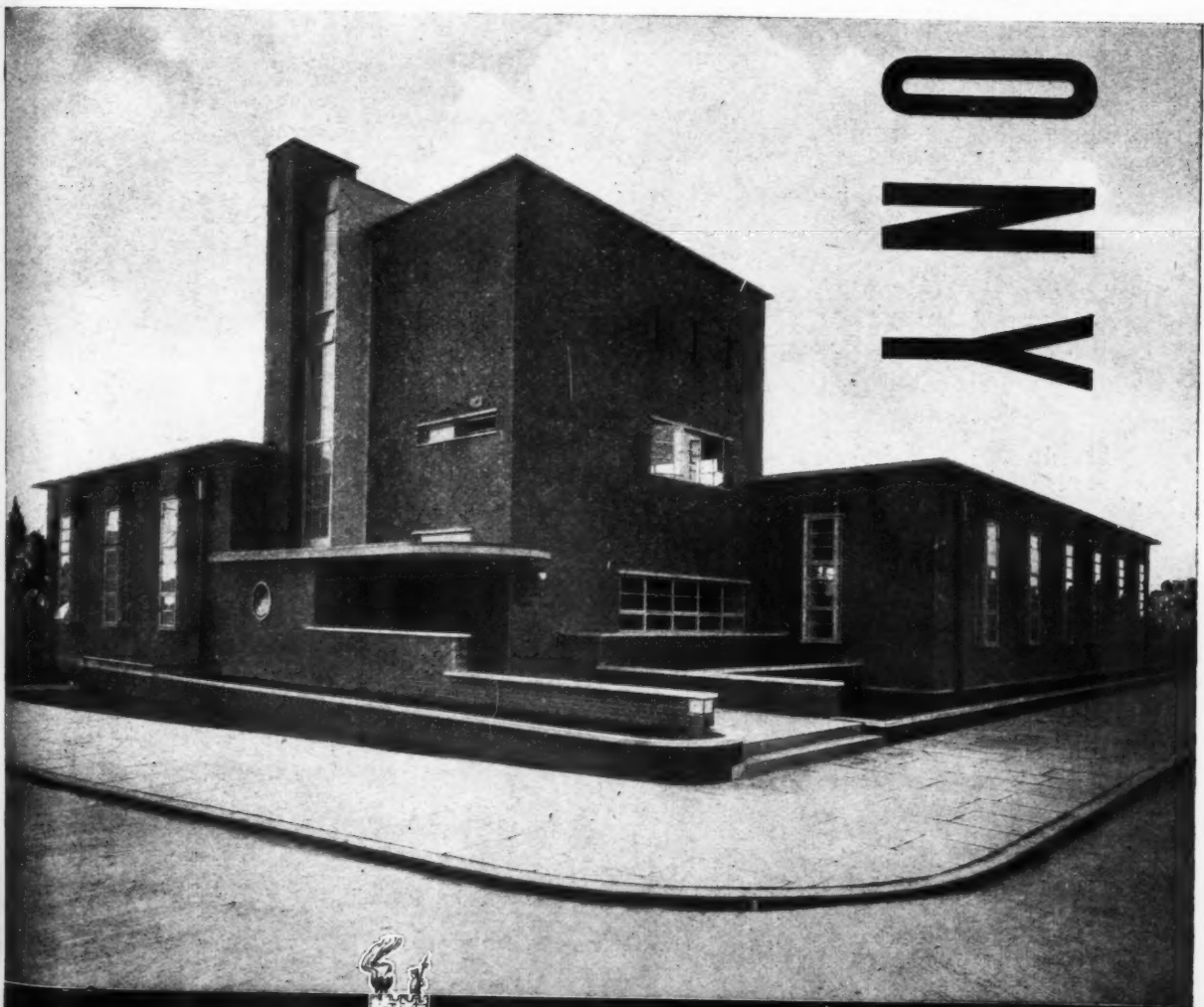
Telephones:  
Bilston 41944/7 (4 lines)

London Office: Imperial House, Kingsway, London, W.C.2.

Telegrams:  
Windows, Wolverhampton

Telephones: Temple Bar 3216 (3 lines)

**H  
A  
R  
M  
O  
N  
Y**

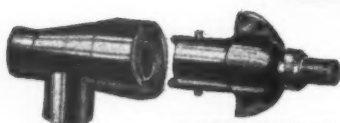


JOHN THOMPSON  
**BEACON**  
METAL WINDOWS



to GAS...

*Gas automatically turned on*



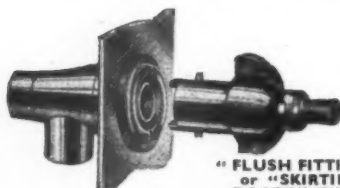
**"ORDINARY" TYPE**  
No. 1. Mk. II.  
Socket screwed  $\frac{1}{2}$  in. B.S.P.  
Nose piece of Plug screwed  $\frac{1}{2}$  in. B.S.P.



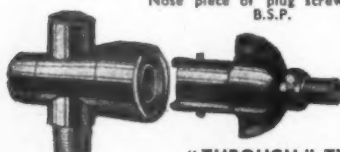
**"PEDESTAL" TYPE**  
No. 2. Mk. II.  
With Flange for floor fixing  
Socket screwed  $\frac{1}{2}$  in. B.S.P.  
Nose piece of plug screwed  $\frac{1}{2}$  in. B.S.P.



**"PEDESTAL" TYPE**  
with stem cock.  
No. 3. M. II.  
This only differs from No. 2. in that the stem cock is added.



**"FLUSH FITTING" or "SKIRTING BOARD" TYPE.**  
No. 4. Mk. II.  
This type has heavy brass plate 4 ins. long and 3 ins. wide with holes in corners for fixing screws.  
Socket screwed  $\frac{1}{2}$  in. B.S.P.  
Nose piece of plug screwed  $\frac{1}{2}$  in. B.S.P.



**"THROUGH" TYPE**  
No. 5. Mk. II.  
Socket screwed in  $\frac{1}{2}$  in. B.S.P.  
M. & F. Threads.  
Nose piece of plug screwed  $\frac{1}{2}$  in. B.S.P.

THE ever growing use of gas appliances, both in the home and industry, makes it essential that it should be possible to change them from point to point, easily and safely.

Edgar Flexible Plugs and Sockets are specially designed for this purpose, and being instantaneous in use, are a perfect safeguard against the accidental or careless turning on of the gas.

The neat design of the various types permit gas points to be installed in the most convenient places, unobtrusively and efficiently.

With Edgar Flexible Plugs and Sockets the connecting of a gas fire, poker, iron, blow lamp, or boiler, etc., is a simple one-handed job. Merely insert plug into socket, give a quarter turn and the gas is instantaneously turned on.

In all new buildings specify

# EDGAR

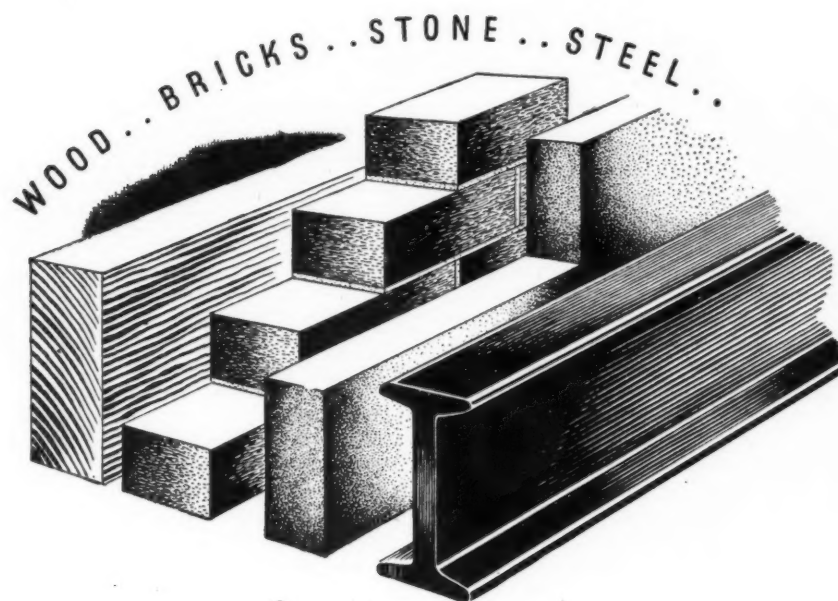
## FLEXIBLE PLUGS AND SOCKETS

### WM. EDGAR & SON, LTD.

BLenheim WORKS, HAMMERSMITH, LONDON, W.6.

Telephone: RIVerside 3486





*... and for the craftsman  
of today—**NEW** materials*

Materials with new qualities, new virtues and calling for new minds and methods in their working. Bakelite Plastics are the new man-made materials for infinite uses. They do not set out to replace the natural materials, although for many purposes where wood and metal have been used in the past Bakelite Plastics are now used—solely because they are more suitable.

New developments in Plastics suggest exciting

possibilities and wartime experience has taught us much which can be turned to good account for post-war development.

Bakelite Ltd., anticipating the future, are making a close study of possible post-war trends. Their industrial designers will be glad to advise industrialists who feel that Plastics may help them to meet the new conditions and to bridge the gap of the years of war.

**BAKELITE**  **PLASTICS**

*Pioneers in the Plastics World*

BAKELITE LIMITED, 18 GROSVENOR GARDENS, LONDON, S.W.1

# Invisible Panel Warming Association

In the many new buildings which will be required in this country and on the continent after the war, Invisible Panel Warming will inevitably play an important role. The inherent success of this all British invention is the result of the low temperature employed in establishing the final comfort conditions. It affords many advantages and these may be broadly classified as follows:—

1. It is healthy. 2. It is economic. 3. It is invisible.

These advantages have been proved in over one thousand important buildings throughout the country.

For technical and further particulars apply to any of the following:—

ASHWELL & NESBIT, LTD., 37, Pembroke Square, London, W.8.	HADEN, G. N. & SONS, LTD., 19/29, Woburn Place, London, W.C.1.	ROSSER & RUSSELL LTD., 30 Conduit Street, London, W.1.
BENHAM & SONS, LTD., 66, Wigmore Street, London, W.1.	HOPE'S HEATING & LIGHTING, LTD., Smethwick, Birmingham.	STEEL & CO. LIMITED, Crown Works, Sunderland.
BRIGHTSIDE FOUNDRY & ENGINEERING CO. LTD., Sheffield, 1.	JEFFREYS, J. & CO. LTD., St. George's House, 195/203, Waterloo Road, London, S.E.1.	SULZER BROS. (LONDON) LTD. 31, Bedford Square, London, W.C.1.
CRITTALL, RICHARD & COMPANY, LTD., Aldwych House, London, W.C.2.	NORRIS WARMING CO. LIMITED, Burley House, Theobalds Road, London, W.C.1.	YOUNG, AUSTEN & YOUNG, LTD., 19, Buckingham Street, Strand, London, W.C.2.

or to the Secretaries, Invisible Panel Warming Association, Pinners Hall,  
Austin Friars, London, E.C.2. Phone: London Wall 4286

*Issued by the*  
**INVISIBLE PANEL WARMING ASSOCIATION**  
*formed to promote and to exchange and codify technical information*









THE UNIVERSITY ARMS HOTEL, CAMBRIDGE

*Modern*

IN STYLE

*Efficient*

IN SERVICE

*Ageless*

IN BEAUTY



The Leaderflush Trade Mark reproduced enlarged on the left is inlaid into the hinge edge of every door in three colours.



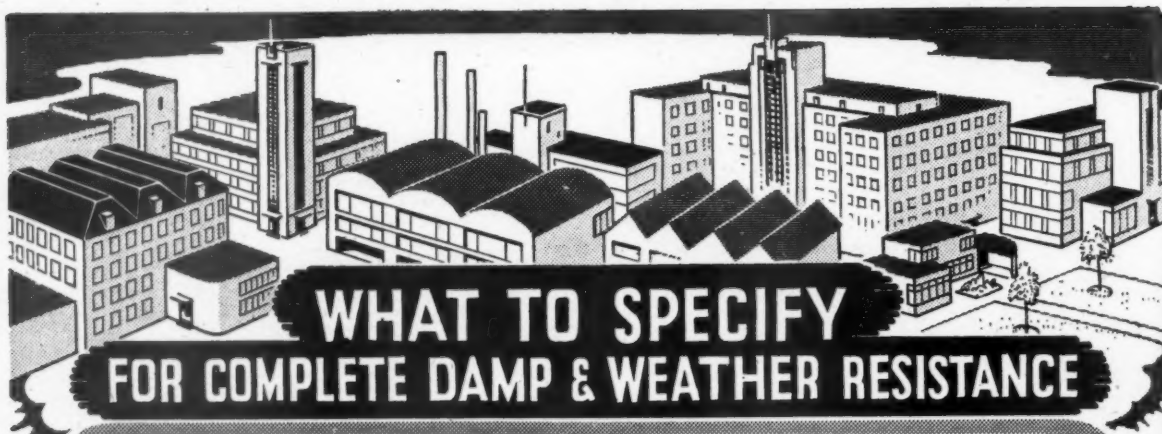
**LEADERFLUSH**  
LTD.

*Britain's best flush door*

HEAD OFFICE: TROWELL, NOTTINGHAM.

Sole Distributors: Midlands and the South, THE ADAMITE CO. LTD., Manfield House, Strand, W.C.2  
Scotland and the North, ARCHIE ARMSTRONG, 14 Ellison Place, Newcastle-on-Tyne

Cogent L.188



### **WALL DAMPCOURSING**

ARMOURITE *Lead Core*  
AQUALITE *Canvas Core*  
Bitumen Dampcourses

### **UNDERSLATING**

AQUATEX  
RAVAR or  
TUFFLEX (*Untearable*)  
Bituminous Felts

### **WATERPROOFING**

Basements, Reservoirs,  
Filter Tanks, Swimming  
Pools, Bridge Insulation  
AQUALITE  
SHEETING SYSTEM

### **PERMANENT ROOFING**

Pitched or Curved Roofs  
C H A L L E N G E  
Bitumen Roofing,  
*Standard or Mineral*  
Surface

### **ASPHALTE WORK**

NAMASTIC ASPHALTE  
and all classes of  
Mastic Paving

### **FLAT ROOFS**

BRIGGS  
MULTI-LAYER  
ROOFING  
SYSTEM

### **Roads, Drives, Paths, etc.**

New Construction & Re-  
surfacing in BITUPHALT,  
MACADAM, ASPHALTE,  
SURFACINGS, etc.

### **EXTERIOR WOOD or IRONWORK**

BRIGGSOL  
The Durable  
Exterior Paint

Depots are established in the following centres where trained  
squads are available under expert supervision . . . .

## **WILLIAM BRIGGS & SONS LTD.**

HEAD OFFICE AND WORKS, DUNDEE  
LONDON, VAUXHALL GROVE, S.W.8

ABERDEEN, EDINBURGH, GLASGOW, LEICESTER, LIVERPOOL, NORWICH



# Core-making

## IN A FAMOUS LIGHT METAL FOUNDRY



*Proved in War*



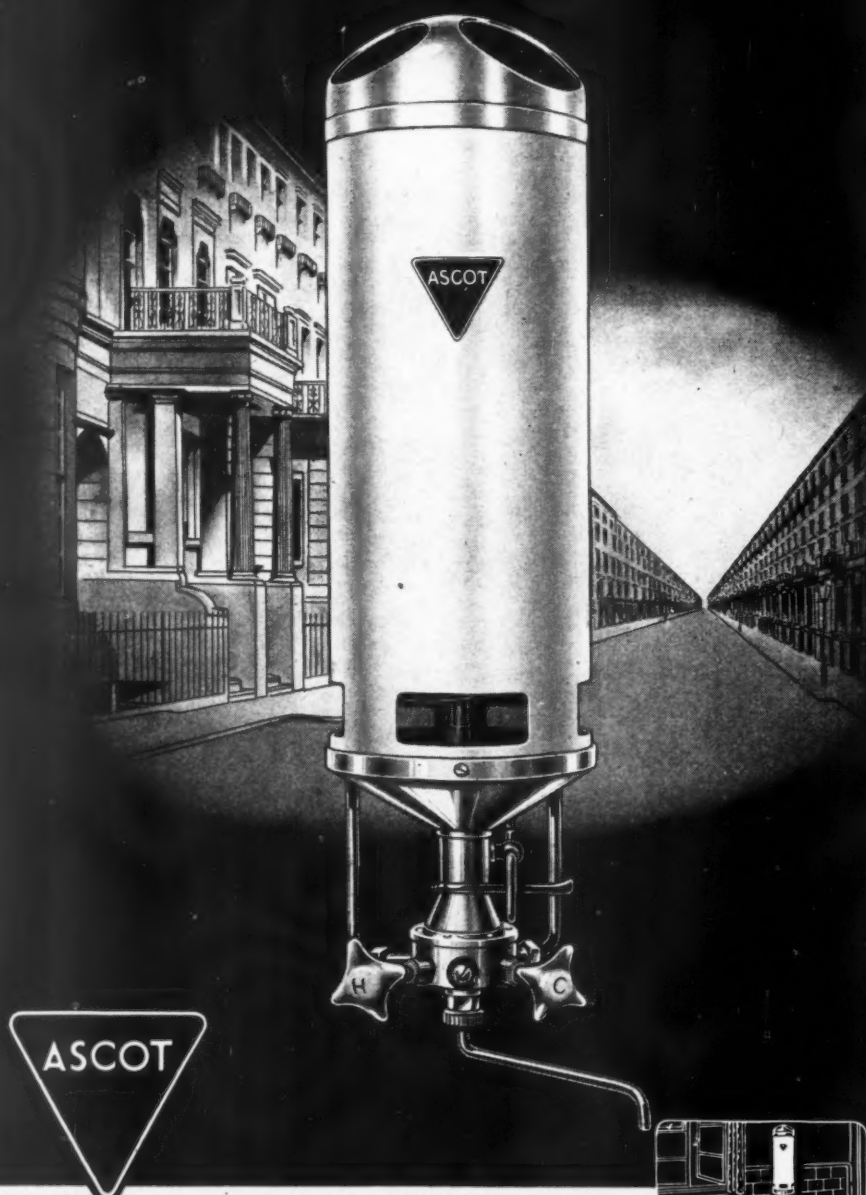
*Geared for Peace*

British Industry needs more castings than ever. Renfrew Foundries, the largest and most highly mechanised light metal casting plant in Europe, can meet all demands. Output capacity and cost are such that they open new fields for the application of these tough, durable and light alloys. Abundant raw materials, fully mechanised production supported by outstanding research, design and engineering specialists, unique facilities for the quick production of prototypes are features of Renfrew service of vital interest to manufacturers pressed for delivery. Full co-operative service from drawing board to despatch.

# RENFREW FOUNDRIES LTD

H I L L I N G T O N · G L A S G O W · S W 2

# KEY TO CONVERSION



CONVERSION OF EXISTING PROPERTY  
*Your Hot Water Problems Solved*  
INSTANTANEOUSLY BY GAS







# THE DIGNITY OF THE CRAFTSMAN



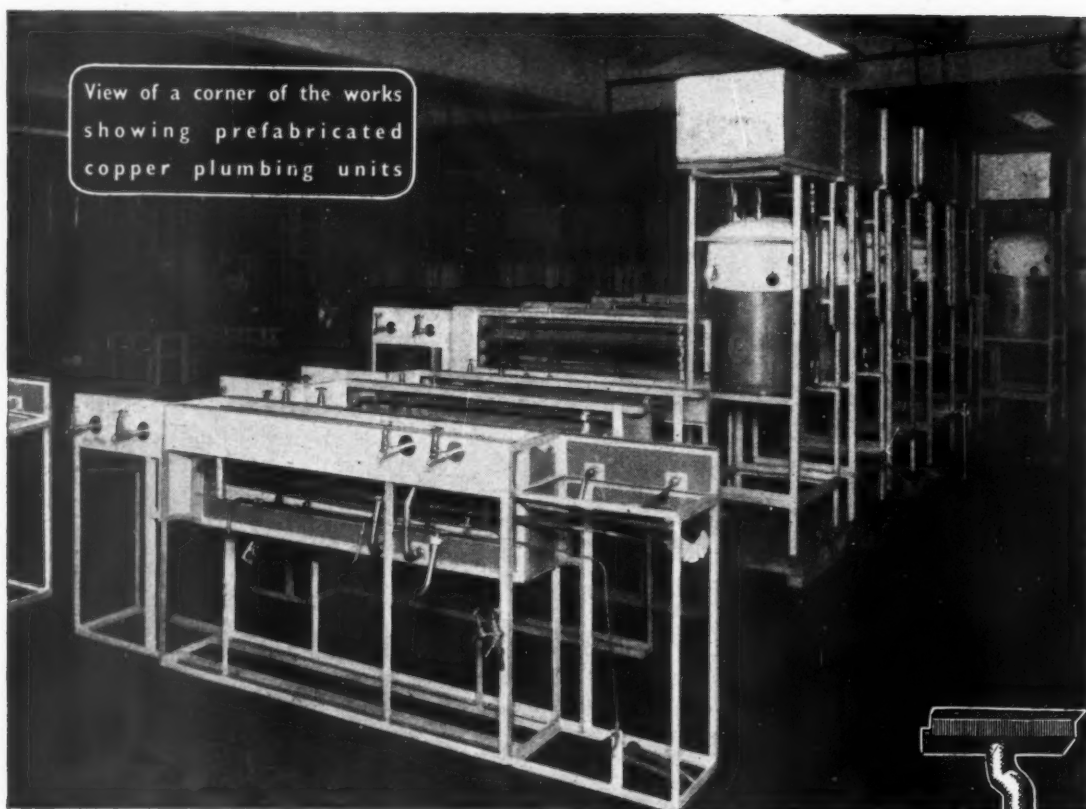
*Under the direction of P. J. Westwood, F.R.I.B.A.*

The skill with which this fine craftsman illustrated his artistry is reflected in the dignity of Modern Shopfronts, Interiors and Display Fittings designed and produced by Harris & Sheldon.

## **Harris & Sheldon Ltd.**

COMPLETE SHOPFITTERS

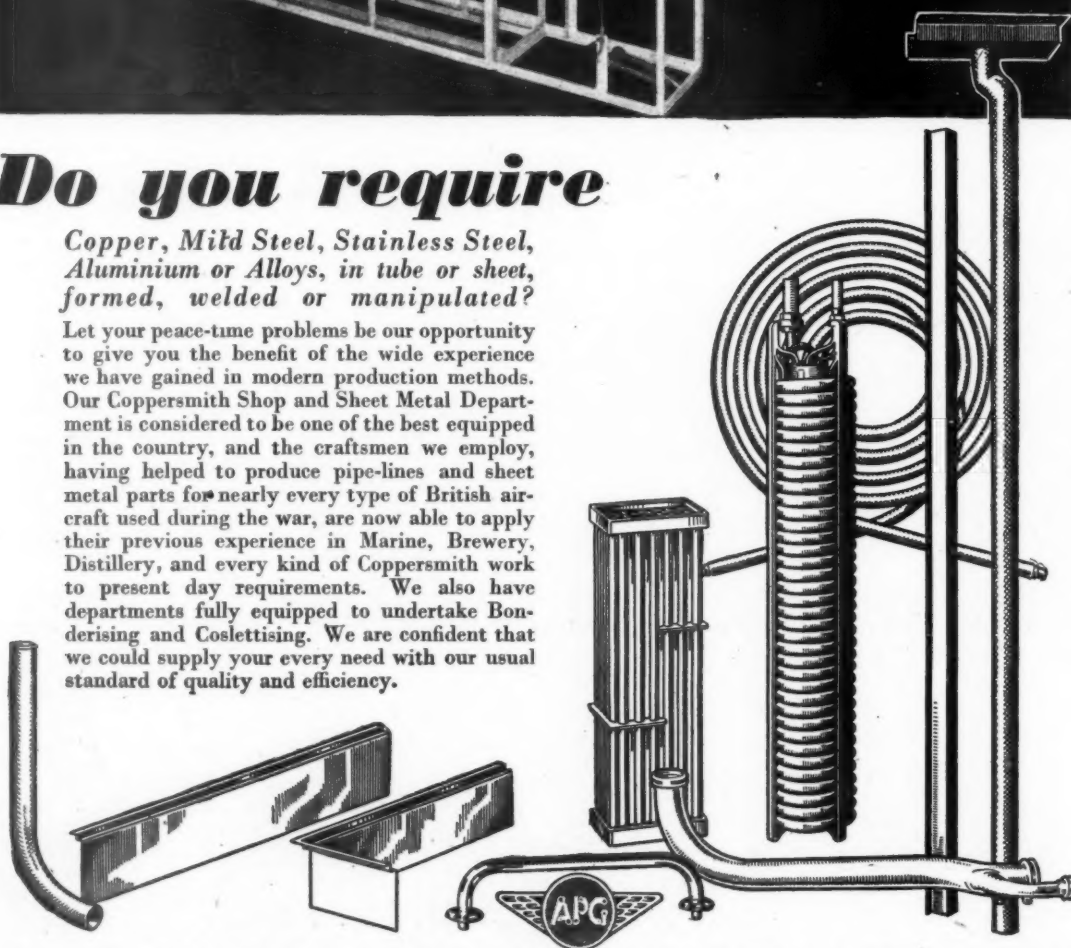
BIRMINGHAM • LONDON • MANCHESTER • GLASGOW



## ***Do you require***

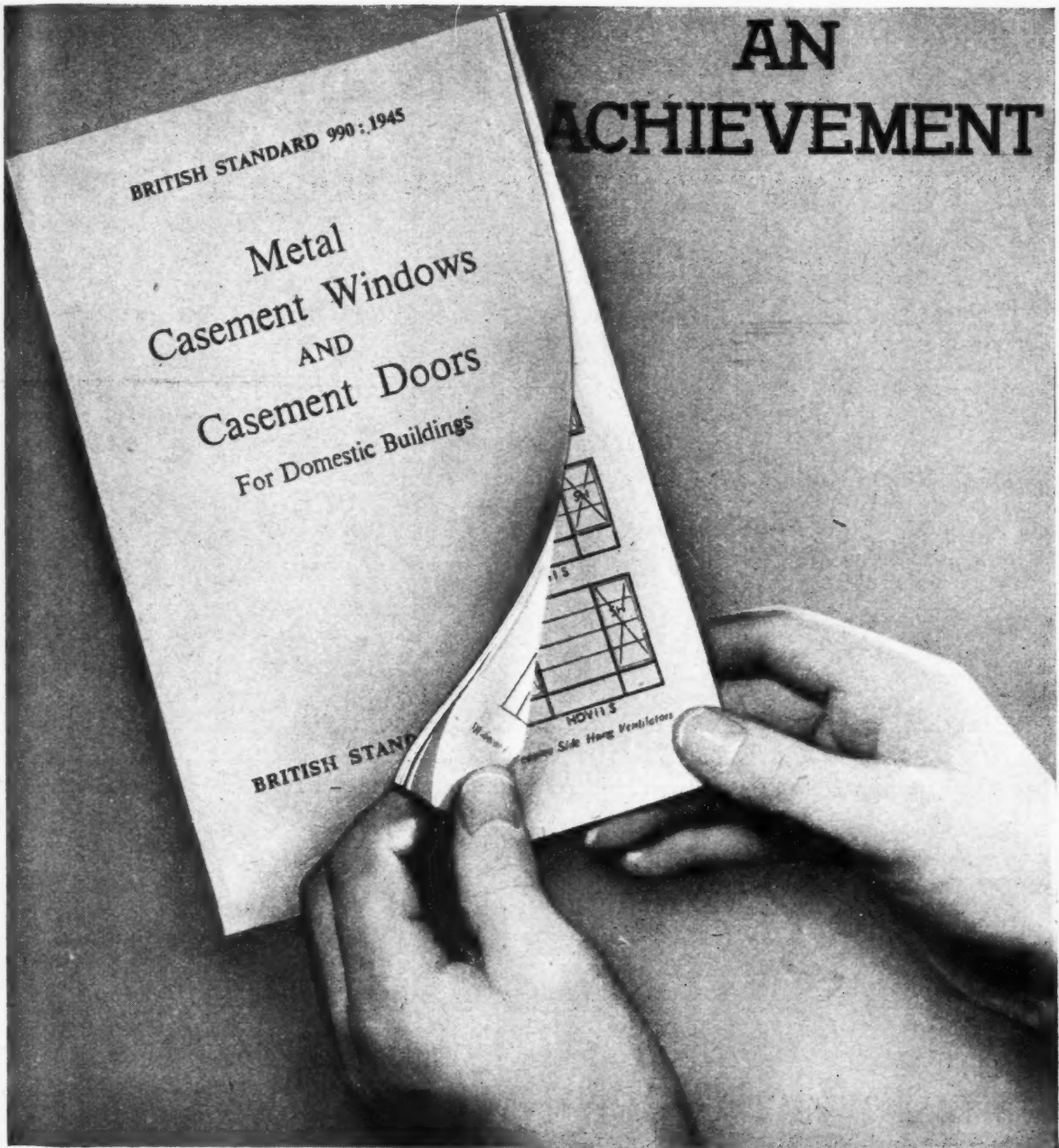
*Copper, Mild Steel, Stainless Steel, Aluminium or Alloys, in tube or sheet, formed, welded or manipulated?*

Let your peace-time problems be our opportunity to give you the benefit of the wide experience we have gained in modern production methods. Our Coppersmith Shop and Sheet Metal Department is considered to be one of the best equipped in the country, and the craftsmen we employ, having helped to produce pipe-lines and sheet metal parts for nearly every type of British aircraft used during the war, are now able to apply their previous experience in Marine, Brewery, Distillery, and every kind of Coppersmith work to present day requirements. We also have departments fully equipped to undertake Bonderising and Coslettising. We are confident that we could supply your every need with our usual standard of quality and efficiency.



