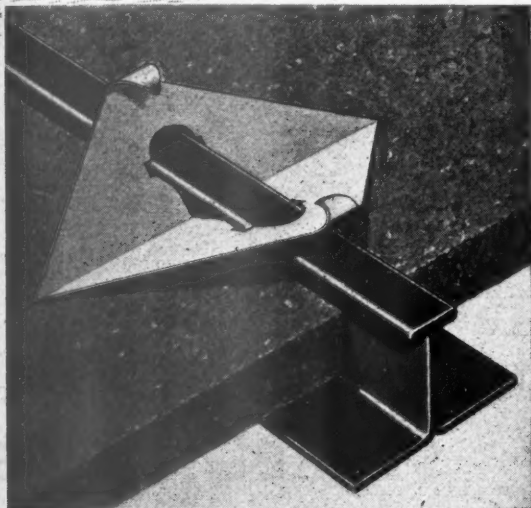


## FIRM-AS-A-ROCK FIXING for Building Boards

### ASSURED WITH THE 'PIMCO' PATENT METAL "V" CLIP



This simple, foolproof fixing method evolved by PIMCO, enables any type or thickness of interior wall or ceiling board to be rapidly and permanently erected without the use of bolts and screws. As illustrated, slotted "V" section steel clips threaded on a flanged T section bar, holds the boards in a vice-like grip. Once fixed they cannot be loosened either by vibration or atmospheric changes.

Full details and information sheet on request.



IDEAL BOARD CO. LTD., ALDWYCH HOUSE, W.C.2. Phone: CHAncery 8159  
Works: Sunbury-on-Thames, Middx.

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

## Galvanized Mild Steel GUTTERS

in any Size, Gauge or Section

"HARCO" Mild Steel Gutters, up to and including  $\frac{1}{4}$ -in. plate, are supplied as standard with pressed socket ends, as shown; thicker than  $\frac{1}{4}$ -in. plate riveted on welded butt straps are supplied.

### "HARCO" PRODUCTS

Although supplies are restricted they are still available for essential purposes.



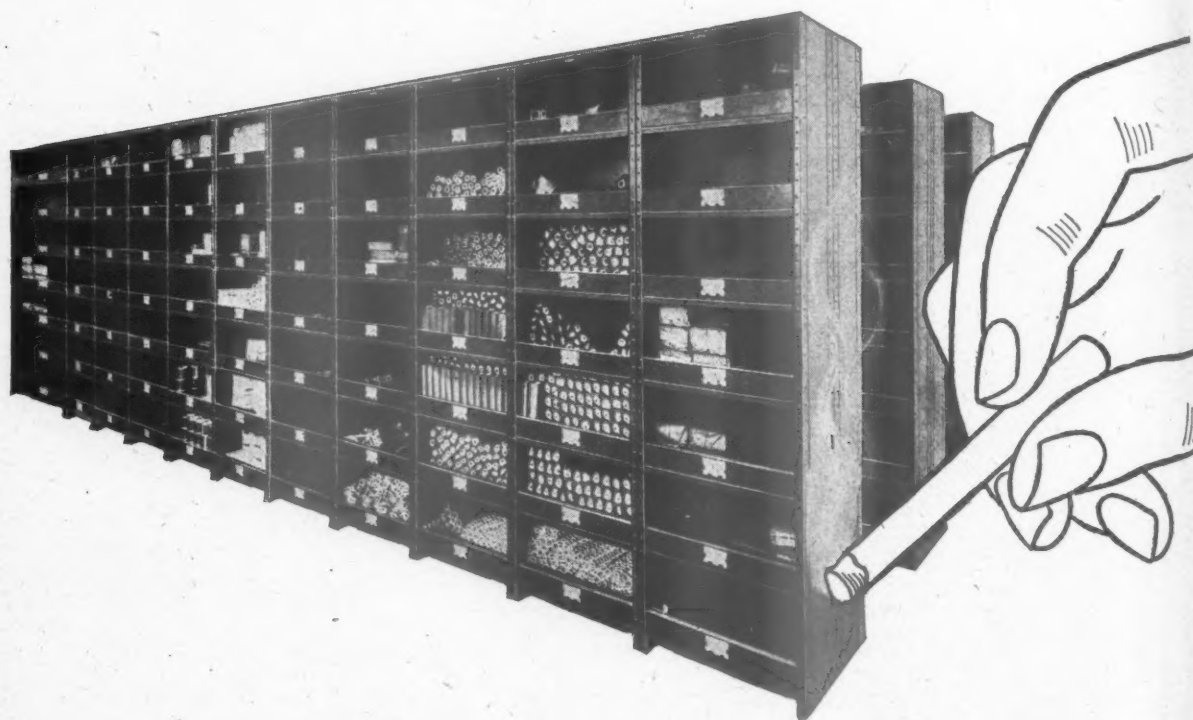
G. A. HARVEY & CO. (LONDON) LTD. WOOLWICH RD.  
LONDON S.E.7.



## STEEL DOESN'T BURN

You greatly reduce fire risk if you store in Sankey-Sheldon Adjustable Steel Shelving and Bins. And you can store more goods per cubic foot of available space. The Sankey-Sheldon A. B. C. System of Unit storage allows the greatest flexibility. The self-contained stacks are built of standard parts that can be assembled and re-assembled to any plan. Shelves and partitions can be adjusted to the exact spacing required by the goods. Not a cubic inch of space need be wasted. The steel is stove-enamelled, giving a durable finish that is easily cleaned. For low-cost, space-saving storage, consult Sankey-Sheldon.

## STORE IN STEEL



## SANKEY-SHELDON

### STEEL EQUIPMENT AND FURNITURE

Chief Office • 46 Cannon Street, London, E.C.4

ALSO HARRIS & SHELDON, LTD., MAKERS OF SHOPS

Enquiries to Sankey-Sheldon, Dept. A.J., 46 Cannon Street, E.C.4

# What price a million homes?



The cost of post-war building will largely depend upon the cost of each component. And the cost of each component will depend upon the way in which it is produced. Only the New Craftsmanship of large scale production

organised upon the most efficient lines can combine low cost and quantity with the quality which the public will demand.

M.E.M. Switch and Fuse Gear has shown how this can be done. In the largest and most self-contained factory specialising in such gear M.E.M. had, up to the war, progressively reduced costs and prices and at the same time improved quality. This steady increase in production efficiency goes on and M.E.M. are ready to pass its benefits on as a contribution to the rebuilding of Britain.

M.E.M. "Memset" Splitter



**SWITCHGEAR**

**MOTOR STARTERS • FUSEGEAR**

**ELECTRIC FIRES**

MIDLAND ELECTRIC MANUFACTURING CO. LTD., TYSELEY, BIRMINGHAM, 11

London Showrooms and Stores: 21-22 Rathbone Place, London, W.1 • Manchester Showrooms and Stores: 48-50 Chapel Street, Salford, 3



SOON . . . PHORPRES BRICKS  
... ONCE AGAIN ON SCHEDULE . . .  
IN ANY PART OF THE COUNTRY

Before the war, London Brick lorries were a familiar sight on roads in large areas of Great Britain. In conjunction with the Railways, they made it possible for deliveries as high as 8,250,000 bricks in a single day to be distributed.

**When the present delivery restrictions are removed the full benefit of London Brick Company's vast productive and distributive resources will again be available to assist in Britain's drive for houses.**



**LONDON BRICK COMPANY LIMITED**

**HEAD OFFICE:** Africa House, Kingsway, London, W.C.2. Telephone: Holborn 8282

**BIRMINGHAM OFFICE:** Prudential Bldgs., St. Philip's Place, Birmingham 3. Tel.: Colmore 4141

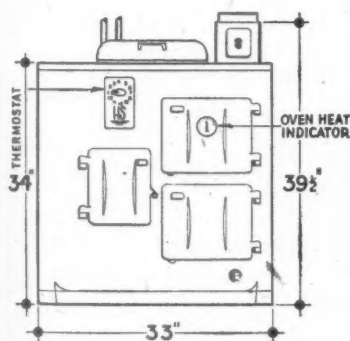
**BRISTOL DEPOT:** Ashley Hill Goods Depot (G.W.R.), Ashley Hill. Telephone: Bristol 46572