**AERO PIPE & GLASS CO. LTD., GENERAL ENGINEERS & COPPERSMITHS  
A.P.G. HOUSE, HARLESDEN ROAD, WILLESDEN GREEN, LONDON, N.W.10**

894-16



This comprehensive Booklet which is now available illustrates the great strides made to provide for the demand for Metal Windows. Specifications have been agreed upon and are now issued as a new British Standard by the British Standards Institution with approval of the Government Departments concerned. These embrace :—

- Uniformity and a high standard of quality
- Interchangeability of parts and fittings
- Limitation of range of types and sizes making for economy in manufacture, easier stock facilities and the consequent speed-up in deliveries.

*Full information on all Metal Window queries and problems from the*

**METAL WINDOW INFORMATION BUREAU,**  
**2, Great Peter Street, Westminster, S.W.1.**

## DESIGN OF EVERYDAY THINGS IN THE HOME A COMPETITION FOR YOUTH

# £1500 "The Shapes of Things to Come"

### *In Prizes*

Presented by  
W. H. SMITH & SON'S  
ADVERTISING  
AGENCY

Closing date March 31, 1946

EMPLOYERS  
are invited to organise  
Staff Entries

A competition under the above title has been organized by the Central Institute of Art & Design, the National Gallery, London, at the invitation of W. H. Smith & Son, so that British youth may express to manufacturers their ideas for the design of domestic furniture and equipment. Entries will be judged solely on the merits of the ideas presented. Open to British subjects of either sex, under 30 years of age, including members of H.M. Forces. No entrance fee.

*Write, enclosing stamp with addressed envelope, for prospectus and entry form to :*

**CENTRAL INSTITUTE OF ART AND DESIGN**  
P.O. Box No. 213, 9 KEAN STREET, LONDON, W.C.2

FOR YOUR POST-WAR RECONSTRUCTION

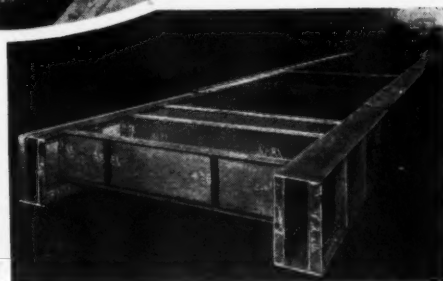
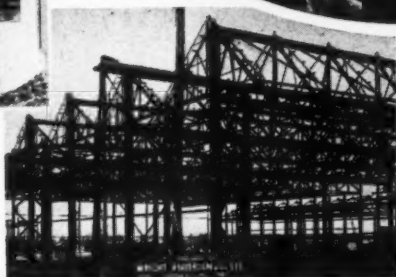
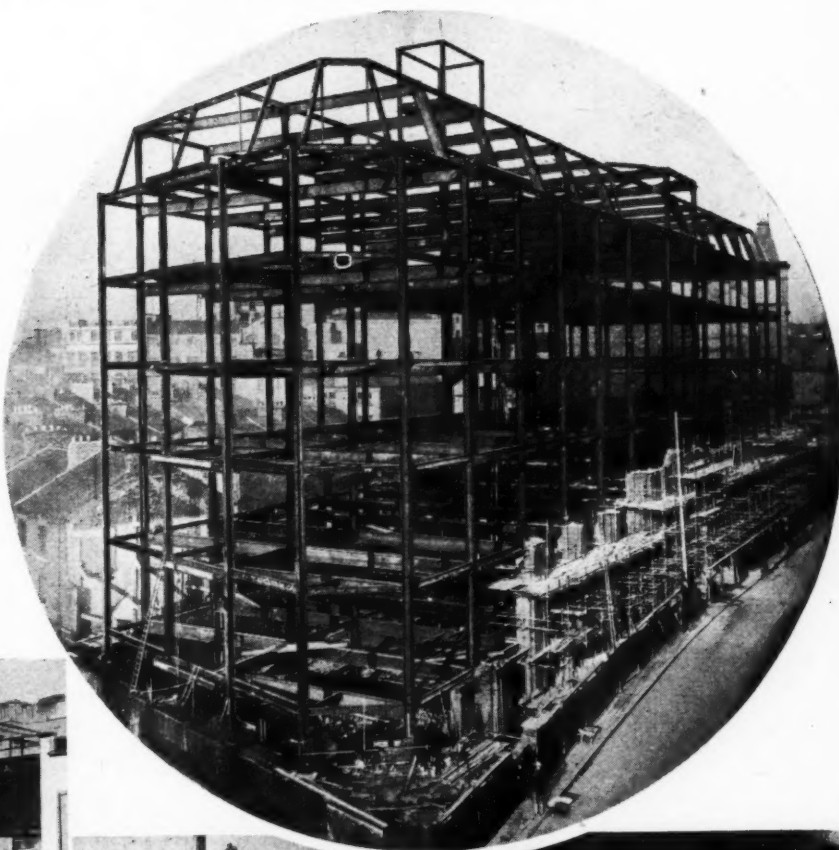
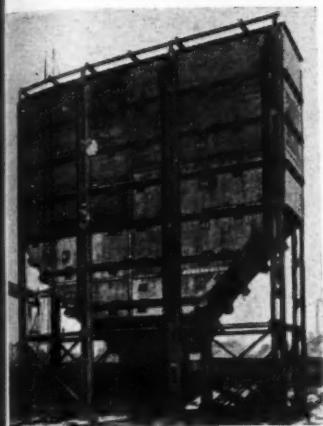
**FREDERICK RESTALL L<sup>TD.</sup>**  
**GT. HAMPTON STREET**  
**BIRMINGHAM, 18.**

★ FLUSH DOORS OF ALL TYPES WILL AGAIN BE  
OUR SPECIALITY AS PRE-WAR.

TEL. : NORTHERN 2252



# LIGHT, MEDIUM & HEAVY STRUCTURES (WELDED OR RIVETED)



If you are delaying a decision to proceed with reconstruction because your present output flow must not be diminished, we can assist you to carry out the necessary work without interference with your production.

We are fully organized to deal promptly and efficiently with LIGHT, MEDIUM and HEAVY STRUCTURES, BRIDGE WORK, TANKS, TOWERS and CRANES (welded or riveted). Your enquiries for all types of constructional engineering are invited. Our staff of experienced designers and engineers are at your service.

Send your enquiries to the General Manager  
**WRIGHT, ANDERSON & CO. LTD.**  
 Constructional Engineers and Bridge Builders,  
 GATESHEAD, Co. DURHAM.

Telephone: Gateshead 72246 (3 lines).  
 London Office: Regent House, Kingsway, W.C.2.

Telegrams: "Construct, Gateshead."  
 Telephone: Holborn 9811.



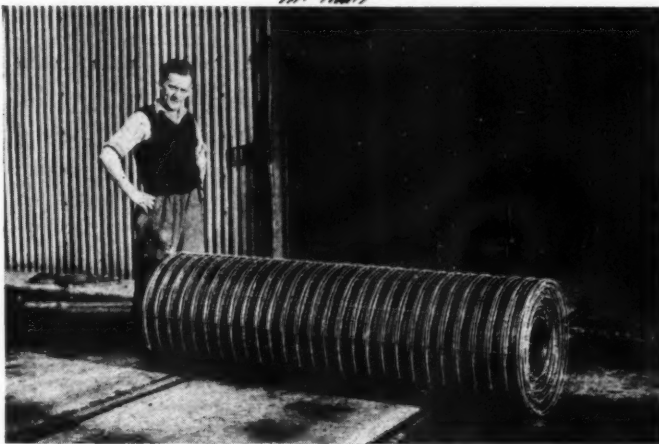
Contractors to:—Admiralty, War Office, Air Ministry, Ministry of Works, Crown Agents for the Colonies.



*Well held  
by the Ferrocon Weld*

**FERROCON**

WELDED REINFORCEMENT



*A few of our specialities*

- Welded Fabric Sheets and Rolls.
- Reinforcement Welded Frames for Beams and Columns.
- Welded Mesh for Fencing.
- Welding Specialists.

*product  
of the*  
**FÉRROCON  
ENGINEERING**  
*Co Ltd*

HIGHFIELD ROAD LEVENSHULME  
MANCHESTER 19  
TELEPHONE: RUSHOLME 3355/6



## **Chimney after chimney . . . built with PHORPRES bricks..**

For many years now the leading firms of industrial chimney specialists have preferred PHORPRES bricks, and one firm alone (Chimneys Limited) has built 259 industrial chimneys using PHORPRES bricks. This type of structure imposes more severe and fluctuating loads than any other. From footings to cap, a standard of performance must be maintained far in excess of that required in any ordinary building.



### **LONDON BRICK COMPANY LIMITED**

HEAD OFFICE: STEWARTBY, BEDFORD, BEDS.

BIRMINGHAM OFFICE: PRUDENTIAL BUILDINGS, ST. PHILIP'S PLACE, BIRMINGHAM, 3.

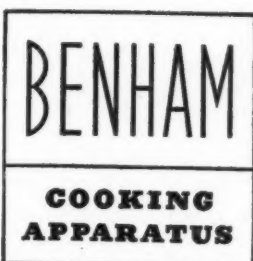
BRISTOL DEPOT: ASHLEY HILL GOODS DEPOT (G.W.R.) ASHLEY HILL.

Telephone: KEMPSTON 3131

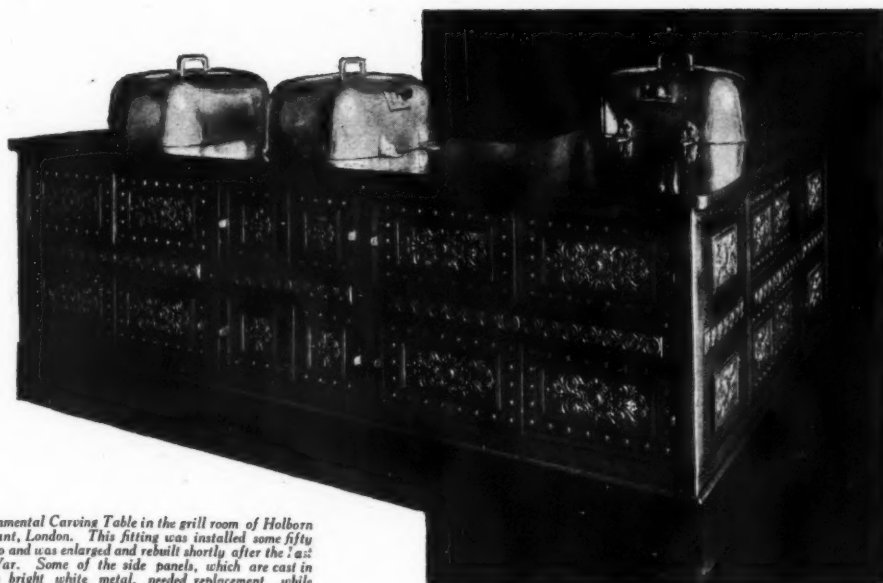
Telephone: COLMORE 4141

Telephone: BRISTOL 46572





## Architecture in Catering Equipment



*An Ornamental Carving Table in the grill room of Holborn Restaurant, London. This fitting was installed some fifty years ago and was enlarged and rebuilt shortly after the 1st Great War. Some of the side panels, which are cast in relief in bright white metal, needed replacement, while others had to be specially made.*

ACCORDING TO THE DICTIONARY, Architect, amongst other meanings, refers to "any maker or contriver," which is an excuse for the use of the word "architecture" as applied to the design of catering equipment. Many architects from time to time have commented on design of Benham equipment, and here criticisms are obviously academic rather than from the design point of view as we know it. Occasionally one comes across beautiful fittings made in the past which have been designed by the real artist; unhappily, to-day such individuality is impracticable, so that our "architecture" is simple, essentially functional and carried out under entirely different production conditions. The use of heavy cast iron with its ugly ornamentation disappeared many years ago, and cornices too, mainly because they served no useful purpose, have likewise gone. Before many months have passed architects engaged on jobs where there are kitchens will have in Benham equipment post-war designs embodying beauty without those embellishments which were wont to be added to otherwise first-class apparatus; we believe, too, that architects will approve their modern clean appearance. The apparatus, as has always been Benham policy, will be for heavy duty, designed with a view to reducing maintenance costs, the importance of which is so frequently overlooked.

**BENHAM & SONS Ltd. 66 Wigmore Street, LONDON, W.1**

TELEPHONE: WELbeck 9253

BRANCHES: BOURNEMOUTH, MANCHESTER, BIRMINGHAM, BRIGHTON, CARDIFF, DUBLIN, GLASGOW.



## *A practical suggestion*

IF you want extensions to your offices and other buildings, and cannot expand horizontally, REYNOLDS Hyduminium Light Alloys enables you to "go up one" - by adding another storey to existing buildings **WITHOUT NEED FOR MAJOR STRUCTURAL ALTERATIONS.** So - if your ground area is restricted, consider - with the aid of Reynolds Light Alloy structural materials - the matter of additional extensions, vertically.

It is perfectly practical, as your co-operation with Reynolds Technicians will prove

Write us.

# REYNOLDS



REYNOLDS TUBE CO. LTD. (Light Alloy Division)  
REYNOLDS ROLLING MILLS LTD., BIRMINGHAM, II.



The White House, Regent's Park, London

Robert Atkinson, F.R.I.B.A., Architect

Sir Lindsay Parkinson & Co., Ltd., General Contractors

Reinforced concrete frame and foundations designed and constructed by The Trussed Concrete Steel Co., Ltd.



# TRUSCON

*a complete service  
in Reinforced Concrete*

**THE TRUSSED CONCRETE STEEL CO., LTD.**

6, Collingham Gardens, Earls Court, London, S.W.5

Telephone: FRObisher 8141

Also at Manchester • Newcastle-on-Tyne • Birmingham • Glasgow • Cardiff

**INSIST ON THE**  
*Cromalin*  
*Finish*

**IN YOUR  
SPECIFICATION**

**BUT...**



We are heavily committed at the present time, and our available capacity for Plating is as indicated below.

Our usual good advice on all plating problems is of course still "unrationed." Ring NOR. 1351.

We shall be pleased to help you.

**SPECIALISTS IN ELECTRO DEPOSITION ON ALUMINIUM.**

**DECORATIVE FINISHES:—**

1. Chromium on aluminium	-	-	-	Capacity available March.
2. Chromium on other Metals	-	-	-	Capacity available June.
3. Colour anodising	-	-	-	Capacity available immediately.
4. Silver on all metals	-	-	-	Capacity available March.

**PROTECTIVE FINISHES:—**

5. Zinc and passivating	-	-	-	Capacity available immediately.
6. Cadmium	-	-	-	" " "
7. Tin	-	-	-	Capacity available March.
8. Anodising	-	-	-	Capacity available immediately.
9. Nickel	-	-	-	" " "

**ENGINEERING PURPOSES:—**

Hard Chromium	-	-	-	Capacity available immediately.
Heavy Nickel	-	-	-	Capacity available June.
Heavy Copper	-	-	-	Capacity available immediately.
Heavy Silver	-	-	-	Capacity available immediately.

*Consult the plating specialists*

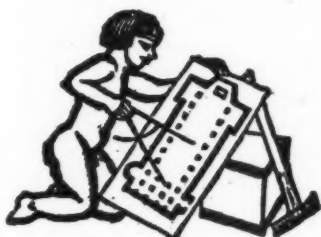
**CROMALIN**  
UN T A R N I S H A B L E

METAL FINISHES LTD., CROMALIN WORKS, NEW SPRING STREET, BIRMINGHAM, 18



In common with every other periodical this JOURNAL is rationed to a small part of its pre-war needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the JOURNAL. Newsagents now cannot supply the JOURNAL except to a "firm order."

Subscription rates: by post in the U.K. or abroad, £1 15s. od. per annum. Single copies, 6d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage 1s. extra. Goods advertised in the JOURNAL and made of raw materials now in short supply, are not necessarily available for export.



# NEWS

THURSDAY, JANUARY 31, 1946  
No. 2662. VOL. 103

News .. .. .	99
Brazil's Latest .. .. .	100
This Week's Leading Article .. .. .	101
Astragal's Notes and Topics .. .. .	102
Letters from Readers .. .. .	103
Some New Architecture in Brazil, Trends Discussed and Examples described by Sidney Loweth .. .. .	105
Information Centre .. .. .	114
Societies and Institutions .. .. .	116

Though no feature in the JOURNAL is without value for someone, there are often good reasons why certain news calls for special emphasis. The JOURNAL's starring system is designed to give this emphasis, but without prejudice to the unstarred items which are often no less important.

★ means spare a second for this, it will probably be worth it.

★★ means important news, for reasons which may or may not be obvious.

Any feature marked with more than two stars is very big building news indeed.

★  
**The Ministry of Works has let THE FOUNDATIONS CONTRACT OF THE CHAMBER OF THE NEW HOUSE OF COMMONS to Messrs. Trollope and Colls, Ltd. Tenders for the superstructure contract will be invited at a later date.**

**The Ministry of Health has decided upon the maximum amounts of TIMBER TO BE USED FOR NEW DWELLINGS erected by local authorities.**

The Ministry of Health has decided that, except as regards softwood for multiple tenement flats, the maximum amounts of timber for all purposes which can be allowed for new dwellings erected by local authorities should be as follows:—(a) Softwood, two standards per 1,000 superficial ft. floor area; (b) Plywood, 450 sq. ft. per dwelling; (c) Hardwood, 10 cu. ft. per dwelling. The Minister is satisfied that it will often be possible to use less than the permitted amounts of timber without detriment to sound and efficient building, e.g., in connection with special methods of construction in floors and roofs; and savings should be effected wherever possible. The softwood requirements for multiple tenement flats will be dealt with on the merits of each particular scheme. As regards hardwood, sufficient home-grown hardwood for a 10-ft. length per house of close-boarded fencing, not exceeding 6 ft. in height, may be allowed, as an extra to the amount specified in paragraph 2(c) in special cases, to give privacy. Timber Control Area officers can sanction home-grown hardwood fence posts for site enclosure.

## DIARY FOR FEBRUARY MARCH AND APRIL

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first. Sponsors are represented by the initials as given in the glossary of abbreviations on the front cover.

**BLACKPOOL.** *Annual General Meeting of the Federation of Master Builders.* FEB. 25-27

**FLEETCHING, NALGO Exhibition.** At Sussex Parsonage Farm. (Sponsor, BIAE.) JAN. 31

**LONDON.** Hugh Casson. *A Visual Policy for Town Planners.* At the International Arts Centre, 3, Orme Square, Bayswater Road, W.2. (Sponsor, IAC.) 8 p.m. FEB. 1

*Federation of Master Builders. Luncheon Meeting preceding Annual General Meeting.* At the Connaught Rooms, Great Queen Street, W.C.2. Guest of Honour, the Rt. Hon. G. Tomlinson, M.P., Minister of Works. (Sponsor, Federation of Master Builders.) 1 p.m. FEB. 4

H. M. Llewellyn, of the Building Research Station. *Painting Plastered Surfaces.* ASB Lecture at the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 5.45 p.m. FEB. 6

Mrs. M. D. Gillies. *American Domestic Architecture.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) 4 p.m. FEB. 8

Professor J. D. Bernal. *Science in Architecture.* At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. FEB. 12

Professor G. I. Finch. *Scientific Adviser to the Ministry of Home Security. The Need for Scientific Research into the Prevention and Extinction of Fires.* At the Royal Society of Arts, John Adam Street, W.C.2. (Sponsor, RSA.) 1.45 p.m. FEB. 13

Frederick Gibberd. *Design and Prefabrication.* At the London School of Hygiene, Gower Street, W.C.1. (Sponsor, DIA.) 7 p.m. FEB. 13

*Annual Luncheon of British Refrigeration Association.* At Connaught Rooms, Great Queen Street, W.C.2. Principal Guest, Rt. Hon. John Wilmot, M.P., Minister of Supply. 12.45 p.m. for 1.15 p.m. FEB. 14

A. G. G. Thompson, Medical Officer of Health for Lambeth. *Land Utilization in Relation to the Public Health.* Chadwick Public Lecture. At the Royal Society of Tropical Medicine and Hygiene, 26, Portland Place, W.1. 2.30 p.m. FEB. 19

Max Lock. *Surveys and Their Practical Application to Planning.* At the Livingstone Hall, Broadway, Westminster, S.W.1. (Sponsor, TPI.) 6 p.m. FEB. 21

Miss Jacqueline Tyrwhitt. *Planning in Canada.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1-15 p.m. FEB. 21

Stormont Murray. *Eric Gill; His Life and Work.* At the International Arts Centre, 3, Orme Square, Bayswater Road, W.2. (Sponsor, IAC.) 8 p.m. MAR. 1

J. F. Bickerton and Petros Protopapadakis. *Layout of Passenger Stations.* At the Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, ICE.) 5.30 p.m. FEB. 26

*Solid Smokeless Fuel Appliances for Domestic Heating Services Exhibition.* At the Horticultural Hall, Vincent Square, S.W.1. The exhibition is being designed by Ian Jeffcott. (Sponsor, Solid Smokeless Fuels Federation.) MARCH

Maurice B. Reckitt. *The Polls and the Citizen.* At the Town and Country Planning Association, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) 1.15 p.m. MAR. 7

G. L. E. Metz and R. L. Davies. *The Electrical Engineering Industry in The Post-War Economy.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5.30 p.m. MAR. 7

**SOUTHEND-ON-SEA.** R. Nicholas. *Town Planning for The People's Needs.*

Third of six lectures on Town Planning and Housing at the School of Art, Dowsett Avenue. Fee for students enrolled in other courses this season, 2s. 6d. New students, 5s., or 1s. per meeting. (Sponsor, Southend-on-Sea Municipal College.) 7.15 p.m. FEB. 4

Paul Mauger. *Neighbourhoods and Homes.* Fourth of six lectures on Town Planning and Housing at the School of Art, Dowsett Avenue. Fee for students enrolled in other courses this session, 2s. 6d. New students, 5s., or 1s. per meeting. (Sponsor, Southend-on-Sea Municipal College.) 7.15 p.m. FEB. 11