# HS heat storage cooking

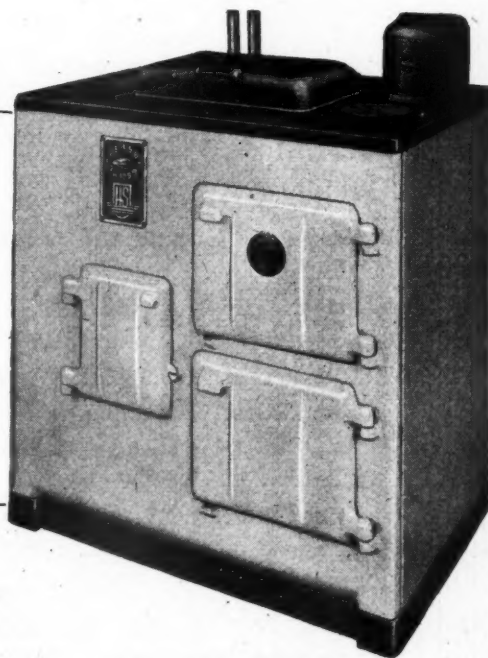
HOUSING  
SCHEMES

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: 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

## 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 conveyerized 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.

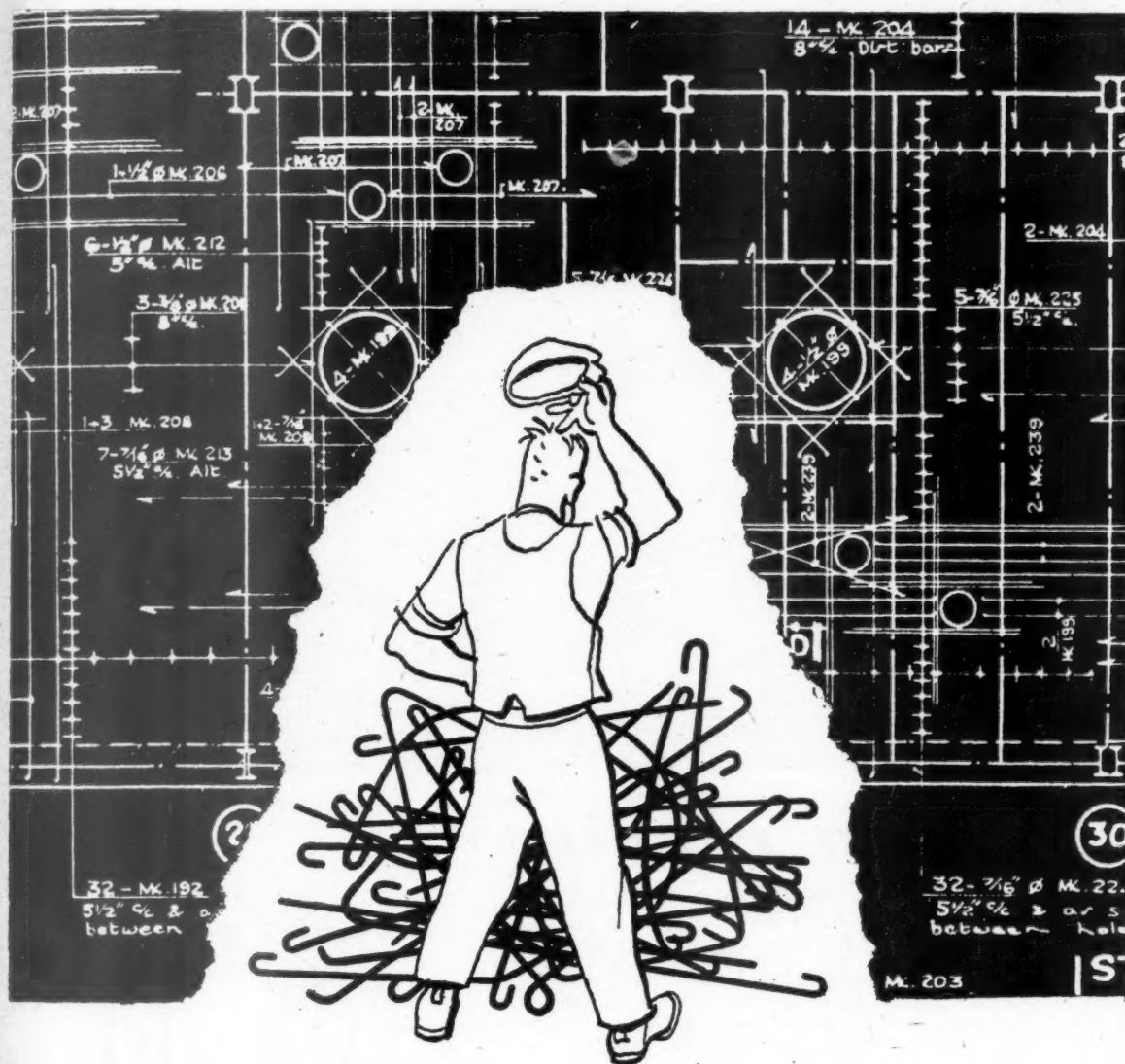
**1939** "PARKERIZING" for Lubrication.