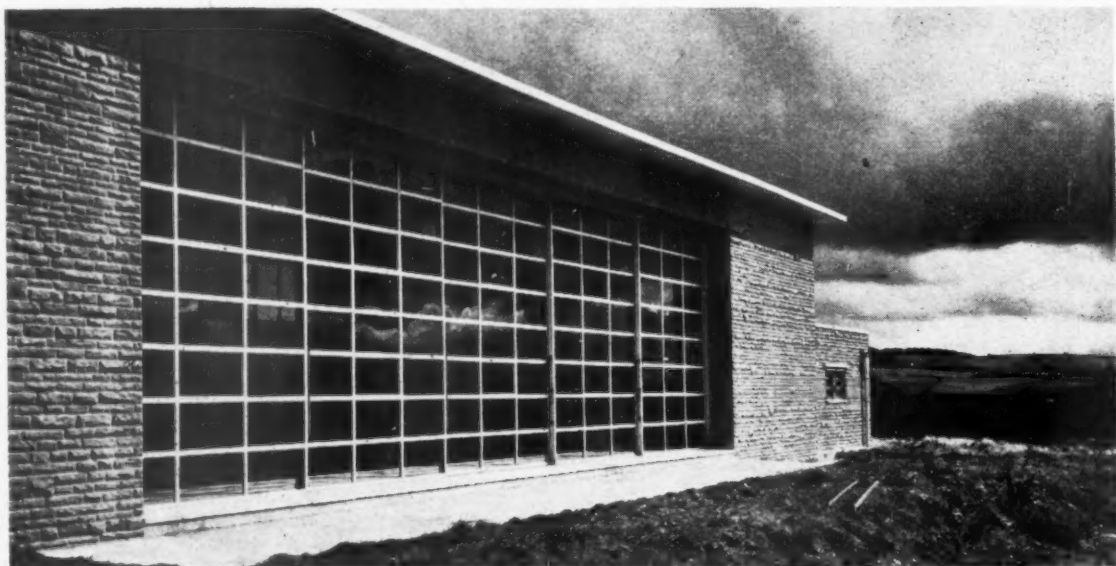
Miss Elizabeth Denby. *Houses and Homes.* Fifth of six lectures on Town Planning and Housing. At the School of Art, Dowsett Avenue. (Sponsor, Southend-on-Sea Municipal College.) 7.15 p.m. FEB. 18

W. R. Arnold Whittick. *How Can All This be Managed?* Last of six lectures on Town Planning and Housing. At the School of Art, Dowsett Avenue. (Sponsor, Southend-on-Sea Municipal College.) 7.15 p.m. FEB. 25

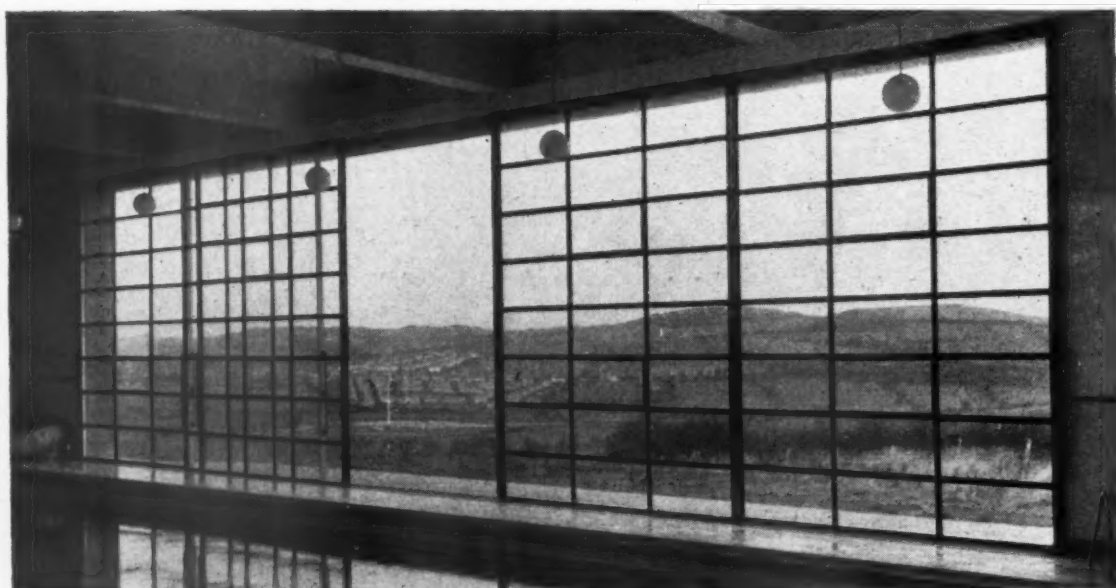
**WINCHESTER.** *Englishman Builds Exhibition.* At Hampshire Guildhall. (Sponsor, BIAE.) JAN. 29-FEB. 3

*Rebuilding Britain Exhibition.* At Hampshire Guildhall. (Sponsor, BIAE.) JAN. 31-FEB. 3

**YORK.** *NALGO Exhibition.* At Holgate Hill Settlement. (Sponsor, BIAE.) FEB. 10-23



UNIVERSITY COLLEGE OF WALES, ABERYSTWYTH—NEW SWIMMING BATH  
PERCY THOMAS, O.B.E., HON. LL.D., P.R.I.B.A.



# HOPE'S *Hot-dip* *Galvanized* WINDOWS

HENRY HOPE & SONS LTD., Smethwick, Birmingham  
LONDON: 17 Berners Street, W.1

## From AN ARCHITECT'S Commonplace Book

ON THE TENEMENT. [From An Autobiography by Frank Lloyd Wright (Faber and Faber).] Along with such skyscraper solution-by-picture of uptown confusion worse confounded as this modernistic myopia, there now goes the vexing problem of the tenement. This extensive would-be beneficent government "housing of the poor." Yes, the poor are not only to be with us always, but the poor are to be recognized and multiplied *per se* as such . . . The poor are to be built in . . . That the poor will benefit by increased sanitation may be granted at a glance. But, not only are the living quarters of the poor to be more germ-proof, but life itself where individual choice is concerned is to be rendered antiseptic. If we trust our eyes . . . And the poor man's life is to become just as the rich man's office—No. 36722, block 99, shelf 17, entrance K, with a few twists and turns thrown in to distract attention from the fact. The "poor" man gets a bath-tub and a flower-box, a patch of lawn, but what Freedom to say and believe what he says, were he to say his soul is his own? Yes, there he is, the poor man. No longer in a rubbish heap. No. Nor can the poor—thus made surface-and-mass of the great institution of poverty individually (or collectively for that matter) choose anything aesthetically alive to live with. At least not if neighbours and landlords can see that he has it. But the "social" objective is attained . . . the dirty rags of the poor have been temporarily covered from sight by a clean smock.

★★

On January 15 the RIBA Council ratified its decision taken at the meeting held on October 16, 1945 to revise clause 7 of the scale of PROFESSIONAL CHARGES, by the substitution of the word seven for the word five.

The Clause now reads as follows:—7. Time Charges. In cases in which charges are based upon time occupied the minimum fee is seven guineas per day exclusive of charges for Assistant's time.

### Mr. Chi Ziang Chen, B. Arch., Liverpool, is TO REPLAN PEIPING, CHINA.

Mr. Chi Ziang Chen, who has been studying architecture and town-planning in Britain as a British Council scholarship-holder, has been appointed Senior Technical Expert in charge of the replanning of the city of Peiping and will be leaving for China to take up his appointment as soon as possible. Mr. Chen, who is 29, is a native of Fenghua, Chekiang Province. He took the degree of B.A. (Architecture) and the Diploma of Civic Design at the University of Liverpool School of Architecture, and was President of the University Architectural Society. He has since been studying town-planning under Professor Sir Patrick Abercrombie at University College, London. He has drawn up plans for the rebuilding of the blitzed areas of Liverpool's Chinatown which are under consideration.

★

### The Association of Building Technicians has won an important REINSTATEMENT case at Bournemouth.

An important case, said to be the first of its kind, was decided by the Reinstatement Committee at Bournemouth on January 17. Mr. Wilfred Albert Summers, a quantity surveyor in the Borough Engineer's Department of the County Borough of Bournemouth and a member of the Association of Building Technicians, applied under the Reinstatement in Civil Employment Act, 1944, for reinstatement in the employment which he had before he entered upon war

service. The case was taken up by the Association of Building Technicians, and Mr. Stephen Murray appeared as Counsel for Mr. Summers. The Bournemouth Corporation was presented by Mr. Morris, Assistant Solicitor to the Corporation. Evidence was given that Mr. Summers had been employed from 1937 to August, 1939, as a quantity surveyor, his salary in 1939 being £350 per year. He was called up in the Territorial Army in August, 1939 and was demobilized in October, 1945. Upon applying for reinstatement the Borough Engineer offered him his pre-war salary plus £59 16s. 0d. cost-of-living bonus (which was applicable to all employees of the Corporation). It was contended for Mr. Summers that had he remained in employment instead of going into the army he would have had rises of salary taking him up to £450 per year, plus cost-of-living bonus. It appeared that other employees in the Borough Engineer's Department who were junior in service to Mr. Summers had had their salaries substantially increased during the war owing to an increase in the responsibilities put upon them. The Committee found that the former employers had not discharged their obligations under the Act, Section 4 (1), as to terms and conditions. The Committee ordered that the County Borough of Bournemouth should make employment available to Mr. Summers upon the following terms and conditions, viz.: that as from January 18, 1946, the County Borough of Bournemouth should pay to the applicant a salary

of £450 per year plus cost-of-living bonus of £59 16s. 0d. The Committee further ordered that the County Borough of Bournemouth should pay to Mr. Summers the sum of £20 by way of compensation for the loss suffered by him. Leave was given to appeal.

★

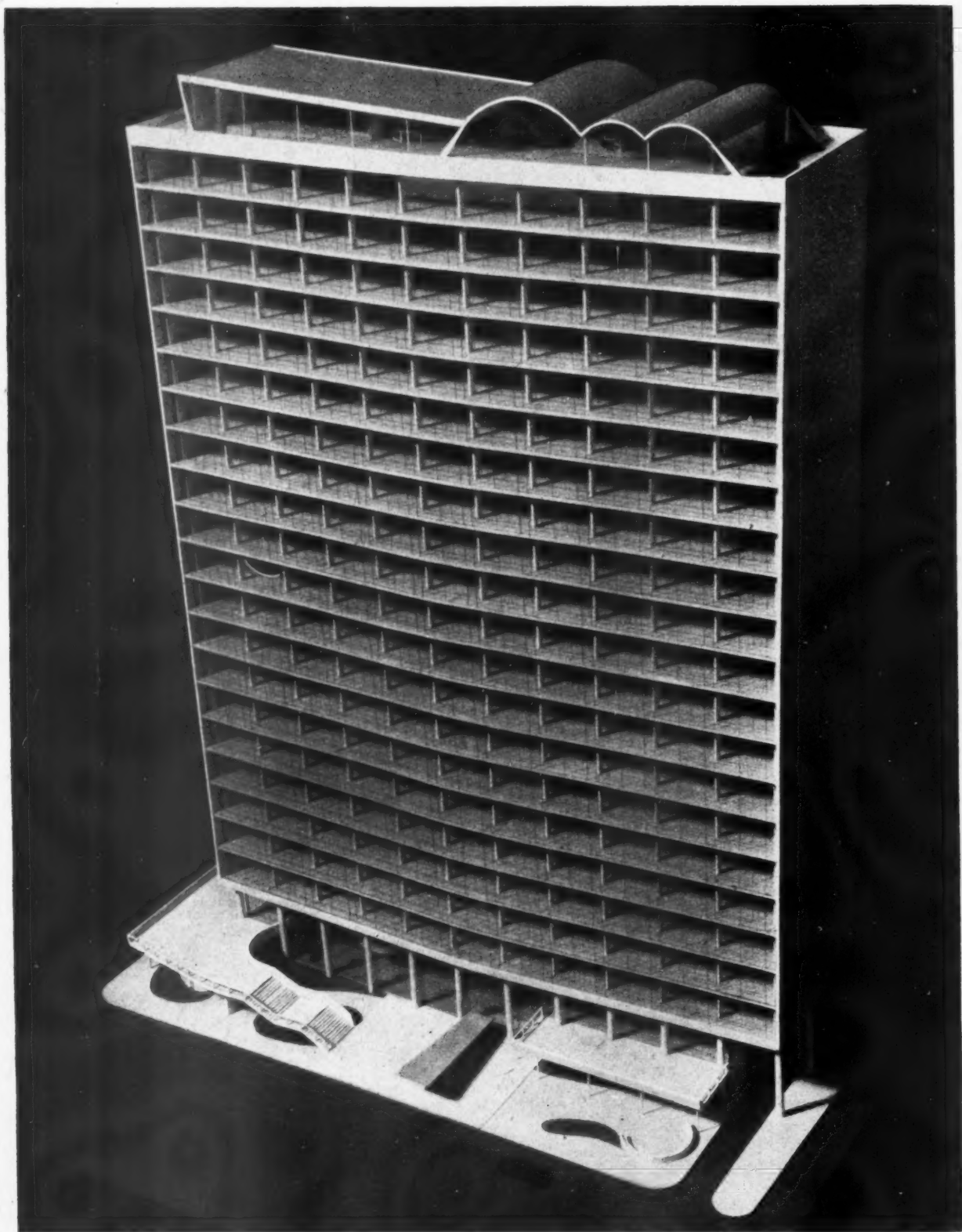
### The Board of Trade is proposing to lay an Order before Parliament in the near future with a view to SCHEDULING TWO NEW AREAS AS DEVELOPMENT AREAS under the Distribution of Industry Act.

The areas concerned are: 1. The Borough of Wrexham and certain adjoining districts. 2. The county boroughs of Wigan and St. Helens and certain nearby districts. The Wrexham Development Area, it is suggested, should be managed by the existing Welsh Trading Estate Company under the Chairmanship of Col. Gerald Bruce, who will make suitable arrangements for local representation. An entirely new Government-financed Trading Estate Company is proposed to manage the Wigan St. Helens Development Area, and Mr. George Gibson has consented to become the Chairman. Mr. Gibson is Chairman of the North West Regional Board of the Board of Trade.



Greenlands, Henley-on-Thames, has been offered by Lord Hambledon and accepted by the Governors of the new Administrative Staff College. Built for the greater part in 1871, the house faces an unspoiled stretch of the Thames. At the Staff College, young administrators from the Civil Service, local government service, industry and trades unions who give promise of becoming future leaders, will acquire a knowledge of the basic principles of leadership, organization and administration and an insight into the methods and ideas of each other.





## Brazil's Latest

Model of the design for the central offices of the Rio Grande do Sul Railway soon to be erected in Rio. The design, a competition winner, is by Reidy and Moreira. Brazil is having something of an architectural renaissance, other recent examples of which are illustrated in this week's issue. As can be seen, the principal material is reinforced concrete,

and the intelligent and up-to-date codes of practice and by-laws governing its use are important factors in forming the characteristic light and elegant plasticity of contemporary architecture in Brazil. That we have something to learn from that country in this respect is pointed out in this week's leading article.

At  
of  
IN  
fol  
of  
Com  
Beat  
Eric  
Hav  
land  
tive:  
Dutt  
berd  
O'R

★★  
Mid  
era  
AC  
MA  
It v  
mean  
the  
mov  
Lab  
(1)  
Max  
Coun  
struc  
brou  
(2)  
the  
cial  
obta  
chan  
the  
(3)  
new  
tatio  
subj  
fict  
rese  
Lock  
illus  
Aug

The  
A s  
a  
P M  
MA  
A M  
the  
has  
Buil  
in a  
Assc  
prob  
of t  
and  
meet  
requ  
elev  
tive,  
by t  
mitt  
J. A  
are  
Coo  
Com  
a m  
G. I  
repr  
matt  
esta  
save  
mitt  
adv  
to  
Mai  
itse  
reco  
will



At the annual general meeting of the SOCIETY OF INDUSTRIAL ARTISTS the following were elected members of the new Council:

Commercial Design Executive: Leonard Beaumont, Beverley Pick, Jesse Collins, Eric Fraser, James Fitton, A.R.A., Ashley Havinden, F. H. K. Henrion, James Holland, Pat Keeley. Industrial Design Executive: Misha Black, Wells Coates, Norbert Dutton, T. A. Fennimore, Frederick Gibberd, Enid Marx, Keith Murray, Brian O'Rorke, R. D. Russell, Allan Walton.

★★

**Middlesbrough Corporation General Purposes Committee has ACCEPTED THE MAX LOCK MASTER PLAN in principle.**

It was made clear that acceptance did not mean agreement necessarily to all details of the proposals. The accepted resolution moved by Ald. E. Turner, leader of the Labour Group, was as follows:

(1) That the master plan prepared by Mr. Max Lock be accepted in principle by the Council as the guide for the future reconstruction and development of Middlesbrough.

(2) That in the implementation of the plan, the Council shall have regard to the financial resources and physical circumstances obtaining from time to time, and any future changes in the duties and responsibilities of the Council.

(3) That the areas zoned in the plan for new houses be approved, and the implementation thereof proceeded with immediately, subject to any variations which do not conflict with No. 1 and subject to the general reservations contained in No. 2. (The Max Lock Master Plan was fully described and illustrated in the *Architects' Journal* for August 2, 1945.)

**The London Master Builders Association has set up a committee to consider the PROBLEMS OF THE MAINTENANCE BUILDER.**

A Maintenance Builders' Committee, under the chairmanship of Mr. Phillip Smallwood, has been set up by the London Master Builders' Association. It has been formed in answer to a demand from some of the Association's members that their particular problems, differing as they do from those of the contract builders, the house-builders, and the many other types of builders who meet round the Council table of the LMBA, require special consideration. Each of the eleven areas has nominated a representative, and the committee will be strengthened by two members of the Administrative Committee, Messrs. A. J. Chapman, J.P., and J. A. Birch, with, when contract matters are under discussion, Mr. W. H. Gough-Cooper, the Chairman of the Contracts' Committee. The Committee will meet once a month. Members are still free, said Mr. G. H. A. Hughes, Director of LMBA, to represent points of difficulty on maintenance matters direct to the Association, but the establishment of the new Committee should save much of the Administrative Committee's time by studying the problems in advance and making the recommendations to the Administrative Committee. The Maintenance Builders' Committee will not itself have any executive powers. All recommendations and resolutions from it will go to the Administrative Committee.

## LESSONS FROM BRAZIL

IN this issue we publish an article containing a series of photographs illustrating reinforced-concrete buildings in Brazil. They give impressive evidence of the high standard of architectural design there, particularly in reinforced concrete. When these pictures and others of buildings in Rio were shown in a lecture given by Madame Carmen Portinho, Regional Chief Engineer of Rio, at the IAAS last autumn, some members of the audience found it difficult to believe that the skyscrapers were in reinforced concrete and not in structural steel, so light and elegant was their form. Indeed, it is unlikely that a twenty-storey building would be erected in this country in any other material but structural steel.

The high degree of development of reinforced-concrete technique in South America was the subject of a series of articles recently published in *Engineering News-Record*, the leading USA technical journal.\* One of the reasons for this development is the importation of structural steel to South America, which has stimulated the use of reinforced concrete through competition. In this respect the situation is opposite to that in this country and the USA, where structural steel has an old tradition, and reinforced concrete, as the younger material, has had, and still has, to struggle against a well-entrenched, well-organized and very powerful industry.

This, however, is only one side of the picture. Another formative factor in South America has been the influence of adventurous European architects and engineers who came to Brazil at the time when reinforced concrete was new in that country. Brazil offered them scope and opportunity. Even to-day the textbooks used in the colleges are, for the most part, French and German. South American engineers, moreover, are consistent students of mathematics, and indeterminate design methods are universally used.

A further important factor is the code situation. The engineers of Brazil have organized the ABNT (Brazilian Association of Engineering Codes) and this group has issued the six Brazilian codes on the calculation and erection of structures. These codes are used in all engineering work.

The code favours the use of reinforced concrete and permits many things unheard of in the USA and in this country, although the permissible stresses and specified design loads are not very different. One interesting feature of the Brazilian code is a clause that permits design on the ultimate strength basis. Everyone who has actually used the new method states that it is easier to apply and that a saving in cost follows. It may be of interest to add that in USSR a method based on the ultimate strength is the only one which is in official use. Among other advantages this method gives much greater scope in the use of high tensile steel than is possible through the standard method of design.

It is here that we can learn from Brazil. The influence of

\* See *Inf. Centre* Nos. 1859, 5.4.45: 2043, 9.8.45: 2120, 27.9.45.

a code on building, good or bad, cannot be overestimated. A new Code of Practice for Reinforced Concrete is badly needed, and one is, indeed, now being prepared. It is essential that the new code should be adopted as a National Code and that loads and stresses should not vary with local by-laws. Flexibility and adaptability to technical developments are two other fundamental requirements. It would be regrettable if the new code adhered to the standard method as the only one permissible. There are still voices in the technical press opposing the new method and suggesting instead an increase in permissible stresses as the remedy for the deficiencies of the traditional method of design. This is contrary to the interests both of the public and the reinforced concrete industry. The whole conception of permissible stresses is obsolete and the Brazilian way of tolerating both the old and the new method seems to be a sound compromise between an ultra-conservative adherence to tradition and the Russian way of radical liquidation of a method which apparently still attracts many designers in this country.



*The Architects' Journal*

War Address: 45, The Avenue, Chess, Surrey

Telephone: Vigilant 0087-9

N O T E S

&

T O P I C S

#### CRITIC ON THE HEARTH

The section of the new MOW Study Report by the Heating and Ventilating Reconstruction Committee includes an interesting discussion on the modes of heating private houses and the public's views on the various available methods. Their poll on central heating reminds one of some of the solemn enquiries made by American Universities on the simpler habits of mankind, for example

the one that canvassed America on why people put sugar in their tea.

The answer, because they liked the taste, is very like the answer of those who opt for the open fire. After all, it is the one method of keeping warm in a house that they know best. The surprising thing about the poll is that 34 per cent. of those questioned were in favour of central heating. If the sample chosen was a true average of all householders, it is certain that the number who want central heating far exceeds the number who have it. In short, mankind is conservative and usually prefers what it has, on the general principle that a fire in the hearth is worth ten boilers in the catalogue.

But I doubt if it would be wise to plan our housing on the basis that even 21 per cent., the figure of the poll, is permanently opposed to central heating. True, there is a very attractive quality about a fire and, ideally, an open fire should be classed among the decorative features of the house. For too long now we have mistakenly regarded it as having some utilitarian purpose. It is like the bowl of flowers that all good housewives will have in the living room. A bowl of flowers is utilitarian in the sense that it gives off an agreeable perfume, but if you wish to give a room a definite scent, you buy a mechanical contraption that really will

fill the room with as much scent as you desire. The main purpose of the bowl of flowers is to look nice. So with the open fire.

Almost as a by-product, it does give a sensation of heat to those who sit or stand close to it, but to argue that it really warms the room effectively is to argue against the known facts of life. It does nothing of the kind. Perhaps one day when those dream grates of the Coal Utilization Council come on the market we may have to revise our opinion. Even then the client of sense will sooner forgive the architect the absence of a staircase than overlook the omission of that little boiler and that unobtrusive, but oh so important, string of pipes.

C

Even the architecture of destruction has its orthodoxy. But it isn't often that a bomb sticks to the rules as closely as the one which fell near the church of Navestock, Essex, stripping the weather-boarding off the belfry and leaving the timber frame exposed yet unscathed. Although of course that is exactly what blast ought to do in such a case, it is odd that it should have done it.

The pair of photographs showing the church before and after this demonstration of Teutonic pedantry—surely the second should become a standard textbook illustration?—is taken from the recently published ninth Report of the Central Council for the Care of Churches, which is called *Salving the Art Treasures of the Church* and costs half-a-crown.

Since the last CCCC report was published in 1940, a section of this is devoted to a summary of war damage. The omission from the list of blitzed London churches of St. John's, Smith Square, gave me a moment's disquiet. Remembering the old joke about the supine elephant, which (for some reason best known to the Freudians) gets applied to any building with four towers or four chimneys, could the

Council, I asked myself, have mistaken St. John's for a white one? But reading on I was reassured; CCCC has no prejudices of that sort, A or M.

\*

Other sections make less gloomy reading. There is an account of the Council's photographic survey, so generously contributed to by amateur photographers all over the country, an encouraging tale of derelict churches taken in hand, sensible advice for incumbents on the repair of war

damage, and articles on The Restoration of Ancient Plaster Ceilings, Loudspeakers and Acoustic Problems, and Wall Surfaces.

\*

The last-mentioned, by Dr. F. C. Eeles, reinforces the lesson of painful observation, that what a great many churches need as much as care is cure—cure from the various skin-complaints inflicted on them in the last century. If only the CCCC had existed then, it would not now be so.

ASTRAGAL



*Navestock Church, Essex, before and after air-raid damage. An example of an Essex wood belfry construction from Salving the Art Treasures of the Church. See Astragal's comment.*



## LETTERS

*E. R. B. Roberts*

*Paul Brewster*

*W. C. Leslie Carter, F.S.I*

### Railway Coaches

SIR.—With regard to Astragal's notes on railway coaches. Although the recent questionnaire of the LNER on the design of new coaches showed that 58.2 per cent. of the replies received voted for compartment carriages, as against 40 per cent. who preferred open saloon coaches, the latter figure will undoubtedly be much improved on when the public get more use to them. Saloon coaches are still very much of a novelty on many parts of the lines, and one certainly does not hear of people wanting compartments on motor-coaches, buses and trams.

In North and South American countries, all trains—including suburban—are composed almost exclusively of saloon coaches, with central aisle and reversible seats in pairs, through which passengers can walk much more easily than with our side corridors (which demand an extra partition), from one end of the train to the other, excepting the vans. No connecting doors between coaches are locked. The extra partition hampers people carrying suitcases, etc.

The reversible seats enable four passengers either to face each other, or sit back to front in pairs. In the former case, a space is left between one of the seats and the following one, in which to store small parcels. The reversible seats also overcome



the embarrassing situation, which ladies and American visitors dislike, of having to sit face to face, and almost knee to knee, with people they have never seen in their lives before. Nor can they move to another part of the compartment coach as they can do with the saloon, to escape unwelcome attentions.

A particular advantage of the complete corridor train is that it largely overcomes the difficulty of short platforms, by enabling longer trains to be run. Passengers are able to pass through to coaches standing outside the platform—even after the train has started—and can make their way back to the central coaches to alight at the platform before the train reaches its destination. The fact that a longer train, with more passengers, can be run is, of course, an important consideration to the railway company.

Tickets can also be collected on the train—giving the guards something to do. This not only saves the time of unnecessary ticket-collectors at every station, but makes every station open. One of the reasons for the unpopularity of British railways with the public is, undoubtedly, closed stations. In other countries, even non-travellers enter the stations quite freely, have their breakfasts, lunches, teas and dinners in the refreshment room, and use the cloak-rooms, slot machines and shops, just as though they were on the streets and roads waiting for buses. The platforms of country stations form regular parade grounds in the evenings for young ladies and their beaux. They often make short trips by train, patronise the refreshment rooms, etc. In all these directions much good business is lost by our railways.

In the accident to the Leighton Buzzard train, in which some boys were burnt to death (which would not have happened if the coaches had been saloon-corridor), it was stated that, of the 17 coaches no fewer than five had luggage compartments. The doors between coaches were locked, because the company had no spare guard to keep an eye on the goods. The LMSR alone had received claims for over £1,000,000 of stolen goods. Partitions simply trap passengers in the event of an accident.

In American countries, all parcels and luggage vans are attached to the front of the train. Being inaccessible to passengers, nothing is lost through pilferage. If the train is divided *en route*, it is only a matter



*Avenue of trees on a housing estate at Ewell, Surrey. See letter from Paul Brewster.*

of shunt to detach the van corresponding to the left part. Much of the traffic carried in these vans abroad consists of what is called *smalls* goods in England. A couple of men travel in the vans and sort the traffic for its quick unloading at the next station.

Reverting to the American saloon coaches, some of them have a partition (with door) across the centre—dividing it for ladies or non-smokers. A compartment corridor coach is also attached to some trains. This is called a family coach. Anyone can reserve a compartment by paying for five out of the six seats. As fares are only about one-third what they are in England, the expense does not amount to much.

Public interest in our railways would undoubtedly also be revived by altering the drab appearance of locomotives and coaches, by painting them brighter and more cheerful colours—similar to motor-coaches, which get much dirtier on the roads. The interest of every child—young or old—would be stimulated, and start them inventing names for their favourite trains—Blue Bird, Red Dragon, White Lady, Yellow Peril, etc.

Still another improvement would be the introduction of double-decked coaches, which are actually used on some railways abroad. Although this would demand the raising of some bridges and tunnels by two or three feet, the task would be small compared with the original one of constructing them, when traffic to meet the interest on the cost were insignificant compared with those available to-day. The carrying capacity of suburban lines, in particular, would be doubled. Overcrowding would be avoided, and season-ticket rates cut by half—thus reducing the heavy toll of accidents by drawing traffic off the streets and roads of every large town. An ordinary railway train can carry more passengers than 20 double-deck motor-buses. Consequently, its fares and season-ticket rates should be less than half as much.

St. Neots.

E. R. ROBERTS.

## Trees in Cities

SIR.—With regard to your frontispiece *Trees Create Street Unity*, I would like to point out that gracious avenues of spreading trees are a feature of a housing estate at Ewell, Surrey, planned by Davis Estates, whose policy it is that every estate should have a garden atmosphere.

Where there are existing trees and shrubs, the estate is as far as possible planned and built round them; and where there are no trees, they are planted. Most suitable are flowering trees which are not too tall—averaging 20-25 feet—so that they do not overshadow the houses.

At the company's estate at Vernon Drive, Harrow Weald, it was feared that a row of majestic elms would have to be condemned. Experts were called in by Davis to examine them and they were then carefully and skilfully pruned. To-day the elms line one of the most pleasant roadways on the estate.

When an estate was laid out at Petts Wood, numbers of the original beautiful silver birches were saved and they still flourish on the grassy verges of the roads.

Few trees grew on the site which the company acquired at Hampton Court. This estate fringes on a by-pass, and a screen of trees was planted to cut it off from the main road. Flowering cherry trees and shrubs give the estate a gardenlike setting.

The company reserve an open space on an estate wherever it is practicable and plant it out as a communal garden. This is paid for by the company and the complete garden then offered to the appropriate local authority. In the past this gesture has been greatly appreciated by progressive councils.

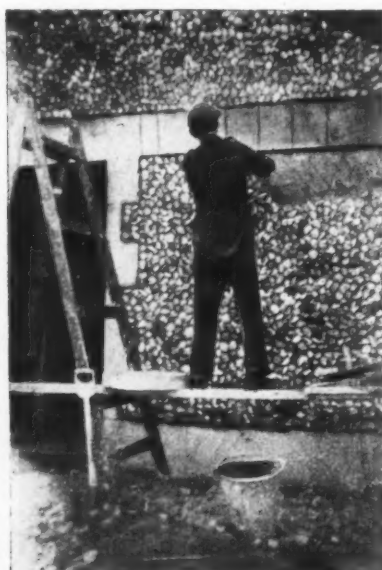
Before the war competitions were held among the owners of Davis Houses for attractive front gardens, and the company offered substantial cash prizes. These competitions will be revived when conditions allow.

A housing estate, Mr. Arthur Davis maintains, should be more than a collection of houses, it should be a pleasant place to live in. It should, in fact, be a garden estate. London.

PAUL BREWSTER



*Left, staircase at Lyme Regis and right, craftsman pushing stones into the wet rendering. See letter from W. C. Leslie Carter.*



## Labour Shortage

SIR.—When I was on holiday I was very much intrigued to see this very fine staircase being built (see photographs), especially as it leads off the front at Lyme Regis to a sort of derelict platform about fifteen feet square.

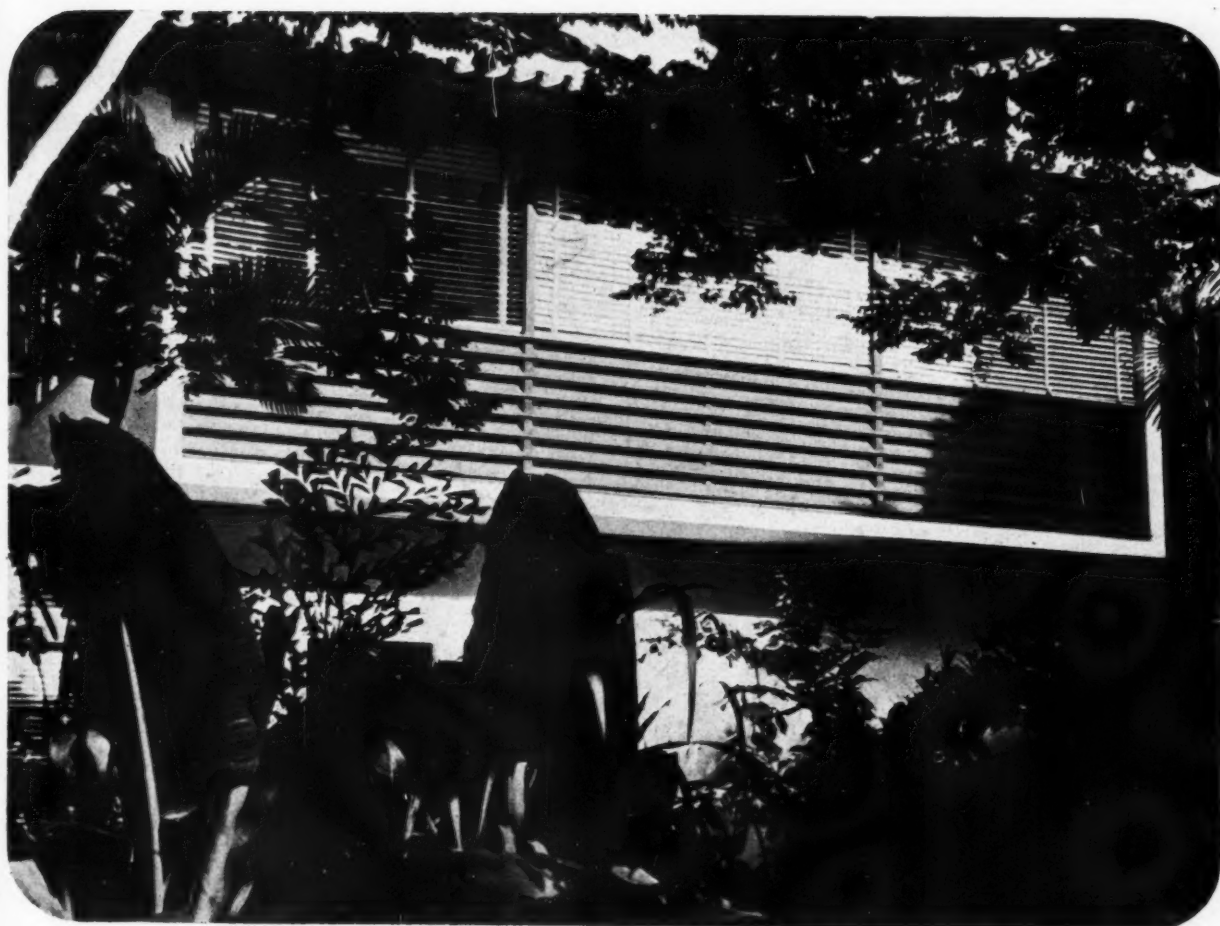
Having built the staircase and rendered it, three men spent their mornings on the beach picking up round stones in a sort of sledge. Then the expert craftsman pushed the stones into the wet rendering.

A good job of work for four men for something over a fortnight.

London

W. C. LESLIE-CARTER





*An architect's own house designed by Alcides da Rocha Miranda*

# SOME NEW ARCHITECTURE IN BRAZIL

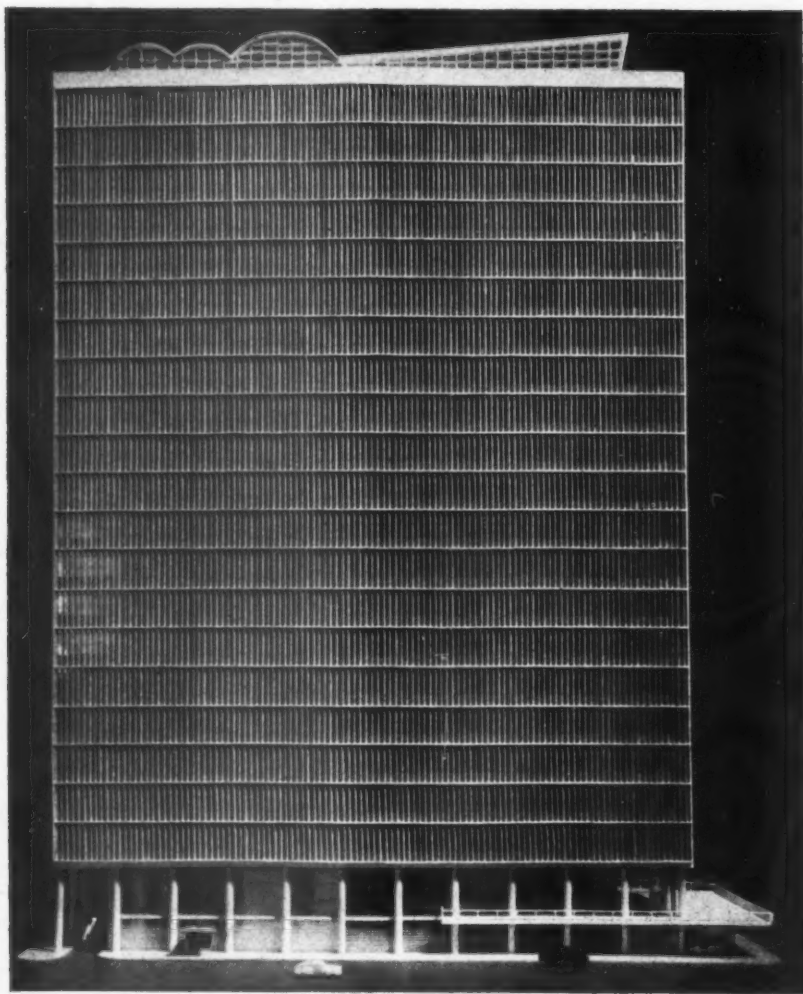
## TRENDS DISCUSSED AND EXAMPLES DESCRIBED BY SIDNEY LOWETH

Experiments in a small way in architectural design were first made in Brazil about ten years after the end of the last war, when the opportunities afforded by a building boom were seized upon by a few enthusiasts to break away from the Portuguese Baroque and other traditional styles of building. This new movement built up strength in a quiet way until it burst upon the world with a maturity which seemingly succeeded in avoiding the usual gaucheries of adoles-

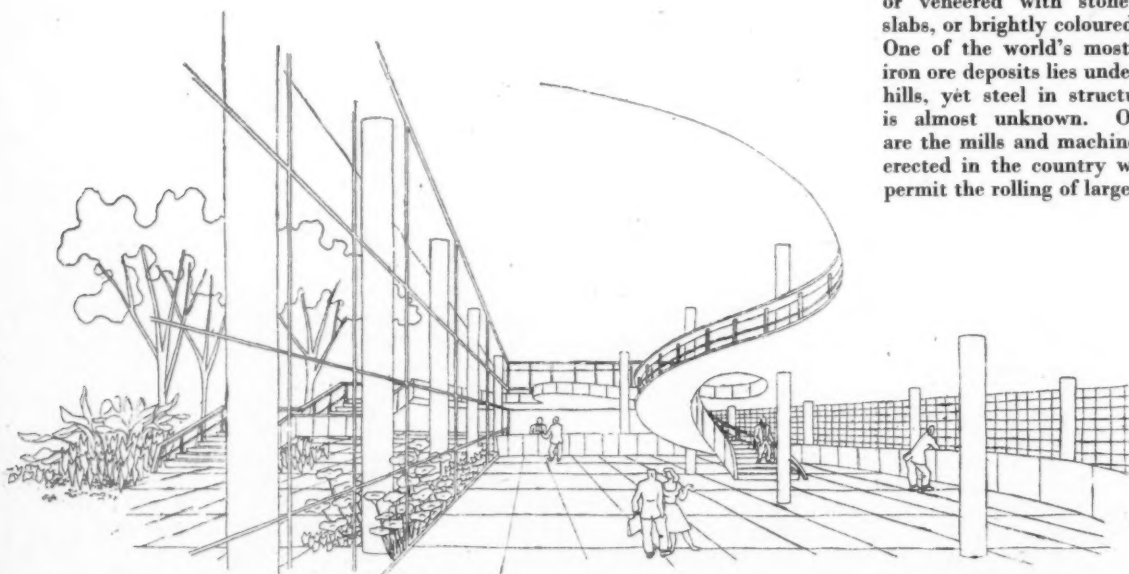
cence. Brazilian architecture has continued to develop throughout the last six years (Brazil being luckily free of war damage) and having made its mark is now assured of a brilliant future; its buildings promise to be the equal of any erected in other parts of the world. The modern school of Brazilian architects have indeed put into practice the phrase so often quoted by the late Professor Lethaby, "that we should build with the spirit of adventure."

This movement was influenced in its embryo stage by the visit to Brazil of Le Corbusier some years ago. His well-known theories of design and construction (greatly aided by the local conditions) proved particularly attractive to the school of young Brazilian architects.

Principally through publications, aided by foreign travel and studies, the country was made aware of the leading achievements of architecture abroad, and whilst many



*Above: the north side of the model of the central offices of the Rio Grande do Sul Railway, soon to be built in Rio de Janeiro. The design which won first place in competition is by Affonso Eduardo Reidy and Jorge Machado Moreira. It has the typical Brazilian sunbreakers. Below, a sketch of the ground floor.*



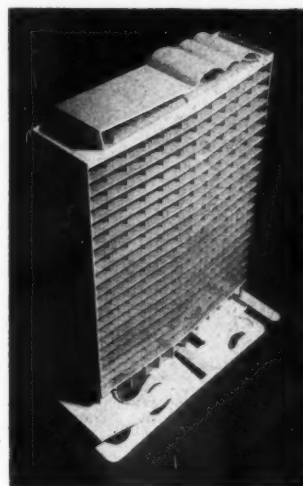
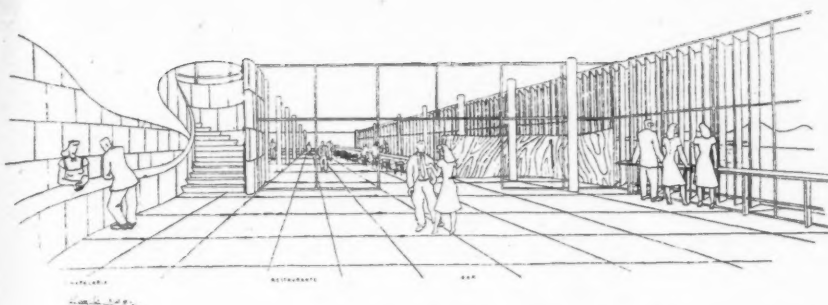
## SOME NEW ARCHITECTURE IN BRAZIL

countries contributed their quota of ideas, the greatest Brazilian contribution was in the control of heat and glare on glass surfaces by means of sunbreakers (external sun louvres) of which much has been written of late.

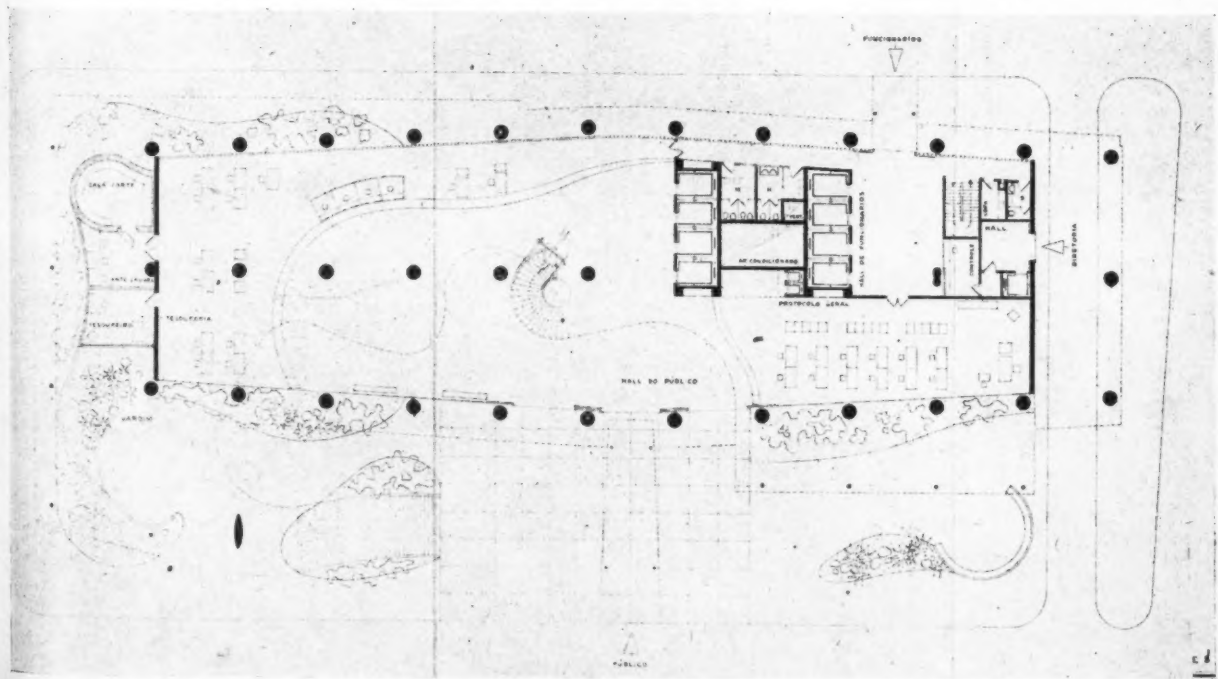
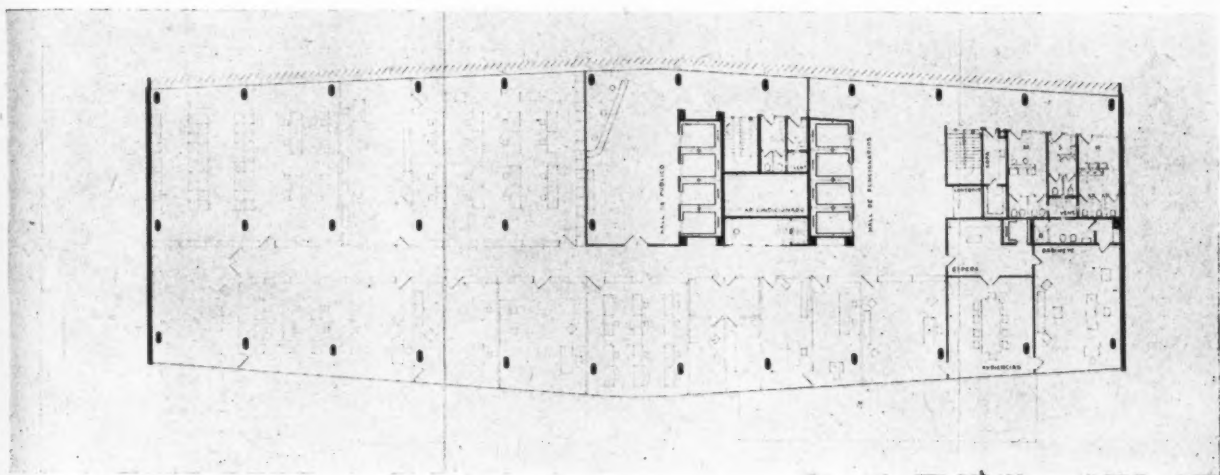
In the design of the buildings to house the Ministry of Education and Health in Rio de Janeiro, the sunbreaker was most successfully integrated with the architecture, and largely as a result this feature is now an accepted integral part of all large modern buildings in Brazil. In that building the sunbreakers were placed horizontally and were adjustable, whilst the brothers Roberto, in the Brazilian Press Association (ABI.) building, have placed them vertically and fixed, compared with Niemeyer's Day Nursery in Rio, where they are vertical and adjustable. In each case the cool south side exposes its wall of glass without protection. On the north, however, (remember that in Brazil the sun comes from the north), the facade is provided with these fitments. So far the majority of these sunbreak devices are found in Rio, although they would be an advantage in other parts of the country also.

Construction of buildings in Brazil is not complicated by fear of earthquakes—although they rock many other parts of South America. The temperate climate and the absence of frost allow concrete to be exposed in any weather, and this material suitably reinforced has been chosen almost exclusively for contemporary building. Cement is made in a huge plant near Niteroi, and many external wall finishes are of stucco or veneered with stone, marble slabs, or brightly coloured tiles.

One of the world's most gigantic iron ore deposits lies under Brazil's hills, yet steel in structural sizes is almost unknown. Only now are the mills and machinery being erected in the country which will permit the rolling of large sections.



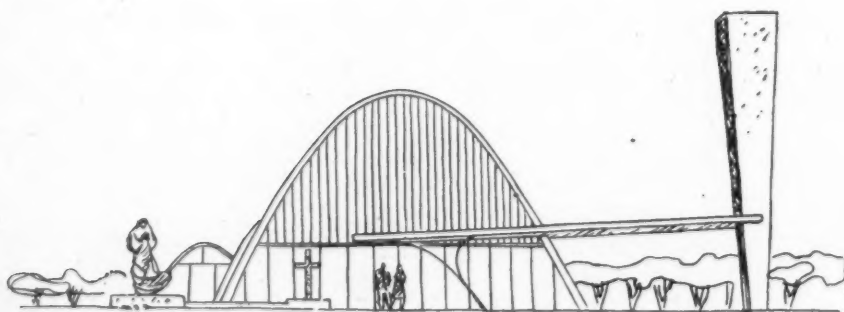
*Central offices, Rio Grande do Sul Railway. Above, sketch of twenty-first floor which contains restaurant, bar and kitchen. Right, the model, south side; the roof floor contains a cinema, lounge, lift machine room and terrace; another view from the south is shown on page 100 of this issue. Below, ground floor plan and a typical floor plan.*



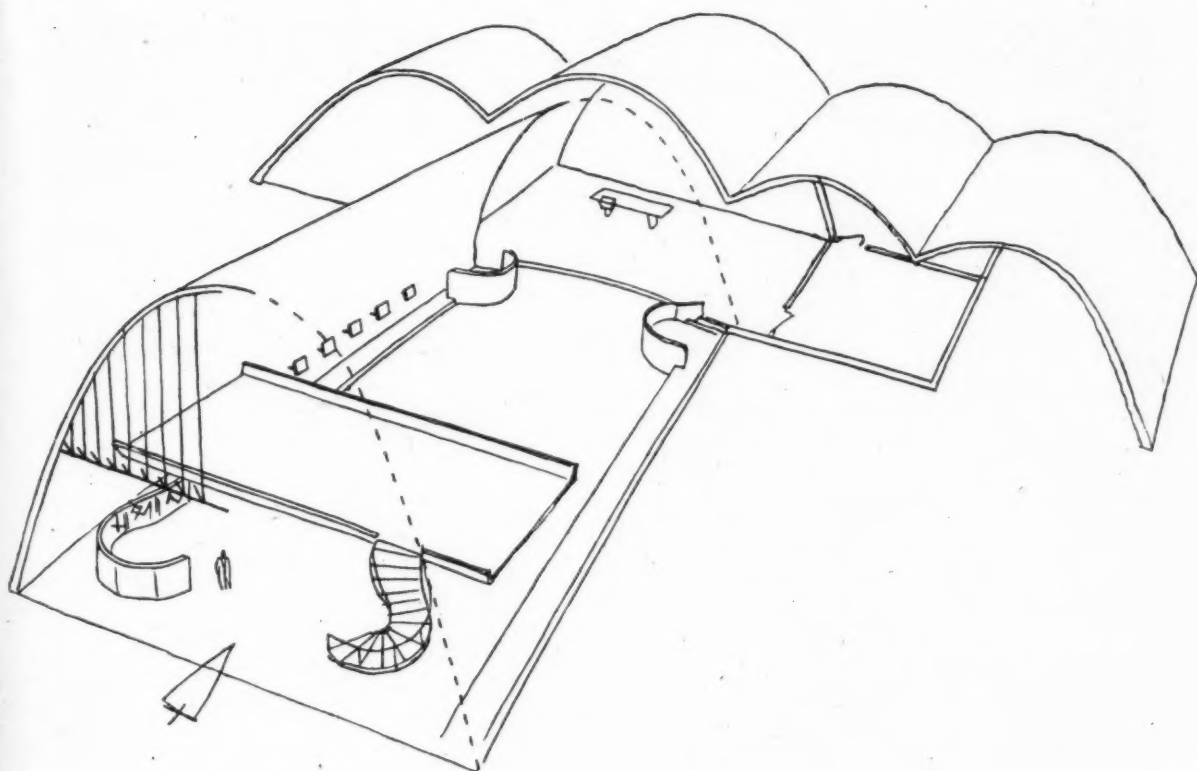
### GROUND FLOOR PLAN



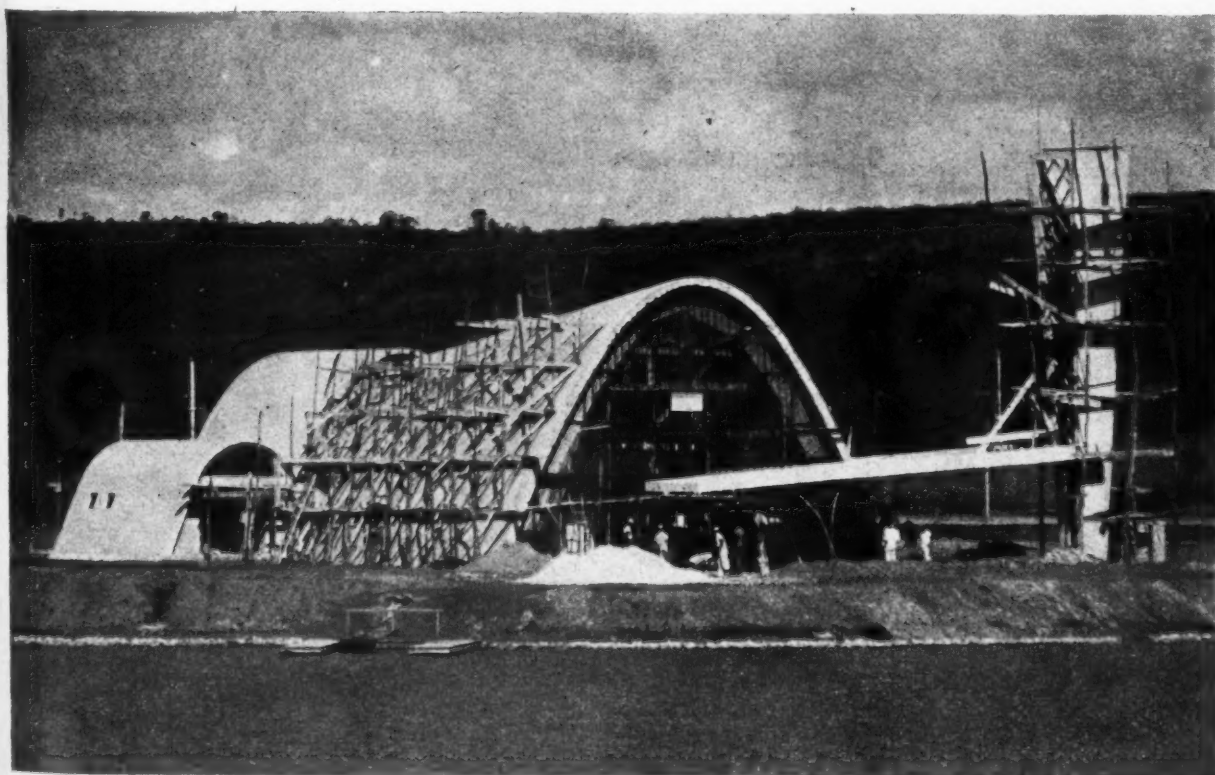
*Above, a church, at Pampulha, Belo Horizonte, designed by Oscar Niemeyer, now nearing completion; it is of reinforced concrete parabolic arch construction. Below sketch of the front elevation, which faces a river; on the right is the bell tower.*







*Below, another view of the church at Belo Horizonte by Oscar Niemeyer under construction. Above, a sketch showing the interior.*



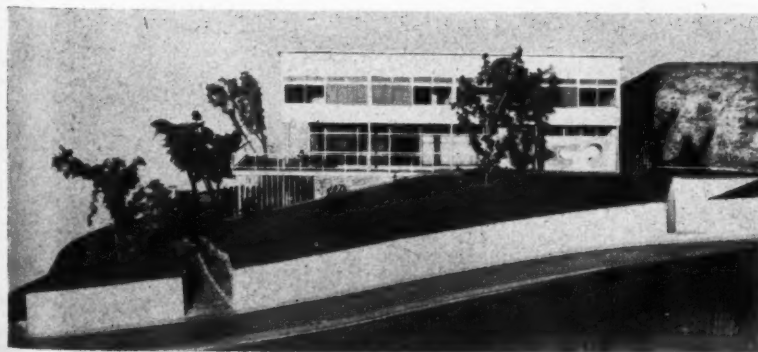
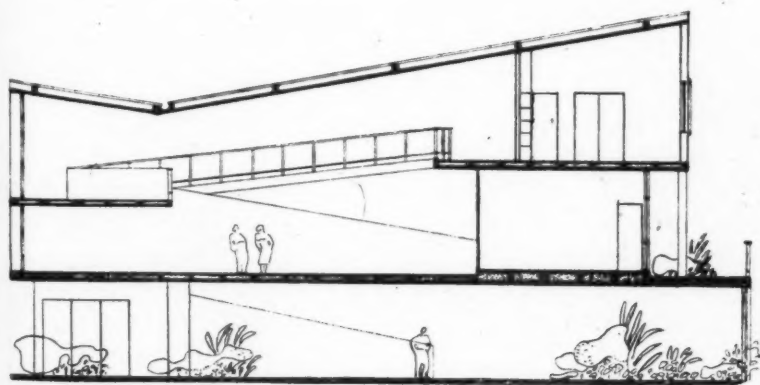
SOME NEW ARCHITECTURE IN BRAZIL



*Part of the design in painted tiles which will cover the whole of the spandrils at the east end of the church at Belo Horizonte.*



*Model of a house designed for a doctor at Rio by R. Mesquita. T. Estrella, J. Ferreira and R. Sotiro. Above and bottom, views from the road. Below, section showing the ramp.*



Thus far only reinforcing bars and secondary shapes are produced locally. Because of this lack, modern designers have had to turn largely to reinforced concrete for the construction of their buildings, and this development in constructional methods has had the most important architectural consequences. Dead styles and tenaciously held prejudices which the architects of the Old School insisted upon reviving or refurbishing did not hinder the spirit of adventure in design. The great adaptability of reinforced concrete has opened up a huge field of possibilities which are not to be limited by any obligations to the past. Architecture must, above all, express the spirit of its age, and if the past periods which are outstanding as models of good architecture are examined it is found that those styles are just the ones which best express the life and times they represent. To quote Oscar Niemeyer, "We respect the lessons of the past, but that is all. Old architectural styles lose their meaning in the face of new technical possibilities. We don't believe either in styles based on by-gone designs or architectural elements. The Neo-Colonial so-called style is to our way of thinking, a lamentable example of this sort of thing."

**SOME NEW  
ARCHITECTURE  
IN BRAZIL**





*A house on stilts overlooking a ravine. Left, side view. Below, the living room showing two aquarium tanks. Bottom, the aquarium adjoining the living room.*



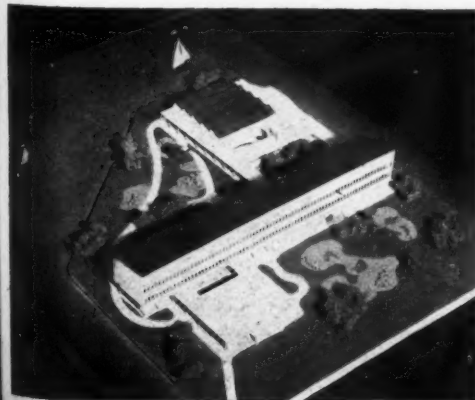
SOME NEW ARCHITECTURE IN BRAZIL

Top,  
Petro  
model  
ment  
Indus





Top, model of the Parque Hotel do Alembe at Petropolis designed by Jose Theodulo. Below, model of a sanatorium for the National Department of Irrigation of the Ministry of Transport Industry and Commerce.



In Rio de Janeiro an architectural competition was held recently for the design for the Central Offices of the Rio Grande do Sul Railway, when the prize was awarded to the architects Affonso Eduardo Reidy, C.I.A.M., and J. Moreira. The building is twenty-two stories in height: floors two to twenty are for offices, the twenty-first floor is a Restaurant, and the twenty-second floor containing an auditorium, lounge, etc., is set back from the main facades, thus forming open terraces which will command magnificent views of the city, the sea and the distant mountains. It is anticipated that the erection of this building will commence shortly. From the model it would appear that the slim bulk of this building will be extremely successful. The slight curve of the long elevations add a subtlety to the design and form a relief from the repeated pattern of the fenestration, whilst the open mezzanine and ground floors and the recessed top floor give an added touch of interest. The elegance and lightness of the new reinforced concrete buildings of Brazil are typified in this design—an elegance for which advanced building by-laws based on scientific knowledge are partly responsible.

In the town of Pampulha, situated about ten kilometres from the centre of Belo Horizonte (the geographical centre of the State of Minas Gerais) a considerable number of buildings of outstanding merit and startling design have been erected recently, thanks to the encouragement of a progressive government, an interested Gover-

nor of the State, and a really enlightened Mayor. Oscar Niemeyer was the architect selected to design about ten of these new buildings, large and small, as signposts for the development of the city. One of these buildings is a Church, photographs of which, taken in May, 1945, are reproduced. To design a Church has always proved rather a perplexing problem for a modern architect. Usually the tendency has been to adapt the old and well-known styles. In fact there seems to be a timidity about departing from the conventional. The architect here has tried to proceed more freely, adopting a solution based on the problem submitted to him and on the possibilities offered by the medium of the new constructional methods. The roof takes the form of a parabolic curve, which satisfies the needs of the interior very well and appears to be the natural solution suggested by concrete. The bell-tower, the marquee, the painted tiles (which fill the whole of the spandrels at the east end of the building), the mosaics in colour, and the granite surface all contribute towards the ensemble. It is expected that the building will be completed early this year.

This development of Brazilian architecture sketched out in this article leads to the conclusion that a new architectural era is in formation in our own time; a period which will represent a high level of construction-technique — marking the beginning of an epoch of design as pure as that of the best of the Greeks—of intelligent fitness of purpose and of enduring solidarity.

# INFORMATION CENTRE

The function of this feature is to supply an index and a digest of all current developments in planning and building technique throughout the world as recorded in technical publications, and statements of every kind whether official, private or commercial. Items are written by specialists of the highest authority who are not on the permanent staff of the Journal and views expressed are disinterested and objective. The Editors welcome information on all developments from any source, including manufacturers and contractors.

## PHYSICAL PLANNING

2340

Wales

**PLANNING PROGRESS IN WALES.** *Clough Williams-Ellis. (Architects' Journal, May 10, 1945, pp. 349-352.)* Welsh reconstruction problems explained as result of division of area into industrial south, agricultural middle, and mountainous north. Co-ordinated planning policy impossible without definite formulation of national programme. Steps towards creating better conditions in blighted industrial areas include setting up of National Industrial Development Council of Wales to attract new industries, and special areas legislation in connection with trading estates. Planning matters under consideration mainly concern Severn barrage scheme, arterial south-to-north trunk road, new bridge at Conway, provision of holiday camps, preservation of prospective national park territories.

2341

Chelmsford

**CHELMSFORD SURVEY.** *A. Minoprio, H. G. C. Spencely, and L. F. Richards. (Architects' Journal, June 21, 1945, pp. 457-459.)* Survey and plan of Chelmsford organised by Chelmsford area planning group. Research undertaken with active co-operation of residents and many local organisations. Survey divided into two parts: (1) factual survey, (2) public opinion survey. Results utilised as basis for tentative planning proposals.

2342

Neighbourhood Planning

**UP YOUR STREET EXHIBITION.** *Walter Segal. (Architects' Journal, August 9, 1945, pp. 97-100.)* Link between individual home and town planning demonstrated in special housing centre exhibit, *Up Your Street*, at Daily Herald post-war homes exhibition. Effects of good and bad neighbourhood planning in relation to one large site explained in two models.

2343

Coastal Preservation

**THE BLUE BELT: COASTAL PRESERVATION AND PLANNING. SURVEY OF THE ISLAND SHORES.** *J. A. Steers. (Architects' Journal, September 27, 1945, pp. 225-228.)* Notes on maps and field-work in survey of England's coastline.

Valuation of various parts of coast for classification purposes. Preservation of unspoilt coastal amenities. Protest against careless industrial development and disfigurement of coastline. Recommendations for erection of well-designed holiday camps. Coastal areas as nature reserves. Need for national policy on coastal planning.

2344

Church Ruin

**ST. ANNE'S, SOHO.** *J. Groag. (Architects' Journal, June 14, 1945, pp. 441-444.)* Scheme for converting ruins of bombed St. Anne's Church, Soho, London, into garden war memorial, taken from *Bombed Churches as War Memorials* (Architectural Press, 1945, 3s. 6d.). Design for memorial chapel in eastern end of ruin. Bombed houses nearby replaced by modern offices, flats, restaurants. Existing emergency water supply converted into lily pond.

2345

West Indies

**PLANNING IN THE WEST INDIES.** *(Architects' Journal, May 17, 1945, pp. 367-369.)* Extracts from memorandum

*Housing in the West Indies* (West Indies Development and Welfare Bulletin, No. 13). Suggestions for extensive housing programme. Provision of improved living conditions for lowest income groups. Legislation needed for compulsory acquisition of land for housing, for revision of building and health regulations, and for overcrowding and density standards. Diagrams showing neighbourhood planning principle applied to typical West Indian township and village.

## STRUCTURE

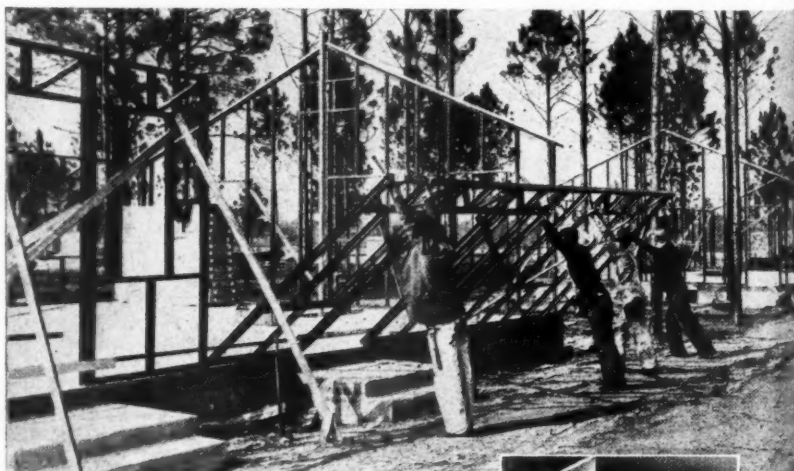
2346

Light-Gauge Steel

**LIGHT-GAUGE STEEL FOR PEACETIME BUILDING.** *Milton Male. (Engineering News-Record, October 18, 1945, pp. 525-529.)* Earlier applications of light-gauge steel. Developments since 1930. Standards for light steel approved. Design standards proposed.

$\frac{1}{8}$  and  $\frac{1}{4}$  in. thick iron sheets were cold-formed and riveted together into I-beams for use in the Bank of the State of New York Building as long ago as 1855. They performed the work required for nearly 50 years, when the structure was demolished. There was hardly any technical progress until 1910 when light steel construction came to be employed more extensively. World War I saw standard prefabricated buildings for various purposes. In general, during this period light-gauge members were used as secondary framing, or as floor or roof deck panels.

In the decade beginning with 1930, a great variety of systems were introduced in USA. One group consists of sections used individually or pre-assembled into large framing panels before erection. Members are installed at relatively close spacing—about 24 to 48 in. for floor and walls. Thicknesses range from 10 to 18 gauge (about  $\frac{1}{8}$  to



Wall sections of light-gauge steel for Navy houses, Jacksonville, Fla., were placed by hand. These 16-ga. sections contain patented nailing grooves (right) for attaching wall material to steel framing. See No. 2346.



# WYMONDHAM ABBEY, NORFOLK

From a pen and wash drawing by Leonard R. Squirrell, R.W.S., R.E., etc.  
(Accepted, Royal Academy, 1943)

THE chancel and transepts were destroyed at the Dissolution of the Monasteries but the tower over the crossing was allowed to remain. A great deal that was spared by the iconoclasts has since perished under the destructive influence of dampness and frost—the twin enemies of buildings. Protection against dampness is one of the first principles of preservation, and this is as important in a cottage as in an ancient monument. How to achieve such protection has been our constant study for nearly forty years. The experience so gained is embodied in the printed specifications and directions which may be had for the asking, as also may be a special specification for any work in prospect which appears to present an unusual or difficult problem.

## 'PUDLO'

BRAND  
CEMENT WATERPROOFER

Used with Portland Cement in renderings or concrete to exclude or retain water.

KERNER-GREENWOOD & COMPANY, LIMITED  
ANN'S PLACE, KING'S LYNN

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.



# PRIORITY CALL . . .

Construction replaces destruction as the national priority. "Build well and build speedily" is the new battle cry.

S.G.B., with branches and depots throughout the country, offer the largest and most efficient scaffolding service.

**S.G.B.**

SCAFFOLDING (GREAT BRITAIN) LIMITED

Registered Office & Works.  
**PLOUGH LANE**  
**LONDON S.W.17**  
Telephone: WIMBLEDON 6201/5

Factory:  
**SAUNDERTON, BUCKINGHAMSHIRE**  
Tel: PRINCES RISBORO 480/4

BRANCHES AT:— ABERDEEN • BRIGHTON • BIRMINGHAM • BRISTOL • CARDIFF • DUNDEE  
EDINBURGH • EXETER • GLASGOW • HIGH WYCOMBE • HULL • LEEDS • LIVERPOOL • LONDON  
MANCHESTER • NOTTINGHAM • NEWCASTLE • PLYMOUTH • PORTSMOUTH • SOUTHAMPTON



$\frac{1}{16}$  in.). Another prominent group has large surfaces integrally connected to the ribs or load carrying parts.

The relatively simple shop equipment required for the fabrication of light-gauge members is available everywhere. Although welding predominates, there are many applications where it is still advantageous to use punched or drilled holes and rivets, bolts, etc.

Further advances are expected from four present developments:—

(1) In 1941, there were issued two ASTM standards for the material covering thicknesses from about  $\frac{1}{4}$  to 0.05 in. and from 0.05 to 0.02 in. Each specification provides for three strength grades.

(2) In order to clarify the question of the durability of light gauge steel structures in 1940, the American Iron and Steel Institute engaged the Pittsburgh Testing Laboratory to survey the conditions of painted light steel constructions in some of the older buildings. The laboratory selected 50 structures, well distributed geographically and of many different kinds. The average age was about 18 years, the oldest having been in use for 35 years. The report (issued in 1942) showed that the installations generally were in excellent condition and that the original paint coating still afforded effective protection to steel members.

(3) The Committee on Building Codes of the American Institute of Steel Construction has prepared a specification for the design of light gauge steel structural members. This is based on laboratory tests and extensive theoretical investigations.

(4) Steps have also been taken to develop a series of shapes that would be acceptable as standards by manufacturers and designers.

2347

## Concrete Slab

CONCRETE DESIGN TREND SHAPED BY CLEAR SPACE NEEDS. A. J. Boase. (*Engineering News-Record*, October 18, 1945, pp. 530-534.) New type of flat slab. Examples of shell structures.

Owing to the cost and scarcity of other materials, foreign designers have long ago found new forms for the use of reinforced concrete. War-time conditions had a similar influence on the development of reinforced concrete in USA. Flat slabs up to 50 ft. span have been used. To save weight, the floor was coffered, resulting in a ribbed slab 20 in. deep. The domes used to form the ribs were 17 in. deep, leaving a solid concrete top slab 3 in. thick.

Even more remarkable is the popularization of shell construction. Prior to the war, owners and the building profession apparently doubted that 3 or 3½ in. thick reinforced concrete shells were adequate to span rectangular areas 60 ft. wide, although such structures have been as common in Europe as other types of construction. The war has entirely changed this attitude. Once the idea was accepted, USA engineers built shell roofs at a greater rate than anywhere else in the world, and the total area to-day at least equals and may exceed that in any other country.

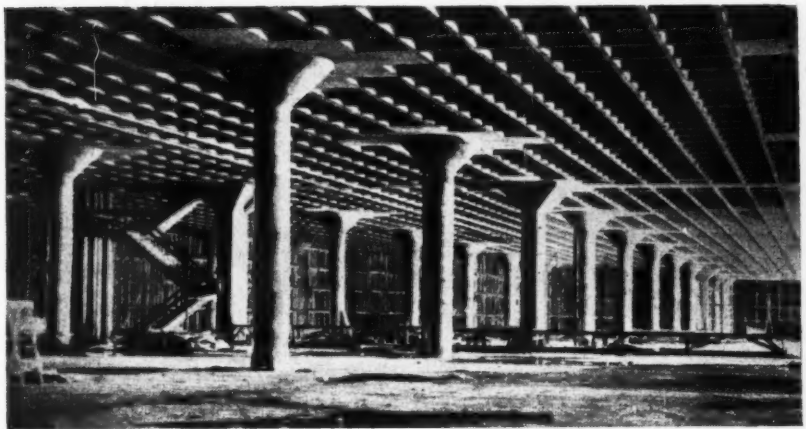
The article contains several examples of shell construction in USA, some of which have already been referred to in the Information Centre.

## MATERIALS

2348

## Aluminium Alloys

HOW AND WHEN TO USE ALUMINIUM ALLOYS. R. L. Moore. (*Engineering News-Record*, October 18, 1945, pp. 518-524.) Physical and mechanical properties. Data for research at Alu-



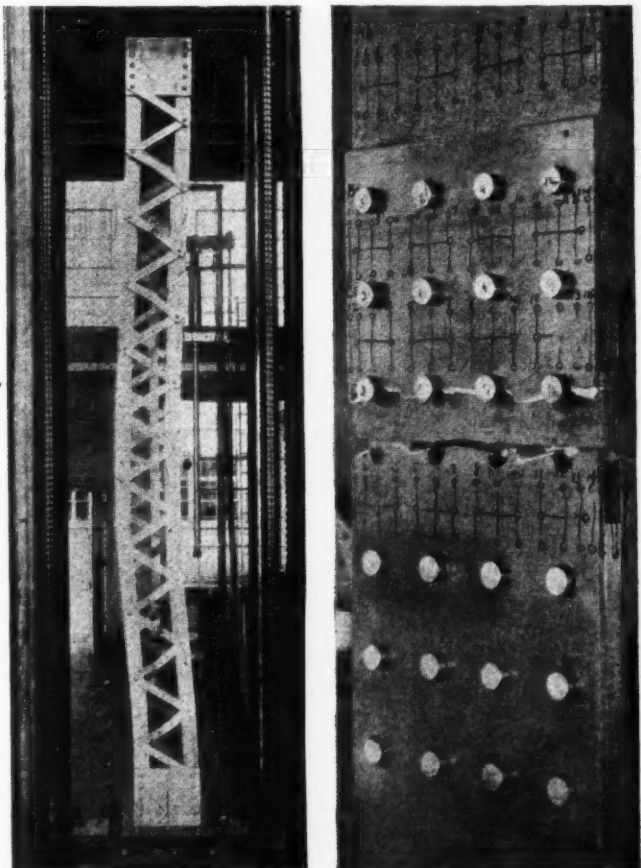
To meet the demands of modern industry in the USA, flat slab floor designs have been adapted to spans of 50 ft. or more. Above is a slab 3 in. thick with ribs 17 in. deep forming 50 by 51 ft. panels. See No. 2347.

minium Research Laboratories. Buckling. Recommended stiffener spacing.

The article is on somewhat similar lines to the one referred to in No. 2113:20.9.45, but contains more information on research. Typical stress-strain curves for several metals indicate that curves for aluminium alloys differ from those for mild steel in that there is no sharp break that definitely locates the yield point. Ultimate strength curves for axially loaded aluminium alloy columns are composed of two parts: the Euler curve and a tangent straight line. A

9 ft. long column, composed of two 7 in. channels ( $L/r = 40$ ) joined by conventional lacing carried a maximum load of 235,000 lb., corresponding to an average compressive stress of 32,600 lb./sq. in., a value approximately equal to the compressive yield strength of the material. A column of structural steel of nominally the same dimensions but having a higher yield point carried a maximum load of 273,000 lb. or only 16 per cent. more than the column of aluminium alloy that weighed one-third as much.

Comparative tests on riveted joints were



Left, an aluminium alloy column sustaining a test load almost equal to that of a similar column in structural steel. Right, a joint of aluminium alloy failing in tension at a stress of about 62,000 lb./sq. in. on net section. See No. 2348.

even more favourable for aluminium. Although column action probably represents the most significant type of buckling in structural design, questions of stability also arise in estimating the lateral buckling resistance of beams, the strength of flat plates under edge compression and the buckling resistance of girder webs. Some empirical formulae are given for these cases.

The possibilities of aluminium as a structural material have only begun to be realized. Alloys in current production to-day have yield strengths almost 100 per cent. greater than the highest available commercially 20 years ago, and tensile strengths have been increased 50 per cent. The use of structural aluminium in building construction will for some time, it is expected, be limited to special applications where appearance, resistance to corrosion, weight, or ease of handling are of primary importance.

## HEATING and Ventilation

2349 Domestic Installations

**TRENDS IN THE DESIGN OF HEATING INSTALLATIONS FOR DOMESTIC PURPOSES.** Prof. Sir Alfred Egerton. (*Journal of the Institute of Heating and Ventilation Engineers*, September/October, 1945.) (Report of paper delivered September 20, 1944.) Lengthy paper giving outline of work and findings of the DSIR Study Committee on Heating of Post-War Buildings. Much valuable information which is useful as a pre-view of the MOW Building Study Committee Report No. 19.

2350 Domestic Heating

**FIRST REPORT OF THE DISTRICT HEATING COMMITTEE OF THE INSTITUTION OF GAS ENGINEERS.** (November, 1945.) Conclusions: District heating practicable method of improving fuel economy and reducing smoke. In certain circumstances may be economical but generally with lower densities of building this not so. Zonal heating of groups of buildings may be wiser. District heating has limitations of low temperature supply only, therefore no cooking or visible radiant heat. Restricts freedom of individual unless combined with other methods of heating. Effect of one centralised system of supply or another must not be overlooked. Report valuable in putting clearly gas industry viewpoint on district heating.

## PLUMBING and Sanitation

2351 Basin and Sink Supports

**BRACKETS AND SUPPORTS FOR LAVATORY BASINS AND SINKS.** *British Standard 1255:1945.* (*British Standards Institution*, 2s. 0d.) Materials, workmanship, construction, dimensions,

weight and finish. Cantilever and leg support types.

2352

WC Seats

**W.C. SEATS (PLASTICS).** *British Standard 1254:1945.* (*British Standards Institution*, 1s. 0d.) Phenol or urea plastics. Design, hinging, buffers, dimensions.

## QUESTIONS and Answers

**THE** Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its help is available to any member of the industry. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential, and in no case is the identity of an enquirer disclosed to a third party. Questions should be sent to: **THE ARCHITECTS' JOURNAL**, 45, The Avenue, Cheam, Surrey.

2353

Corrugated Glass

**Q** In your issue for October 4, 1945, there was a description of wired corrugated glass sheeting given in No. 2,134 of the Information Centre. Can you give us further information on the properties of such sheets and the availability in this country?

**A** Wired corrugated glass is not, so far as we know, available in this country.

Some years ago a corrugated glass (not wired) was produced by Pilkingtons, but it was not marketed for very long, as there were, of course, difficulties with the usual hook bolt fixing. There was also the difficulty that a number of asbestos cement manufacturers did not keep to the galvanised corrugated gauge, and that they also produced various sheets, such as Bix-Six which were not corrugated in the normal sense of the word, but a series of wide flats with small ribs spaced at about 15 in. centres.

We understand that production of corrugated glass was abandoned very largely because of the number of different types of corrugation which had to be standardised and were fairly easily available in different parts of the country.

2354

Building a Small House

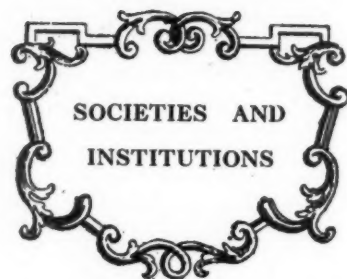
**Q** I wish to build a house for my own occupation approx. 1,600 sq. ft. floor area. It will be constructed entirely by my brother and myself, no outside labour being employed. Can you answer the following questions?

- (1) Is a permit required in this case?
- (2) Is it possible to obtain the two standards of timber which I understand is allowed for houses of under 1,000 sq. ft.?
- (3) Where can I obtain information on the heating of air for use in underfloor ducts in small houses?

**A** 1. No permit is required if the house is to be constructed entirely by your brother and yourself, but the plans will have to be passed by your local authority.

2. We are informed that the timber control in your district will almost certainly grant a licence for the two standards of timber, but this will have to be applied for through your local authority.

3. We suggest that you should write to the Electrical Development Association, 2, Savoy Hill, London, W.C.2, the British Gas Association, Grosvenor Gardens, London, S.W.1, and the Coal Utilisation Joint Council, 54, Victoria Street, London, S.W.1.



Speeches and lectures delivered before societies, as well as reports of their activities, are dealt with under this title, which includes trade associations, Government departments, Parliament and professional societies. To economize space the bodies concerned are represented by their initials, but a glossary of abbreviations will be found on the front cover. Except where inverted commas are used, the reports are summaries, and not verbatim.

## CIAD

### Refresher Courses

The Central Institute of Art and Design (2, Stratford Place, W.1) has issued a PROSPECTUS OF REFRESHER COURSES FOR DECORATIVE DESIGN, extracts from which are given below.

The Central Institute has been approached by a number of manufacturers who are anxious about the return, or impending return, of their design stars from war service. These men and women, it is felt, will have been for some years quite out of touch with the tendencies of design in this country, and will find some difficulty in re-orientating their minds.

The Central Institute has, therefore, decided to organize a series of refresher courses for industrial designers, not only to give them opportunities of seeing or reminding themselves of the British tradition, but of studying modern trends. Inasmuch as the course will be composed of representatives of a number of different trades, opportunities will be given to each individual to familiarize himself with the outlook in other industries by which he must necessarily, to some degree, be influenced.

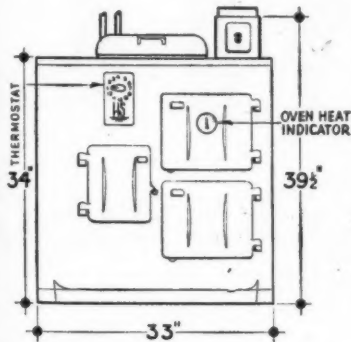
These courses will cover the field of design in the decorative industries, more particularly those which provide furnishings for the home, but other fields of decorative design may be included. The following industries are invited to avail themselves of this scheme: Carpets and Floor Coverings, Wallpaper, Furnishing Fabrics, Pottery, Glass, Furniture, Cutlery, Silver and Plate.

The course will be confined to periods of three weeks, and will be limited to 20 members each. They will be centred in London, with very little, if any, travelling outside the Metropolis. They will be held in February, April and May, 1946, respectively, and the firms who wish to send their designers or assistant designers will be called upon to pay an exclusive fee to the CIAD of five guineas per week per designer. (The

# HS heat storage cooking

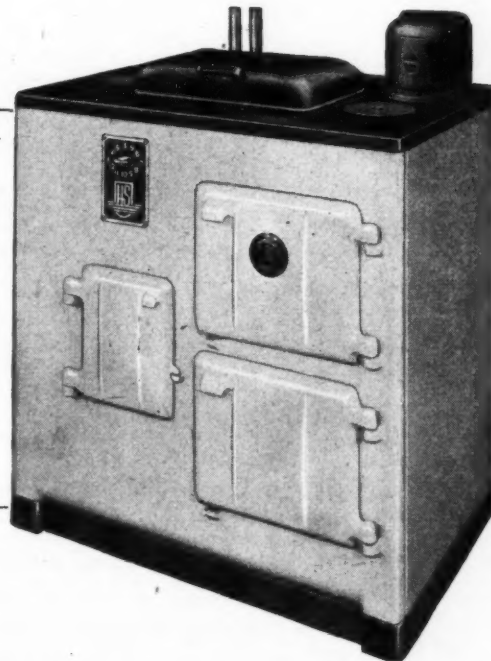
HOUSING  
SCHEMES

The "H.S." Cooker, regulated by thermostat, answers the national need for a Heat Storage Cooker, with its efficiency and startling fuel economy, sufficiently low priced to be used in municipal housing schemes. In addition to cooking, from one fire is provided a constant supply of hot water, thus abolishing the uneconomic system (especially in summer) of heating water from the sitting-room fire. Easy to work, providing a gentle warmth day and night, having two spacious ovens, top for roasting and lower for slow cooking, and extensive fast boiling hot-plate, the "H.S." brings the advantages of Heat Storage Cooking, FOR THE FIRST TIME, to the lower-income home.



## BRIEF TECHNICAL DETAILS

Overall Depth: 21 1/4"  
 Each oven: 12" x 10" x 17" deep.  
 Inside diam. of flue outlet 4 1/2" suitable for 4" diam. asbestos pipe.  
 Boiler: 70/80 gall. water at 150/160°F. over 24 hours.  
 Storage Cylinder: 30/35 gall. within 15 feet of cooker and insulated.  
 Fuel: Anthracite, Coke or Phurnacite.  
 Consumption: 16 to 20 lbs. per 24 hours.  
 Weight: 588 lbs.  
 Finish: Mottled Porcelain enamel.



Full details of the "H.S." will be supplied on request and also, if desired, particulars of the ESSE-Q continuous burning heating stove, for housing schemes.

Sole Manufacturers: **SMITH & WELLSTOOD LTD.**, Established 1854, Head Office and Works, **BONNYBRIDGE, SCOTLAND**

HS



# MANY ARCHITECTS WHO ARE NOW RETURNING

to practice from their wartime jobs are anxious to obtain the latest information regarding a number of building products and services. We print the form below in response to a number of requests . . . it will save you time and trouble.

All you have to do is to fill in the names of the manufacturers in whose products you are interested and post the form to "The Architects' Journal"—we will do the rest.

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

.....  
 .....  
 .....  
 .....  
 .....  
 .....

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

NAME .....

ADDRESS .....

.....

.....

A.J. 31.1.46

Institute will arrange hotel accommodation for designers for these three courses if notified immediately, but the designer will be responsible for his own hotel bills and all other payments for meals, travelling, etc.) The Institute will finance various functions (as, for example, certain lunches when important guests will be present), and all lecture fees, etc., will be included in the fees paid to the Institute.

The course would comprise the following:  
 (a) Visits to the National Gallery; the Tate Gallery; other Galleries, both national and private; Dealers' Galleries.

(b) Visits to Museums, and where possible to individual collections. Also to antique dealers parallel in importance with the art dealers' galleries.

(c) Visits to large departmental stores and small specialist shops.

(d) Visits to certain private houses and flats of particular importance in demonstrating the newest ideas in interior decoration and equipment.

(e) Designers will also be encouraged to make up their own small parties to visit the more important stage productions, films, ballet, and so on, which may then be running in London.

(f) Meetings with certain buyers of important departmental stores, and with London representatives of large overseas companies and shipping agents.

(g) Conference with leading interior decorators, architects, designers and artists.  
 (h) It may also be possible to arrange for small groups of four or six people to visit certain designers' studios.

There will be a series of lectures or talks, and, since the number attending the courses will be limited, it is hoped that these will be of an informal nature, and that each designer will have an opportunity of discussing his own subject with the lecturer. These lectures will not, for the most part, be either technical or historical, but will

aim towards giving the designers an idea of the trend of things to-day.

Not the least important value of the courses will be the intermingling of the designers themselves coming, as they will, from various industries; and it is hoped that as a result closer contact will be established, and later maintained, between the various industries providing furniture and equipment for the home.

Those attending the courses should present themselves during the early evenings of the first days (Mondays) at a rendezvous to be announced later, when introductions will be made and general instructions and details of the syllabus given.

Members can return home on the mornings of the last days of the courses or on the previous evenings.

As far as possible Saturdays and Sundays during the courses will be kept free for members to pursue their own activities.

The courses will be as follows:—

Course 1: February 11-March 2.

Course 2: April 1-April 18.

Course 3: May 13-June 1.

## Announcements

Mr. Bronek Katz, DIPL. ING. ARCH. and Mr. Reginald Vaughan, A.A., DIPL., A.R.I.B.A., are now in partnership at 8, Clarges Street, W.1, and would be glad to receive technical literature and catalogues.

The address of the Wood Wool Building Slab Manufacturers' Association is now 11, Ironmonger Lane, E.C.2. Telephone: Royal 3288, to where all enquiries and applications for technical information should be made.

Mr. C. E. Pearson, F.R.I.B.A., having been released from military service is resuming the practice of C. B. Pearson & Son, 18, Dalton Square, Lancaster. Telephone: Lancaster 582, and would be pleased to receive trade catalogues, etc.

## FACTS ABOUT



# LIME

## FOR PLASTERING

**LIME** has been accepted for thousands of years as the ideal plastering material.

**LIME** has maximum plasticity and so facilitates application.

**LIME** increases the retentive power of the mix for water thus minimising the suction of porous backgrounds.

**LIME** gives maximum adhesion.

**LIME** can be gauged with Portland cement or gypsum plaster in backing or finishing coats.

**LIME** saves time and money.

## THE SOUTHERN LIME ASSOCIATION

4, SOUTHAMPTON ROW, LONDON, W.C.1.



**Milners — The Safest  
SAFE Investment!**



OVER a century's experience of sound construction is behind the making of Milners' Office and Factory Steel Equipment.

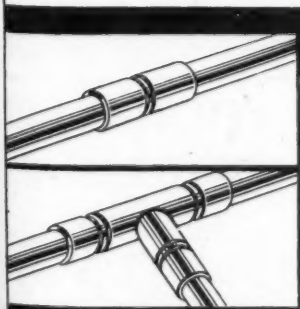
Milners' technical experts will be pleased to advise on all matters of storage equipment for industrial purposes.

Write setting out your problems to:  
MILNERS SAFE COMPANY LTD., 58, HOLBORN VIADUCT, LONDON, E.C.1.  
Telephone: CENTral 0041/5. Telegrams: Holdfast, Cent, London.

**STEEL  
MILNERS  
EQUIPMENT**

## THE **MBL** CAPILLARY JOINT

(Patent No. 571,988)



Unsightly joints abolished by this new copper capillary joint, a production having behind it the workmanship of an organisation skilled in the manufacture of non-ferrous metal small-ware. Soft solder, either in paint, or stick form, is used for jointing. Our light gauge COPPER TUBE is, of course, known everywhere.

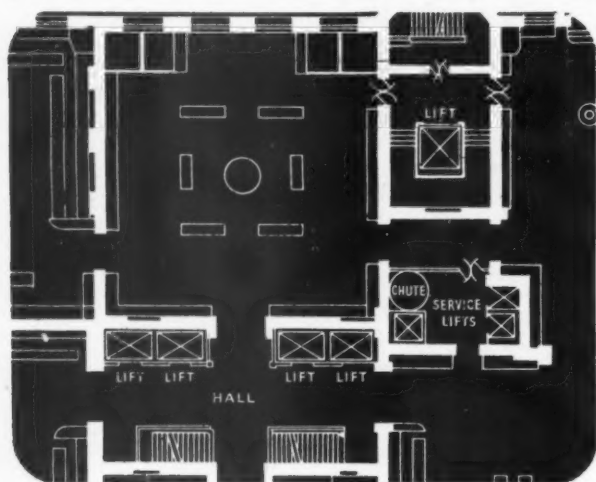
**THE MINT, BIRMINGHAM, LTD.**  
BIRMINGHAM, 18

Phone: CENTRAL 2532 Grams: MINT, BIRMINGHAM

**MBL**

BRANCHES AT • LONDON • GLASGOW • MANCHESTER

# LIFT ECONOMICS



## Tell us

The number of floors  
Area of floors  
Type of building

## And we can advise on

Capacity of lift car(s)  
Most efficient speed  
Most suitable control system

## Because—

There is 50 years experience  
behind the planning of:—



# HAMMOND & CHAMPNESS

BLACKHORSE LANE · WALTHAMSTOW · LONDON · E 17

Telephone · Larkwood 1071

"When icicles hang by the wall  
and Dick, the shepherd, blows  
his nail."

**USE**

# KETTON WINTER CEMENT

Manufactured by  
THE  
KETTON PORTLAND CEMENT CO. LTD.  
KETTON.

Distributed by  
THOS. W. WARD LTD.  
SHEFFIELD.



*constant flow ventilation constant flow ventilation constant flow*

Living Rooms  
Bedrooms  
Kitchens  
Bathrooms  
Halls, Etc.

*Air Change  
without draught*

THERE IS A  
**COLT**

**CONSTANT FLOW**

**VENTILATOR  
FOR EVERY TYPE  
OF HOUSE**

SILENT, DRAUGHTLESS, CONSTANT  
VOLUME, AUTOMATICALLY  
CONTROLLED, NON-MECHANICAL

Information sheets 20/21  
from

**Colt**  
VENTILATION LTD.  
SURBITON, SURREY.  
TEL. ELMBRIDGE 6511 (4 LINES)

*constant flow ventilation constant flow ventilation constant flow*



## PRESS GANG

In factories, institutions, schools and offices in most parts of the country there is a press gang at work saving fuel. But it is an unusually willing and well-behaved press gang.

These Prestex non-concussive self-closing taps have to be pressed to serve and as soon as you stop pressing they stop serving! That's the beauty of them as water savers.

With these Prestex self-closers on the job you need no longer worry about the thoughtless people who always forget to turn off the tap.

*The use of these taps is approved by most Water Companies throughout the country (including the Metropolitan Water Board).*

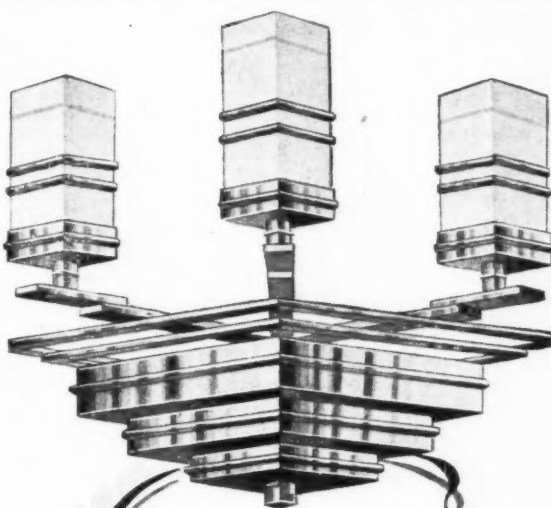
# Prestex

**PEGLERS LTD.**

BELMONT WORKS, DONCASTER

and 58 SOUTHWARK STREET, LONDON S.E.1

## MODERN METAL FINISHES



*will lighten  
the way...*

Let Rushton's accentuate the beauty of modern illumination with the aid of metal finishes.

Their long experience and wartime development in the Anodising of Aluminium and its Alloys in natural or colourful finishes, and bright finishes in Chrome, Nickel, Brass and Copper for interior and exterior display purposes, etc., is at your service. Why not consult us now, while your ideas are still at the blue-print stage?

## J. V. RUSHTON

(BIRMINGHAM) LIMITED.

**ANODIC WORKS, BATH ROW,**

**BIRMINGHAM,**

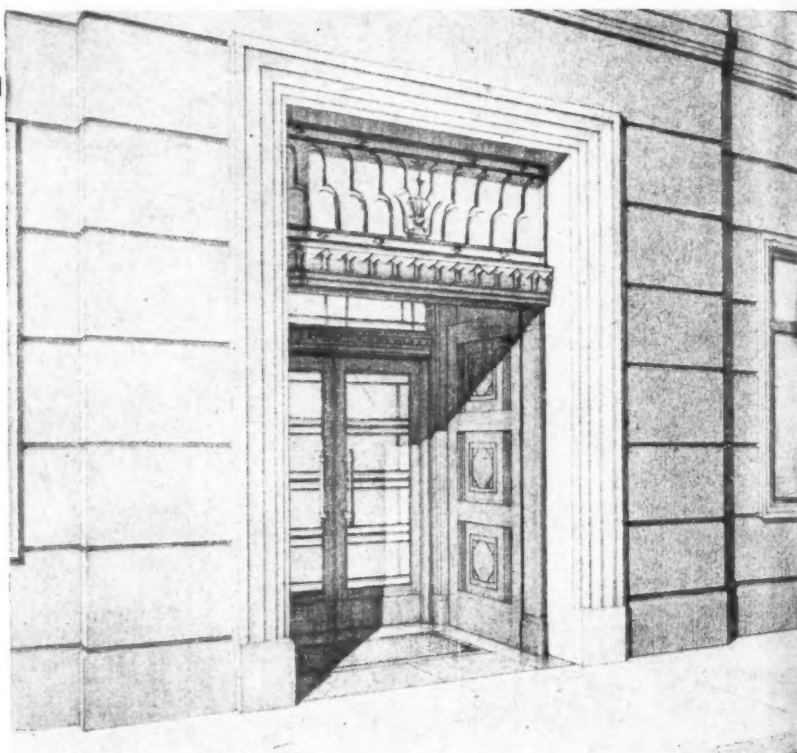
BRANCHES THROUGHOUT THE COUNTRY.

---

TYLER'S  
LTD.

*of*  
STROUD

FOR ARCHITECTURAL  
DECORATION IN WOOD  
AND METAL



Head Office and Works:  
London Road, STROUD.

London Office:  
49 Tottenham St., W.1

---

---

# DEMOLITION

Demolition is a highly specialised trade necessitating experienced direction and the use of skilled top and mattock men.

The National Federation of Demolition Contractors has been very careful to ensure that all its members are demolition contractors of experience and with adequate organisations.

The employment of a member of The National Federation of Demolition Contractors means that demolition will be carried out with speed, economy and safety.



Fuller information may be obtained from

THE SECRETARY, 13, BLOOMSBURY SQUARE, LONDON, W.C.1  
Chancery 6731, 2, 3.





**BLUNDELL PRODUCTS ENSURE SATISFACTION**

They combine the greatest protection and durability with the finest decorative qualities. Our staff of Chemists and Technicians are always at the service of Architects and we would welcome the opportunity of co-operating with them in their painting problems.

**BLUNDELL, SPENCE & CO. LTD.**

Manufacturers since 1811, of quality Paints, Colours and Varnishes for all purposes.

**HULL & 9 UPPER THAMES ST., LONDON, E.C.4**

*Milk-*

**IS ONLY PART OF THE PLAN**

Milk for school-children is a big step forward in our determination to provide for their physical as well as mental development. But Milk is only part of the plan. There are other essentials of greater importance. Adequate heating and ventilation are vital in safeguarding health.

These are matters for the specialist. British Trane, with their wide experience in the heating of modern schools, are able to give Architects expert technical advice on any heating problem and invite enquiries.

**Vectair**

**WELFARE HEATING  
FOR CLASSROOM COMFORT & HYGIENE**



**BRITISH TRANE CO., LTD., VECTAIR HOUSE, CLERKENWELL CLOSE, LONDON, E.C.1**

Telephone: CLERKENWELL 6864-3826

Telegrams: ENARTRANE SMITH LONDON

## SUNDEALA INSULATION BOARDS

for

WALL LININGS  
CEILINGS  
HEAT AND COLD  
INSULATION  
FUEL SAVING  
ACOUSTICAL  
CORRECTION  
PLASTER BASE  
PREVENTION OF  
CONDENSATION  
RETARDING PATTERN  
STAINING



*British made throughout.*

Scientifically waterproofed to ensure greater permanence and durability, this famous All-British board (formerly known as Insulwood) is made in a complete range of standard sizes to meet all requirements and especially to keep buildings warm in Winter and cool in Summer.

Full details on request.

**SUNDEALA BOARD CO. LTD.**  
**ALDWYCH HOUSE, LONDON, W.C.2**

Tel.: CHAncery 8159

Works: SUNBURY-ON-THAMES, MIDDLEX.

*Members of Building Board Manufacturers'  
Association of Great Britain Ltd.*

## SELF-ADHESIVE TAPE

Protects the edges of baths, basins and other prefabricated house components in transit from factory to job. Easily removable. No deposit left on delicate surfaces.



**ENQUIRIES  
INVITED**

# SAMUEL JONES & CO. LTD

16-17 NEW BRIDGE STREET, E.C.4. PHONE: CENTRAL 6500



CAMDEN WELL BEAUTY  
PATENT TRADE MARK



## Nobles & Hoare's

### ALBAMATTE

Flat Oil Paint.

### NOBLEX

Washable Distemper.

### NOBELIN

A High-grade Enamel Paint supplied in a full range of colours. Suitable for use on wood or metal surfaces.

### ALBAGLOSS

A perfect white enamel, hard drying, elastic, providing a fine lustrous finish and highly resistant to atmospheric conditions.

### BODICOTE

ready mixed flat white undercoating with exceptional degree of obliteration.

### VARNISHES

for interior and exterior use.

**Nobles & Hoare**  
LIMITED

Varnish, Paint and Cellulose  
Lacquer Manufacturers,  
Woodbridge Works, Kingston  
Road, Leatherhead, Surrey.  
Tel.: Leatherhead 2450 & 2992.

ESTABLISHED 1787.



## GETTING HOT WATER

There is too much fuss about getting hot water. If you have steam and cold water all you need is a Leonard-Thermostatic Steam & Water Mixer and you will get all the hot water you want.

You will only make as much as you need, you will make it where you want it and when you want it. No storage losses and very little equipment. Leonard-Thermostatic Valves provide warm water at uniform temperature automatically controlled by a thermostat within the mixer.



Leonard-Thermostatic Valves are used everywhere to save heat losses and equipment charges.

They supply hot water for wash fountains, troughs, wash-basins, showers, canteen kitchens and many industrial processes.

They can be used on either hot and cold water or steam and cold water supplies.

★ Please write for "Ablution & Process" Pamphlet.

**Leonard-Thermostatic**  
**MIXING VALVES**  
(PATENTED)

**WALKER, CROSWELLER & CO LTD**  
CHELTENHAM, GLOS.  
and 6 Gordon Sq London WC1

- NON SLIP "QUARTZITE" FLOOR TILES
  - NON SLIP "CORNOLITH" PAVING
  - CAST STONE FACINGS
  - "CORNOLITH" COLUMNS
  - "CORNOGLAZE" GLAZED PANELLING FOR WASH ROOMS & KITCHENS
  - "TERRAZZO" COUNTER TOPS
- ... PRODUCTS OF

We are in a position to accept limited orders for our products and can assure our clients that the high standard of quality which we have maintained in the past will be adhered to in the future.

**Johnston Brothers**  
(CONTRACTORS) LTD.

CORNOLITH—THERE IS NO SUBSTITUTE.

JOHNSTON BROTHERS (CONTRACTORS) LTD., DAWLEY, SALOP. LONDON: MINORIES, E.C.3

Using Steam or Hot Water



"You see me everywhere—waging war on fogs."

Remember —  
**VENT-AXIA**  
— for better  
**Air Conditions**

VENT AXIA LTD., 9 VICTORIA ST., LONDON, S.W.1  
and at GLASGOW, MANCHESTER, BIRMINGHAM & LEEDS.

**MOULDINGS?**



**Yes, from our own mills.**

**WE** manufacture Mouldings, Sash Stuff and Planed Goods in our own mills, and we can give really good service throughout the South of England. Immediate attention awaits every enquiry.

You Buy **RIGHT** from

**BRYCE WHITE**  
& COMPANY LIMITED

Head Office: Deseronto Wharf, Lantley, Slough.  
(Telephone: Langley 232 and Southall 2231)  
SOUTHAMPTON, Bridge Works, Redbridge - (Telephone Totton 81293)  
BRISTOL, River Street - - - (Telephone: Bristol 57013)  
LONDON, 16, South Wharf, W.2 - - - (Telephone: PAD. 7131)

**Berry's**  
ELECTRIC LTD.  
"MAGICOAL"

**Fires**

★

**Lighting Fittings**

★

**Water Heaters**

★



# IT'S FIXED DOWN

## WHEN P.D. ADHESIVE EMULSION IS USED

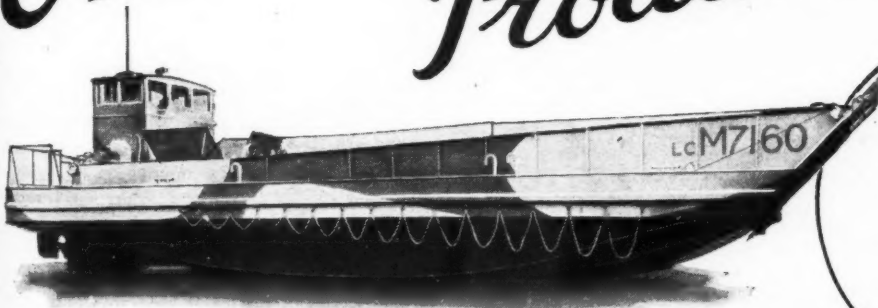
Used by the Ministry of Works and other official bodies for fixing linoleum and wood blocks over concrete, etc., also for waterproofing concrete roofs and for sub-floor construction.

## FIX UP SUPPLIES

FROM POWELL DUFFRYN LTD., BY-PRODUCTS DEPT., 113A, BUTE STREET, CARDIFF

49. 460.

*Once again to Peace  
Production*



*An all-welded Landing Craft constructed at our Works.*

From application of our energies to the manufacture of War products has emerged a wealth of technical knowledge now of benefit to the Building Trade.

Our specialists are now ready to assist you in every way with their experience and advice.

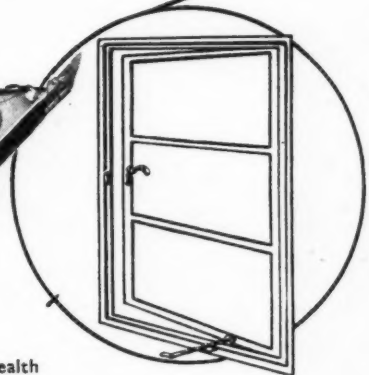
# HELLIWELL

AND COMPANY LTD.

BRIGHOUSE, YORKSHIRE  
BIRMINGHAM • BRISTOL • MANCHESTER

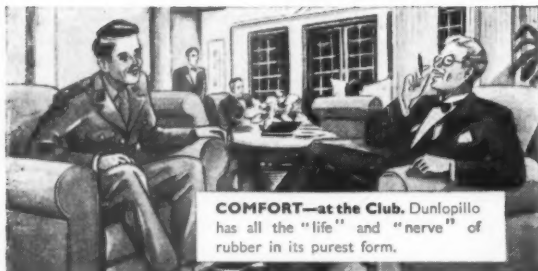
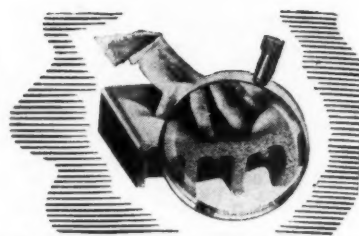
SHEFFIELD • HULL

68 VICTORIA ST., LONDON, S.W.1  
GLASGOW • ABERDEEN • DUBLIN



Metal Windows  
Standard and Purpose-  
made Casements for  
every building  
requirements

*The greatest contribution to comfort and hygiene ever devised...*



**COMFORT—at the Club.** Dunlopillo has all the "life" and "nerve" of rubber in its purest form.



**COMFORT—for Paratroops.** Dunlopillo pads protected head, spine, heels, knees.



**COMFORT—in Travel.** In the soft buoyancy of a Dunlopillo cushioned seat you feel you are virtually "floated".



**COMFORT—in the Cinema.** Dunlopillo has unique self-ventilating properties and unrivalled resilience.



**COMFORT—in the Home.** The Dunlopillo mattress is comfort supreme.

The war period has proved our claim that Dunlopillo is supremely comfortable, definitely hygienic, trouble free and long lasting.

(Present production is limited to a few priority lines).

# DUNLOPILLO

LATEX FOAM CUSHIONING

DUNLOP RUBBER COMPANY LIMITED, RICE LANE, WALTON, LIVERPOOL 9

45/G.R.G/12B

*... thought about wood preservation?*



Registered Trade Mark

Specified and used by the Admiralty, War Office, Air Ministry, Home Office, Ministry of Works and Planning, Ministry of Supply, Public Authorities, Architects, Builders and Contractors

# CUPRINOL

WOOD AND FABRIC PRESERVATIVE

(Manufactured by Cuprinol, Ltd., London)

JENSON & NICHOLSON LTD., CUPRINOL SECTION, 36 ST. JAMES'S STREET, LONDON, S.W.1

DISTRIBUTORS OF CUPRINOL PRODUCTS IN THE UNITED KINGDOM AND NORTHERN IRELAND



**TIMBER MERCHANTS AND SAWMILLERS**

Modern sawmill and transport facilities.  
Architects and Builders Specifications  
efficiently and promptly executed.

**W. C. Ware**  
AND SONS LIMITED

6-8, KENNINGTON LANE, S.E. 11. Phone: Reliance 1864/2647  
11, MANETTE STREET W. 1. Phone: Gerrard 2621  
138-140 SAFFRON HILL, E.C. 1. Phone: Holborn 2326

**SOFTWOODS · HARDWOODS · WALLBOARDS · PLYWOOD · PLASTERBOARD**

## 'THE LIVING STONE'

*Hopton-Wood is a stone of rare beauty. It has inherent warmth and character; as responsive to thought as to the chisel. Its working qualities could not be bettered.*

*Hopton-Wood is indeed a very handsome gift from Nature.*

*From a hill in Derbyshire*

# HOPTON-WOOD STONE

THE HOPTON-WOOD STONE FIRMS LTD., WIRKSWORTH, DERBYSHIRE  
and at Victoria House, Bloomsbury Square, London, W.C. 1

Members of British Stone Federation



## AIR CONDITIONING'S

*First Name -*

**Carrier**

## GALVANIZED TANKS CYLINDERS & CALORIFIERS



Many thousands have been supplied to all Government Departments since 1939.

**Robert Jenkins & Co. Ltd.**  
IVANHOE WORKS ROTHERHAM  
Est'd. 1856

# Astos

*The 100% Mineral Dampcourse*

## PROTECTS

*this fine block*  
of **FLATS**



Withdean Court a delightful block of flats at Brighton, is PROTECTED by Astos Dampcourse. Astos is impermeable; does not perish, and gives lasting service in the most exacting conditions. One quality only. Write for samples and Publication No. 351 giving full detailed instructions.

As our Industry is controlled and priority has to be given to Government work, our ability to execute orders is subject to the regulations imposed on our Industry by the Ministry of Works.

**THE RUBEROID CO. LTD**  
2, Commonwealth House  
New Oxford Street,  
LONDON—W. C. 1

The Architect is J. Dixon, Esq., M.Inst.R.A., London.

**... for all electrical installations**

# F. H. Wheeler

Head Office: 39 Victoria Street, London, S.W.1. Tel: ABBey 8080 (18 Lines)

Branches: Manchester, Bournemouth, Glasgow, Birmingham, Hull, Southampton, Hereford, Sheffield, Thetford, Bristol, Edinburgh, Aberdeen



## POST WAR HOUSE PLANNING IN PREFABRICATED UNITS

- METAL STAIRCASE
- METAL KITCHEN CABINETS
- METAL GARDEN GATES

FABRICATED METAL SECTIONS

*Consult*



HE'S HAPPY NOW... BUT  
WHAT WILL HE THINK OF  
YOU A YEAR FROM NOW?

House newly decorated to his liking. Yes, he's happy now, but what will he say a year from now? Will extremes of weather have taken heavy toll? Will he begin to doubt you? Don't risk your reputation. Use only Smith & Rodger Protective Paints. Products include "Vitamel" Fine White Enamel, "Vitamel" Hard Gloss Paint, "Vitamatt", Flat Paint, "Waldura" Washable Distemper.

Certain of our goods are still restricted and this advertisement is intended to keep our name before our customers during a period when many items are unobtainable or reserved for essential purposes.

**SMITH &  
RODGER**  
PAINTS •  
VARNISHES

SMITH & RODGER LTD., ELLIOT STREET, GLASGOW.  
Telephone: CITY 6341-2. Telegrams: "SMITH RODGER," Glasgow.

## HELPFUL HINTS SERIES —

We shall be publishing these Hints as a booklet. Supplies will be limited. Order a copy NOW and one will be reserved for you.

**HINT No. 21.** When estimating material requirements for painting work, allow 1-gallon of High Gloss Paint for each 70-square yards, and 1-cwt. of Distemper per 400/500-square yards per coat.

**Cementone**  
No. 9

The Paint that looks like stone, feels like stone, and is as hard as stone, the truly perfect imitation Stone Paint.

Write for  
our  
technical  
handbook

JOSEPH FREEMAN SONS & CO. LTD. CEMENTONE WORKS, WANDSWORTH, LONDON  
Phone: BAT 0876-9

## CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the *Advt. Manager, "The Architects' Journal," War Address: 45 The Avenue, Cheam, Surrey, 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," War Address: 45 The Avenue, Cheam, Surrey.

## Public and Official Announcements

Six lines or under, 8s.; each additional line, 1s.

THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: 75, Eaton Place, London, S.W.1. TEL.: SLOANE 5515. 991

### COUNTY BOROUGH OF HUDDERSFIELD.

#### APPOINTMENT OF TOWN PLANNING ASSISTANTS.

Applications are invited for the following appointments:—

##### (a) CHIEF TOWN PLANNING ASSISTANT.

Candidates for the appointment of Chief Assistant should have had considerable experience in the preparation and administration of Statutory Planning Schemes, including the re-development of built-up areas, and preference will be given to those who are Associate Members of the Town Planning Institute and have in addition either architectural, engineering, or surveying qualifications. Applicants are asked to state what salary they require. Cost-of-living war bonus, which will be paid in addition, is at present £59 16s. per annum.

Candidates for the appointment of Second Assistant should have had experience in the preparation of general development plans and estate layouts, including the design and construction of roads and sewers. Preference will be given to those having accepted qualifications. The salary for this appointment is £350 per annum, rising by annual increments of £25 to £400 per annum (plus cost-of-living war bonus, at present amounting to £59 16s. per annum), and the commencing salary may be fixed above the minimum of the scale, depending on the experience of the candidate.

The persons appointed will be required to pass a medical examination and to contribute to the superannuation fund.

Applications, giving full particulars of age, qualifications and experience, and accompanied by copies of not more than three recent testimonials, should be forwarded to the Borough Architect, High Street Buildings, Huddersfield, not later than the 11th February, 1946.

HARRY BANN, Town Clerk.

Town Hall, Huddersfield. 630

### STAFFORDSHIRE COUNTY COUNCIL.

#### TOWN AND COUNTRY PLANNING DEPARTMENT.

Applications are invited for the appointment of a SENIOR PLANNING ASSISTANT. Grade E, at a commencing salary of £450 per annum, rising, subject to satisfactory services, by two annual increments of £20 and one of £10 to £500 per annum, plus war cost-of-living bonus of £59 16s. per annum, and travelling allowance in accordance with the County Council's scale.

Applicants should be members of the Town Planning Institute, or hold an equivalent qualification, and have had experience in the preparation of planning schemes by a planning authority. The appointment is subject to the Local Government Superannuation Acts, and the successful applicant will be required to pass a medical examination. The appointment will be terminable by one calendar month's notice on either side.

Applications in writing, stating age, qualifications, and experience, and position with regard to National Service Act, accompanied by copies of three recent testimonials, marked in the top left-hand corner "Planning Appointment," must be lodged with the undersigned not later than the first post on 11th February, 1946.

Canvassing, directly or indirectly, will be a disqualification. Applicants must state in their application whether they are related to a member of the County Council.

T. H. EVANS, LL.M., Clerk of the County Council. County Buildings, Stafford. 22nd January, 1946. 637

### CITY AND COUNTY OF THE CITY OF EXETER.

#### APPOINTMENT OF CITY ARCHITECT.

Applications are invited for the above appointment, at a salary of £1,000 per annum, rising by annual increments of £50 to £1,250 per annum, plus cost-of-living bonus, now £59 19s. 3d. per annum. The commencing salary will be fixed in accordance with the qualifications and previous experience of the selected candidate. Applicants must not be under 35 years of age.

The person appointed must be a member of the Royal Institute of British Architects, and will be responsible for designing and carrying out the Council's architectural work, including its housing and educational building programmes.

He will be required to advise the Council on all architectural matters under its control, and will be responsible for the upkeep and maintenance of the Council's buildings and properties, and the control of the staff engaged on such work.

The appointment will be subject to three months' notice on either side and to the provisions of the Local Government Superannuation Act, 1937. The person appointed will be required to pass a medical examination.

Applications, stating age, qualifications, and full records of experience, together with copies of three recent testimonials, should be sent to the undersigned not later than the 20th February, 1946.

No application forms will be issued. C. J. NEWMAN, Town Clerk.

Exeter.

22nd January, 1946. 635

### COUNTY BOROUGH OF SWANSEA.

#### CHIEF ASSISTANT QUANTITY SURVEYOR.

Applications are invited for the appointment of Chief Assistant Quantity Surveyor, in the Borough Architect's Department.

Salary: £500 per annum, rising by annual increments of £25 to £600 per annum, plus cost-of-living bonus, as determined by the Council (current rate 23s. per week).

Applicants must be Fellows or Professional Associates (Quantities Sub-Division) of the Chartered Surveyors' Institution, and must have had extensive experience in the preparation of bills of quantities, specifications, and schedules for all classes of public buildings, the administration of contracts, measurement for and adjustment of accounts for all classes of work, and should be a competent estimator, and have a thorough knowledge of constructional detail and methods. Previous experience with a Municipal Authority will be an advantage.

Applicants must be under 45 years of age. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

The appointment may be terminated by one month's notice on either side.

Forms of application may be obtained from the Borough Architect, Guildhall, Swansea, by application with stamped addressed foolscap envelope.

Applications, accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Chief Assistant Quantity Surveyor," must be delivered to the undersigned not later than 16th February, 1946.

Canvassing directly or indirectly will disqualify.

T. B. BOWEN, Town Clerk.

Guildhall, Swansea.

25th January, 1946. 634

### SOMERSET COUNTY COUNCIL.

#### COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of the following Temporary Staff in the above-named Department:—

Class II(a) ARCHITECTURAL ASSISTANTS, at a salary within the scale £360 per annum, by annual increments of £15 to £415 per annum.

QUANTITY SURVEYORS, at a salary within the scale £310 per annum by annual increments of £15 to £415 per annum.

The commencing salaries will be determined by experience and qualifications. War bonus in accordance with the Council's scale (at present £59 19s.), to be paid in addition to the above salaries.

The successful candidates will be required to pass a medical examination by the County Medical Officer of Health.

Applications, stating age, training, experience, qualifications, position in regard to military service and length of time required to take up new appointment, together with copies of three recent testimonials, should be sent to the undersigned not later than the 11th February, 1946.

R. O. HARRIS, F.R.I.B.A., County Architect.

Park Street, Taunton, Somerset.

21st January, 1946. 639

### CITY OF NOTTINGHAM.

#### QUANTITY SURVEYOR—HOUSING DEPARTMENT.

Applications are invited for the appointment of a Quantity Surveyor, in the Housing Department, at a salary of £600 per annum, plus war bonus, at present £59 16s. per annum.

Candidates must have had considerable experience of quantity surveying work, particularly in relation to housing, and must hold suitable professional qualifications. Membership of the Surveyors' Institution is desirable.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, to one month's notice on either side, to the successful candidate passing a medical examination, and to his undertaking to reside within the City boundaries.

Applications, stating age and experience, together with copies of three recent testimonials, to be delivered to the undersigned, and endorsed "Quantity Surveyor—Housing Department," not later than the 18th day of February, 1946.

J. E. RICHARDS, Town Clerk.

The Guildhall, Nottingham. 621

### MARSHLAND RURAL DISTRICT COUNCIL. WISBECH RURAL DISTRICT COUNCIL.

#### SENIOR ARCHITECTURAL ASSISTANT.

The joint Councils invite applications from duly qualified persons for the appointment of a Senior Architectural Assistant in their Architect's Dept., at a commencing salary of £400 per annum, plus cost-of-living bonus (at present £59 16s. per annum).

Applicants must be capable of preparing house designs, working drawings, specifications and bills of quantities, and preference will be given to those who have had experience of local authorities' housing schemes.

Applications from serving or ex-Service men with the necessary experience will be welcomed, and such applicants should state the date they would be available to commence their duties.

The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and to one month's notice on either side.

Applications, endorsed "Senior Architectural Assistant," stating age, qualifications, details of experience, position regarding military service, together with copies of three testimonials, to be sent to the undersigned by not later than 12th February, 1946.

Canvassing will be a disqualification.

G. HELLIER, Clerk to the Councils.

Council Offices, Alexandra Road, Wisbech. 18th January, 1946. 623

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

#### COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of ASSISTANT ARCHITECTS, in the following grades:—

Two in grade "PA" (£275—£15—£365).  
Two in grade "PB" (£375—£20—£475).  
One in grade "PC" (£500—£25—£650).

Cost-of-living bonus, at present £59 16s. per annum, is payable in connection with the appointments, which are subject to the provisions of the Local Government Superannuation Act, 1937, and successful candidates will be required to pass a medical examination.

Details of these appointments and form of application may be obtained on application to Mr. Hubert Bennett, F.R.I.B.A., County Architect, County Hall, Wakefield.

Applications must reach me, the undersigned, not later than the 19th February, 1946.

BERNARD KENYON, Clerk of the County Council.

County Hall, Wakefield. 636

### NEWCASTLE-UPON-TYNE EDUCATION COMMITTEE.

#### TECHNICAL SCHOOL OF BUILDING CRAFTS.

Wanted, if possible, by the beginning of the summer term, 1946:—

(a) An ASSISTANT MASTER, to take History of Architecture, some Building Geometry, Building Construction, and Free Drawing. Good architectural qualifications and teaching experience desirable.

(b) An ASSISTANT MASTER, to take Carpentry and Joinery, and to assist with Technical Drawing, mainly Building Geometry, Good City and Guide qualifications, teaching experience, and some experience in the building industry desirable.

Burnham, secondary scale. Prescribed form to be returned to the undersigned by 6th February, 1946.

THOS. WALLING, Director of Education.

City Education Office, Northumberland Road, Newcastle-upon-Tyne, 1. 635

## COUNTY BOROUGH OF BIRKENHEAD.

## APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT FOR EDUCATIONAL WORK.

Applications are invited for the above appointment on the Borough Surveyor's staff, at a salary of £500 per annum, plus bonus, at present £59 16s. per annum.

Candidates should be A.R.I.B.A. or hold equivalent qualifications, and should have had experience in the design of school buildings and of light construction, and have a knowledge of the regulations of the Ministry of Education with regard to school buildings.

The above post is subject to the Local Government Superannuation Act, 1937, and the person appointed will be required to contribute the appropriate percentage of his salary to the Corporation's superannuation scheme.

The appointment will be subject to one month's notice on either side, and to the successful candidate passing a medical examination.

Applications, endorsed "Architectural Assistant," which must be in accordance with particulars to be obtained from Mr. B. Robinson, M.Inst.M. & Cy.E., Borough Engineer and Surveyor, Town Hall, Birkenhead, to be sent with copies of three recent testimonials to the undersigned not later than the 9th February, 1946.

E. W. TAME.

Town Clerk.

Town Hall, Birkenhead.

January, 1946.

624

## INDUSTRIES DEVELOPMENT ACT (NORTHERN IRELAND), 1945.

## INDUSTRIAL BUILDING.

The attention of all persons concerned is directed to Section 9 of the Industries Development Act (Northern Ireland), 1945, which provides that a person shall not enter into a contract for the erection of any building having an aggregate floor area exceeding 3,000 sq. ft., required for the purpose of any industrial undertaking, or begin the erection of such a building, at a time earlier than the expiration of three months, or such shorter period as the Ministry of Commerce may allow, from the giving to that Ministry of a notification in writing of the proposed erection.

Penalties are prescribed for contravention of this section.

Notifications of intention to begin, or to enter into a contract for, the erection of buildings to which the Section applies, should be addressed to the Secretary, Ministry of Commerce, Factory and Storage Control, Chichester Street, Belfast.

Such notifications should not be confused with applications for building licences, which are still necessary. Application for building licences should continue to be made to the Secretary, Ministry of Finance, 121, Victoria Street, Belfast.

Ministry of Commerce, Belfast.

January, 1946.

627

## CUMBERLAND COUNTY COUNCIL.

## APPOINTMENT OF PLANNING ASSISTANT

Applications are invited for the position of Planning Assistant, at a salary of £420 per annum, rising by annual increments of £20 to £460, plus war bonus (at present £59 16s. per annum), and a car and subsistence allowance in accordance with the County Council's scale.

The appointment is subject to the Local Government Superannuation Act, 1937, and the successful candidate will be required to undergo a medical examination.

The appointment to be terminable by one month's notice on either side.

Candidates must be fully conversant with the Town and Country Planning Acts and Orders made thereunder, and be thoroughly competent to carry out Field Work, Plotting, and the Preparation of Plans.

Applications, stating age, qualifications, and experience, accompanied by copies of three recent testimonials, and endorsed "Planning Assistant," should be received by the undersigned not later than Monday, 11th February, 1946.

G. ANDREW WHEATLEY.

Clerk of the County Council.

The Courts, Carlisle.

25th January, 1946.

646

## BATTERSEA BOROUGH COUNCIL.

Applications are invited for the appointment of two ARCHITECTURAL ASSISTANTS, in the department of the Borough Engineer and Surveyor. The appointments are temporary, and subject to one month's notice on either side. The salary to be paid will be according to qualifications and experience, but will not exceed £8 per week, plus cost-of-living bonus (at present 23s. per week).

Forms of application may be obtained from the Borough Engineer and Surveyor, Town Hall, Battersea, S.W.11, and should be returned to him, together with copies of three recent testimonials, not later than Friday, 8th February, 1946.

R. G. BERRY.

Town Clerk.

Town Hall, Battersea, S.W.11.

625

## KINGSTON-UPON-HULL EDUCATION COMMITTEE.

## COLLEGE OF ART AND CRAFTS.

Principal: S. I. HEMMING, A.R.C.A. (Lond.).

## SCHOOL OF ARCHITECTURE.

Applications are invited for the position of SENIOR ASSISTANT, to lecture and give instruction in the School of Architecture at the College of Art and Crafts. Applicants should be members of the R.I.B.A., preferably with the Degree of Diploma of a recognised School of Architecture, and qualified by experience for the duties and responsibilities of the position. The Senior Assistant will be expected to deal with the studio work at all stages of the five-year Diploma Course; to conduct lecture courses in the Theory of Architectural Design, Civic and Landscape Design, and should be qualified to lecture in such other subjects as Acoustics, Surveying, and Professional Practice.

The salary will be in accordance with the Durham Technical Scale for Senior Assistants, i.e., £600, rising by annual increments of £25 to a maximum of £750, plus increments for training.

Particulars of appointment and application forms, which must be returned not later than the 15th February, 1946, can be obtained on receipt of a stamped addressed envelope, from the Director of Education, Education Offices, Guildhall, Kingston-upon-Hull.

643

## COUNTY BOROUGH OF SWANSEA.

## HOUSING ARCHITECT.

Applications are invited for the appointment of Housing Architect in the Borough Architect's Department.

Salary: £2750 per annum, plus cost-of-living bonus, as determined by the Council (current rate 23s. per week).

The person appointed will be required to take charge of all architectural work for the provision of housing accommodation undertaken by the Council, including the supervision of works carried out by contract and by direct administration.

Applicants must be Registered Architects and Fellows or Associates of the Royal Institute of British Architects, and should also have extensive experience in the layout, planning, and supervision of large scale housing schemes.

Applicants must be under 45 years of age. The appointment will be subject to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass a medical examination.

The appointment may be terminated by one month's notice on either side.

Forms of application may be obtained from the Borough Architect, Guildhall, Swansea, by application with stamped addressed foolscap envelope.

Applications, accompanied by copies of three recent testimonials, and enclosed in an envelope endorsed "Housing Architect," must be delivered to the undersigned not later than 16th February, 1946.

Canvassing directly or indirectly will disqualify.

T. B. BOWEN.

Town Clerk.

Guildhall, Swansea.

25th January, 1946.

633

## METROPOLITAN BOROUGH OF LEWISHAM.

## APPOINTMENT OF BOROUGH ARCHITECT.

Applications are invited from qualified and experienced Architects for the appointment of Borough Architect. The person appointed will have complete responsibility for all architectural work of the Council, including, in particular, the layout, design and development of municipal housing schemes and the technical direction of the work of repair of war damage to dwelling-houses still remaining to be carried out in the Borough.

The salary will be at the rate of £1,500 per annum, rising by annual increments of £50 (subject to satisfactory service) to a maximum of £1,750, plus a temporary bonus in accordance with the recommendation of the London District Council for Local Authorities' Administrative, Professional, Technical and Clerical Services.

The appointment will be subject to the rules and regulations of the Council from time to time in force relating to officers; to the provisions of the Local Government Superannuation Act, 1937; to termination on three months' notice on either side; and to the successful candidate passing, satisfactorily, a medical examination by the Council's Medical Officer of Health.

The person appointed will be required to devote his whole time to the duties of the office, and will not be permitted to engage in private practice. Forms of application and further particulars of the appointment may be obtained from me.

Applications, accompanied by copies of not more than three recent testimonials, should be addressed to me in envelopes endorsed "Borough Architect," and must be received not later than Saturday, the 23rd February, 1946.

Canvassing, either directly or indirectly, will be a disqualification.

ALAN MILNER SMITH.

Town Clerk.

Lewisham Town Hall, Catford, S.E.6.

24th January, 1946.

644

## ESSEX COUNTY COUNCIL.

## COUNTY LAND AGENT'S DEPARTMENT.

## APPOINTMENT OF BUILDING SURVEYOR AND ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a Building Surveyor and Architectural Assistant upon the staff of the County Land Agent's Department.

Candidates should be Associates of the Royal Institute of British Architects, and must be competent draughtsmen and fully experienced in the preparation of working drawings, specifications and estimates, and the supervision of contracts for the erection, maintenance, and reconstructions of buildings. Experience in connection with farm buildings and rural houses will be an advantage.

The salary will be at the rate of £390 per annum, rising by annual increments of £15 to £435 per annum, plus cost-of-living bonus as decided by the Council from time to time (at present £59 16s. per annum).

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.

Applications, stating age, qualifications and experience, together with copies of three recent testimonials (which will not be returned), should be sent to the County Land Agent, 69, Duke Street, Chelmsford, in a sealed envelope, endorsed "Assistant Building Surveyor," as quickly as possible.

JOHN E. LIGHTBURN.

Clerk of the County Council.

County Hall, Chelmsford.

630

## Competitions

Six lines or under, 8s.; each additional line, 1s.

## COMPETITION FOR DESIGNS FOR A GARDEN OF REMEMBRANCE.

(1) The Commissioners of Public Works in Ireland invite Architects, who are Irish citizens or who are ordinarily resident in Ireland, or both of whose parents were born in Ireland, to submit competitive designs for the conversion of the northerly end of the Rotunda Gardens, Dublin, into a Garden of Remembrance, to be dedicated to those who gave their lives in the cause of Irish freedom.

(2) Conditions of the Competition and a site map may be obtained from the undersigned up to 28th February, 1946, upon payment of £1, which will be returned after receipt of a bona fide design. Applications for the conditions should be accompanied by an affidavit, or other declaration in legal form, that the applicant complies with the requirement as to eligibility to compete.

(3) The Commissioners have appointed John J. Robinson, Esq., M.Arch., F.R.I.A.I., F.R.I.B.A., as their Assessor, and his award shall be binding on all competitors.

(4) The author of the design placed first will be appointed Architect for the proposed Garden of Remembrance, with remuneration at the scheduled rates of the Royal Institute of the Architects of Ireland.

(5) The authors of the designs placed second and third will be paid £80 and £40 respectively.

(6) All designs must be delivered to the undersigned not later than noon on 31st July, 1946.

T. J. MORRIS, R.U.N.A.I.

Secretary.

Oifig Na nOibreacha Poiblí (Office of Public Works), Baile Átha Cliath (Dublin).

622

## Partnership

Six lines or under, 8s.; each additional line, 1s.

**WELL-KNOWN** Firm of London Architects, with large practice, and now engaged on high priority contracts, have vacancy for a young energetic Architect as Junior Partner; Service man, due for early release considered.—Apply, stating full particulars of training, experience, and age, to Box 645.

## Architectural Appointments Vacant

Four lines or under, 4s.; each additional line, 1s.

**LONDON ARCHITECTS** require Senior Assistant; experienced in London housing (flat); salary, £600-£800. Apply Box 599.

**ARCHITECTURAL ASSISTANT** wanted in London office of Staff Architect to large industrial company; well trained, good draughtsman, able to handle large and small jobs from sketch plans to finish; salary, £400 to £500, according to qualifications. Apply Box 605.

**MEASURING SURVEYORS AND ASSISTANTS** required for work in the London area; must have experience in measurement and settlement of builders' accounts. Please apply, with full particulars of experience, salary required, and when free, to H. M. Doughty & Partners, Quantity Surveyors, 55, Pall Mall, Westminster, S.W.1.

619



**JUNIOR ARCHITECTURAL ASSISTANT** required. State age, experience, and salary required, to Frederick Gibberd, 25, Grove Terrace, N.W.5. 631

**HOUSING ARCHITECT** in private practice in London requires additional Junior/Senior Assistant immediately. Write, giving age, qualifications and salary required, to F.R.I.B.A., 42, Richmond Park Road, S.W.14. 632

**ARCHITECTURAL ASSISTANT** required immediately. Applications in writing, stating experience and salary required, to Howard Williams, F.R.I.B.A., F.S.I., 2, St. Andrews Place, Cardiff. 638

**ARCHITECTS**—Senior and Junior Architectural Assistants required, with experience in industrial and commercial buildings; salary in accordance with qualifications and experience. Applications in writing, giving details of experience, etc., should be sent to R. W. Leckie, Esq., Secretary, S.C.W.S., Ltd., 95, Morrison Street, Glasgow, endorsed "Architect." 641

**QUANTITY SURVEYORS**—Senior and Junior Quantity Surveying Assistants wanted, with experience in industrial and commercial buildings; salary in accordance with qualifications and experience. Applications in writing, giving details of experience, etc., should be sent to R. W. Leckie, Esq., Secretary, S.C.W.S., Ltd., 95, Morrison Street, Glasgow, endorsed "Surveyor." 642

**ARCHITECTURAL AND Engineering Assistants** A required immediately; permanent to selected applicants for large estate development in North-West area. Write, stating age, experience, and salary required, to Joseph W. Anderson, A.I.A.A. & S., Registered Architect, 24, South King Street, Blackpool. 647

### Architectural Appointments Wanted

**ARCHITECTURAL ASSISTANT:** "A" release; 10 years' continuous and varied experience at home and abroad; available immediately; will go anywhere. Write W. Schofield, Hatfield Broad Oak, Bishops Stortford, Herts. 256

**PART-TIME WORK** wanted by Qualified Architect and Surveyor; willing to assist other Architects in preparation of sketch plans, surveys, working drawings, specifications, etc.; experienced in housing plans and layouts and war damage work, etc.; Northern Ireland district. Box 262.

**BUILDING TRADE SUB-CONTRACTORS**—A Technica Sales Engineer, with successful pre-war and post-war experience in builder's hardware, plumbing and heating equipment, modern building materials, light alloy construction and prefabricated housing, desires contact substantial manufacturers wishing to extend their home and export markets; competent production engineer; connections Ministries, architects and builders; knowledge of export market, advertising and catalogue production; remuneration by salary and commission. Box 226.

**A.R.I.B.A. (31)** seeks progressive Architectural Position in Oxfordshire; ex-R.E. officer, concerned in W.D. building throughout service; would consider private or commercial work; good experience in housing and most types of building. Box 263.

**CHIEF ARCHITECTURAL ASSISTANT**, extensive experience in factories and commercial buildings, mainly in London, accustomed to complete charge, seeks appointment with responsibility and definite prospects. Box 264.

**QUALIFIED Interior and Furniture Designer (N.R.D.)** seeks position with firm of Architects or Industrial Design Specialists; experienced in most types of contemporary design; recently released from the R.A.F.; specimens of work and reference available on request. Box 265.

**FULLY qualified Architect (34)**, just demobilised, requires Partnership in progressive firm or post of responsibility with view to Partnership; success in architectural competitions before enlistment, and good general experience in all types of work. Box 266.

**ARCHITECT, A.R.I.B.A., A.M.T.P.I.**, desires Senior Position, leading to early Partnership; 19 years' experience housing and general work; Scotland preferred.—Please reply, in confidence, to Box 267.

### For Sale

Four lines or under, 4s.; each additional line, 1s.

**ELECTRICITY FOR COUNTRY HOUSE**—Complete equipment for sale, including 20 h.p. Oil Engine, Electric Generator and Booster Set, Switchboard, Battery, and Motors. 200 volts supply, in good running order; inspection—Apply Baily, Grundy & Barrett, Ltd., Electrical Engineers, Cambridge. 577

**SEVERAL Standard Text-Books**, in good condition; suitable R.I.B.A. Inter. and Final Studies. Details from Box 640.

### Miscellaneous

Four lines or under, 4s.; each additional line, 1s.

**A. J. BINNS, LTD.**, specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 55, Gt. Marlborough St., W.1. Gerrard 4223-4225.

**F. J. BAYNES, LTD.**, established over 100 years. Heating, Ventilating and Sanitary Engineers. 99/101, St. Paul's Road, N.1. Canonbury 2552. 584

**FENCING AND GATES** of every type, supplied and erected. Specialists in chain link. Boulton & Paul, Limited, Norwich. 662

**WANTED**—One set of "Arts Et Matiers Graphiques." Please reply to Box 5.

**ARCHITECTURAL AND Engineering, Tracing, and Drafting Work** required; staff of expert draughtsmen; moderate fees. Box 628.

**BUILDING ESTATE DEVELOPMENT**—Ample funds available; liberal advance on cost of land; then building finance; then up to 90 per cent. long term mortgages to owner-occupiers, free of brokerage; low interest rates and charges. Chas. B. Buxton, Ltd., Local Authorities Loans Brokers, 9, Clements Lane, Lombard Street, E.C.4. 588

**TRACING**—Architectural drawings traced; blue and white prints made and coloured; rough sketches drawn up; quick service. K. W. Taylor, 5, Perrywood Street, Parson's Green, S.W.6. 509

**ARCHITECT**, recommencing practice (work in hand) invites catalogues building materials, accessories, joinery, steel casements, domestic equipment, etc. Walker, L.R.I.B.A., 5, Summerfield Road, Bridlington. 629

**CENTRAL HEATING OIL BURNERS**—Insist on the British-made Parwinc—no stoking, clean, trouble free; no waiting for coal or coke deliveries; available now if oil permit obtainable. Parker, Winder & Achurch, Ltd., Makers, 80, Broad Street, Birmingham, 1. 992

### Educational Announcements.

Four lines or under, 4s.; each additional line, 1s.

**R.I.B.A. QUALIFYING EXAMINATIONS**. Mr. C. W. Box, F.R.I.B.A., M.R.San.I. Courses of Correspondence and Personal in Studio. 115, Gower St., London, W.C.1 (Tel.: Euston 3906), and at 23, St. James's St., Derby (Tel.: 45648).

**R.I.B.A. and T.P. INST. EXAMS**. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 161, West Heath Road, N.W.3. Tel: SPE 5319. 415

## STEELWORK BY SHARMAN & SONS

SWAN WORKS, HANWORTH, MIDD.

'Phones: Faltham 3007. Sunbury 2347. 'Grams: "Sharmen," Faltham.

## NEW FLOORS for OLD

Wood Floors Planed, Sanded, Repaired and Treated.

**FLOOR RENOVATIONS LTD.**

26, LAURISTON ROAD, E.1. 'Phone: AMH 1080  
Sandpapering machines for hire.

## GEORGE ELLISON LIMITED

PERRY BARR BIRMINGHAM 22B

Makers of reliable electric switchgear for mains supply and electric motor control

## Wm. OLIVER & SONS, Ltd.

(of Bunhill Row), 12/13 Bow Lane, E.C.4  
City 3335

HOME GROWN { HARDWOODS  
SOFTWOODS

Quota Merchants for  
NATIONAL STOCK

## NEW ERA PAMPHLETS

### on Reconstruction and Home Affairs

A NEW series of pamphlets by experts to interest the general reader and assist the specialist in solving the most urgent problems which face the country to-day.

The first appears immediately under the title:

### PLANNING LOCAL PROSPERITY

by K. G. Fenelon, M.A., Ph.D.

to be followed by

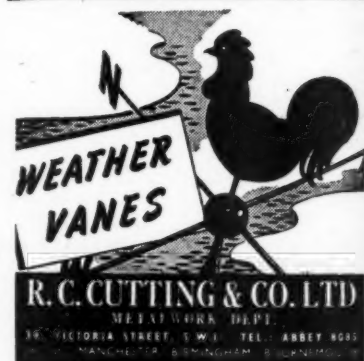
AIR TRANSPORT  
by E. D. Weiss, Ph.D.

PLANNING AND THE COUNTRYSIDE  
by Jaqueline Tyrwhitt, A.M.T.P.I.

EDUCATION AND THE COMMUNITY  
by J. L. Hardie, M.A., Ed.B.

Illustrated 1s. 6d. net.

Artand Educational Publishers Ltd.



## SOUND INSTRUCTION by Postal Method

is offered by the world's largest and greatest correspondence school in the following subjects:

Architecture	Surveying and Mapping
Architectural Drawing	Municipal Engineering
and Designing	Plan and Map
Building Contracting	Draughtsmanship
and Interior Work	Structural Engineering
Building Construction	Concrete Engineering
and Quantities	Structural Drawing
Building Specifications	Construction Draughtsmanship
and Quantities	
Quantity Surveying	Sanitary Engineering
Structural Steelwork	Air Conditioning
Civil Engineering	Heating and Ventilation

Special Courses for the Diplomas of the R.I.B.A., I.O.B., C.S.I., I.C.E., I.M. & Cy.E., I.Struct.E., R.S.I., I.S.E., etc.

Special Terms for members of H.M. Forces and discharged disabled members of H.M. Armed Forces.

Write to-day for Syllabus of our Courses in any of the subjects mentioned above

## INTERNATIONAL

CORRESPONDENCE SCHOOLS, LTD.

Dept. 141, International Buildings  
KINGSWAY, LONDON, W.C.2





AN ARCHITECT'S THOUGHTS ON POST-WAR OPPORTUNITIES



## INSET ELECTRIC FIRES

- A limited number of models are available in restricted quantities.
- Full production will be achieved as soon as conditions permit.
- In the meantime we ask for the indulgence of friends.

**ELECTROWAY HEATERS LTD.**  
LOUGHBOROUGH ENGLAND

## HEATING AND AIR-CONDITIONING OF BUILDINGS

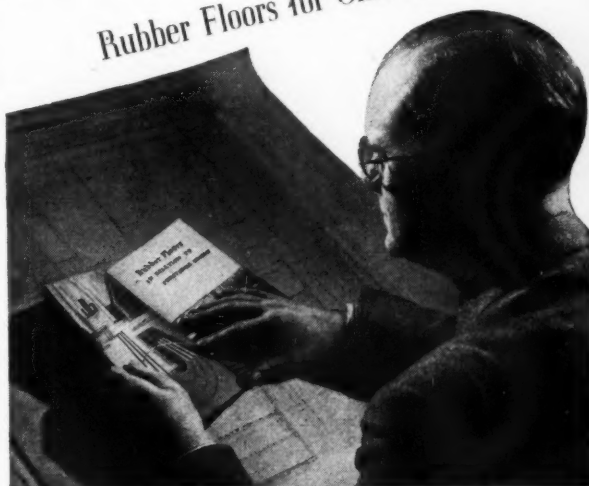
By Faber & Kell

SECOND AND REVISED EDITION  
(Full particulars sent on application)

Price 45s. Postage 7d.

**THE ARCHITECTURAL PRESS**  
45 The Avenue, Cheam, Surrey

'I don't think you can better  
Rubber Floors for Cinemas ...



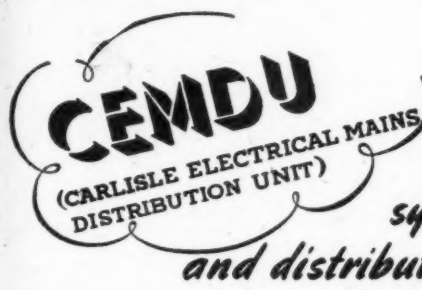
## REDFERN RUBBER FLOORS

although not at present available, will provide wide scope for use in post-war plans. Municipal Buildings, Cinemas, Theatres, Hospitals, Banks and Office Buildings are typical opportunities for the use of this most hard-wearing, silent and decorative of all types of floors.

**REDFERN'S RUBBER WORKS LIMITED · HYDE**

P.C.6.

Arthur Union Service



*A NEW, compact  
and expandable  
system for the intake  
and distribution of electricity-*

"CEMDU"—Carlisle Electrical Mains Distribution Unit will fulfil your requirements for neater and more flexible arrangements for the intake and distribution of electricity in both large and small buildings.

Loose gear and trailing wires simply don't exist with the "CEMDU": all equipment and wiring is enclosed in the compact and attractively designed sheet metal cases and trunking, which provide easy access and facilities for endless extensions with the minimum of work.

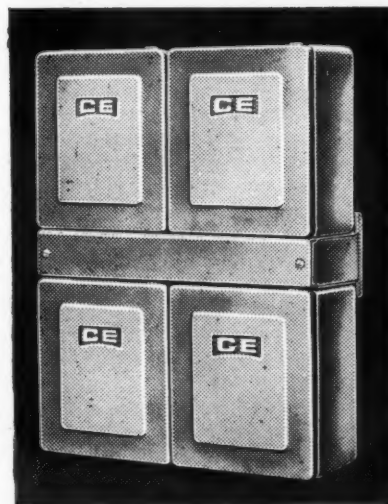
Write for full details to the sole manufacturers:—

**CARLISLE  
ELECTRICAL**

**MANUFACTURING CO. LTD.**

Bentcliffe Works, Eccles, Lancs.

Telephones: ECCLES 1691/2/3/4 Telegrams: "Carlectric," Eccles



The "CEMDU" incorporates latest type C.E. "LATRALOK" Fuses which are rewirable. Main Switch is the entirely new "C.E." Rotary Pattern and is of liberal rating.

# Alphabetical Index to Advertisers

	PAGE		PAGE		PAGE
Aero Pipe & Glass Co., Ltd.	xxvi	Hammond & Champness, Ltd.	xli	Powell Duffryn, Ltd.	ii
Aircscrew Co., Ltd.	—	Harris & Sheldon, Ltd.	xxv	Proderite, Ltd.	—
Aluminium Development Assoc.	—	Harvey, G. A., & Co. (London), Ltd.	lii	Pyrene Co., Ltd.	ix
Anderson, C. F., & Sons, Ltd.	—	Helliwell & Co., Ltd.	—	Rawlplug Co., Ltd.	—
Anderson, D. Sons, Ltd.	—	Henley's Telegraph Works Co., Ltd.	—	Redfern's Rubber Works, Ltd.	lix
Art & Educational Publishers, Ltd.	lviii	Hilton, James, & Son (Leigh), Ltd.	iv	Renfrew Foundries, Ltd.	xxiii
Architectural Press Ltd., The	lix	Holden & Brooke, Ltd.	—	Restall, Fredk., Ltd.	xxviii
Ascot Gas Water Heaters, Ltd.	xxiv	Hope, Henry, & Sons, Ltd.	xxxviii	Reynolds Tube Co., Ltd.	xxxiv
Bakelite, Ltd.	xix	Hopton Wood Stone Firms, Ltd.	liii	Rheostatic Co., Ltd.	xxx
Banister, Walton & Co., Ltd.	—	Hotric, Ltd.	iv	Robinson & Kershaw, Ltd.	—
Bath Cabinet Makers & Artcraft, Ltd.	xvi	Ideal Boilers & Radiators, Ltd.	—	Rowson, Drew & Clydesdale, Ltd.	ii
Belling & Co., Ltd.	—	Industrial Engineering, Ltd.	—	Ruberoid Co., Ltd.	liv
Benham & Sons, Ltd.	xxxiii	Invisible Panel Warming Assoc.	xx	Rushton, J. W., & Co., Ltd.	xlv
Berry's Electric, Ltd.	i	International Correspondence Schools	lviii	Rustproof Metal Window Co., Ltd.	xviii
Black & Decker, Ltd.	xii	Isteg Steel Products, Ltd.	—	Sadd, John, & Sons, Ltd.	viii
Blundell, Spence & Co., Ltd.	xlvii	Jenkins, Robert, & Co., Ltd.	liv	Sanders, Wm., & Co. (Wednesbury), Ltd.	—
Booth, John, & Sons (Bolton), Ltd.	—	Jenson & Nicholson, Ltd.	lii	Scaffolding (Gt. Britain), Ltd.	xi
Braithwaite & Co., Engineers, Ltd.	—	Johnston Bros. (Contractors), Ltd.	li	Schell, D., & Co., Ltd.	lviii
Bratt, Colbran, Ltd.	—	Jones, Saml., & Co., Ltd.	xlvi	Sharnam & Sons	—
Briggs, William, & Sons, Ltd.	xxii	Kerner-Greenwood & Co., Ltd.	xxxix	Siegmart Fireproof Floor Co., Ltd.	—
British Electrical Development Assoc.	—	Ketton Portland Cement Works	xliv	Smith, Henry (Constructional Engineers), Ltd.	—
British Insulated Callender's Cables, Ltd.	—	Kidde, Walter, Co., Ltd., The	—	Smith & Rodger, Ltd.	lv
British Steelwork Assoc., The	—	Kingfisher, Ltd.	—	Smith & Wellstood, Ltd.	xli
British Trane Co., Ltd.	xlvii	Laing, John, & Son, Ltd.	—	Southern Lime Assoc., The	xlvi
Brown, Donald (Brownall), Ltd.	—	Lamont, James H., & Co., Ltd.	xxi	Spiral Tube & Components Co., Ltd.	i
Bryce, White & Co., Ltd.	i	Leaderflush, Ltd.	—	Staines Kitch Equipment Co., Ltd.	—
Carlisle Electrical Mfrg. Co., Ltd.	lix	Lead Industries Development Council	—	Stainless Steel Sink Co., Ltd.	—
Cargo Fleet Iron Co., Ltd.	—	Lockerbie & Wilkinson (Tipton), Ltd.	—	Stelcon (Industrial Floors), Ltd.	xv
Carrier Engineering Co., Ltd.	liv	Logical Coal Bunkers	—	Sundeala Board Co., Ltd.	xlviii
Cellon, Ltd.	x	London Brick Co., Ltd.	xxxii	Sutcliffe, Speakman & Co., Ltd.	—
Cement Marketing Co., Ltd.	—	Lunn, Sir Henry, Ltd.	xiii	Tarran Industries, Ltd.	—
Central Institute of Art & Design	xxviii	Magnet Joinery Co., Ltd.	—	Tentest Fibre Board Co., Ltd.	xvii
Colt Ventilation, Ltd.	xliv	Mallinson, William, & Sons, Ltd.	—	Thompson Beacon Windows, Ltd., John	—
Constructors, Ltd.	vii	McCall & Co. (Sheffield), Ltd.	—	Thornborough & Son (Manchester), Ltd.	xxxv
Crittall Manufacturing Co., Ltd.	—	McCarthy, M., & Sons, Ltd.	—	Trussed Concrete Steel Co., Ltd.	—
Croft Granite, Brick & Concrete Co., Ltd.	—	McKechnie Bros., Ltd.	—	Tucker, Duncan (Tottenham), Ltd.	—
Cutting, R. C., & Co., Ltd.	lviii	Mellor, Bromley & Co., Ltd.	lxi	Turners Asbestos Cement Co., Ltd.	vi
Dawnays, Ltd.	xi	Metal Finishes, Ltd.	xxxvi	Tylers, Ltd.	xlvi
Dunlop Rubber Co.	lii	Metal Window Mfrs. Assoc., Ltd.	xxvii	Underfeed Stoker Makers' Assoc.	—
Edgar, Wm., & Son, Ltd.	xviii	Metropolitan-Vickers Electrical Co., Ltd.	—	United Steel Companies, Ltd.	—
Electroway Heaters, Ltd.	lix	Midland Woodworking Co., Ltd.	—	Universal Asbestos Co., Ltd.	—
Ellis (Kensington), Ltd.	—	Mills Scaffold Co., Ltd.	lxii	Val de Travers Ashphalte Paving Co., Ltd.	—
Ellison, George, Ltd.	lviii	Milners Safe Co., Ltd.	xliii	Vent-Axia, Ltd.	i
English Joinery Manufacturers' Assoc.	—	Mint, Birmingham, Ltd., The	—	Vulcan Products, Ltd.	—
Etchells, Congden & Muir, Ltd.	—	M.K. Electric, Ltd.	—	Walker, Crosswell & Co., Ltd.	xlix
Everant, Ltd.	lx	Mumford, Bailey & Preston, Ltd.	—	Walterisation Co., Ltd., The	ii
Expanded Metal Co., Ltd., The	—	National Federation of Demolition Contractors	xlvi	Warerite, Ltd.	—
Ferrocon Engineering Co., Ltd.	xxxi	Newsum, H., Sons & Co., Ltd.	v	Ware, W. C. & Sons, Ltd.	liii
Floor Renovations, Ltd.	lviii	Nobles & Hoare, Ltd.	xlix	Warwick Rim & Sectioning Co., Ltd.	—
Frank Compressed Pile Co., Ltd.	—	Northern Aluminium Co., Ltd.	—	Wilkinson Rubber Linatex, Ltd.	—
Freeman, Joseph, Sons & Co., Ltd.	lv	Oliver, Wm., & Sons, Ltd.	lviii	Wimpey, George, & Co., Ltd.	xiv
Gillett & Johnston, Ltd.	—	Parnall, George, & Co., Ltd.	xlv	Windshields of Worcester	—
Gray, J. W., & Son, Ltd.	—	Peglers, Ltd.	ii	Wheeler, F. H.	liv
Greenwood's & Airvac Ventilating Co., Ltd.	—	Penfold Fencing, Ltd.	—	Wright, Anderson & Co., Ltd.	xxix
Hall, Matthew, & Co., Ltd.	lii				

For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property and Land Sales—see pages lvi, lvii, and lviii.



FOLLOW THE EXAMPLE  
OF THE NATION'S LEADING  
ORGANISATIONS & INSTALL

STEEL SHELVING • PARTITIONS  
BINS • CUPBOARDS • BENCHES ETC

by **EVERTAUT**  
LIMITED  
(Proprietors: J. B. Brooks & Co. Ltd.)

p76

PAGE

li

lx

lix

cxiii

cxviii

cxiv

xxx

li

liv

xliv

viii

xl

lviii

lv

xli

xlvi

l

xv

lviii

xvii

xxv

vi

xlvi

l

xliv

li

liii

xiv

li

liv

cxix