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

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

WITHOUT *Pyrene* CHEMICALS

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



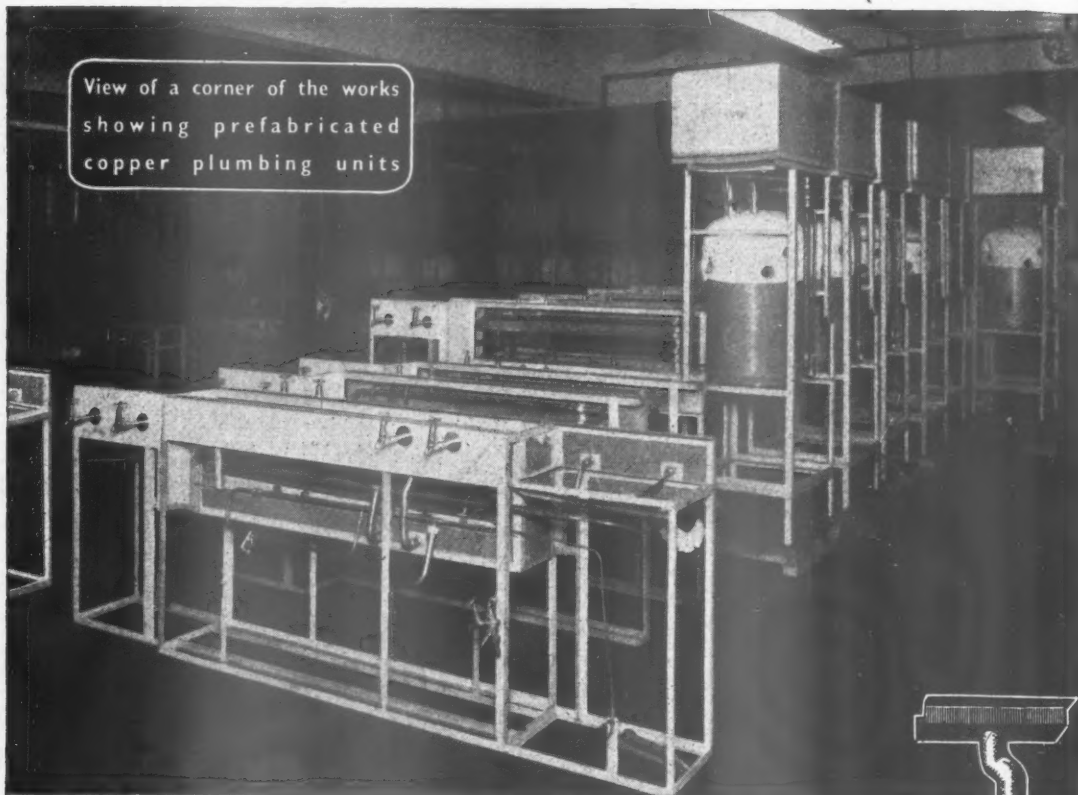
## No head scratching on the site

From the time you let us have the specification we take off your hands all the worry concerned with the supply of reinforcing material; do all that's required in the way of bending, hooking, radiusing, etc., and get the material to the site not only when it's wanted but in the order it's wanted, and bundled and labelled for easy sorting and quick handling.

**GUEST, KEEN & NETTLEFOLDS LIMITED**

**GKN**  
**CARDIFF**

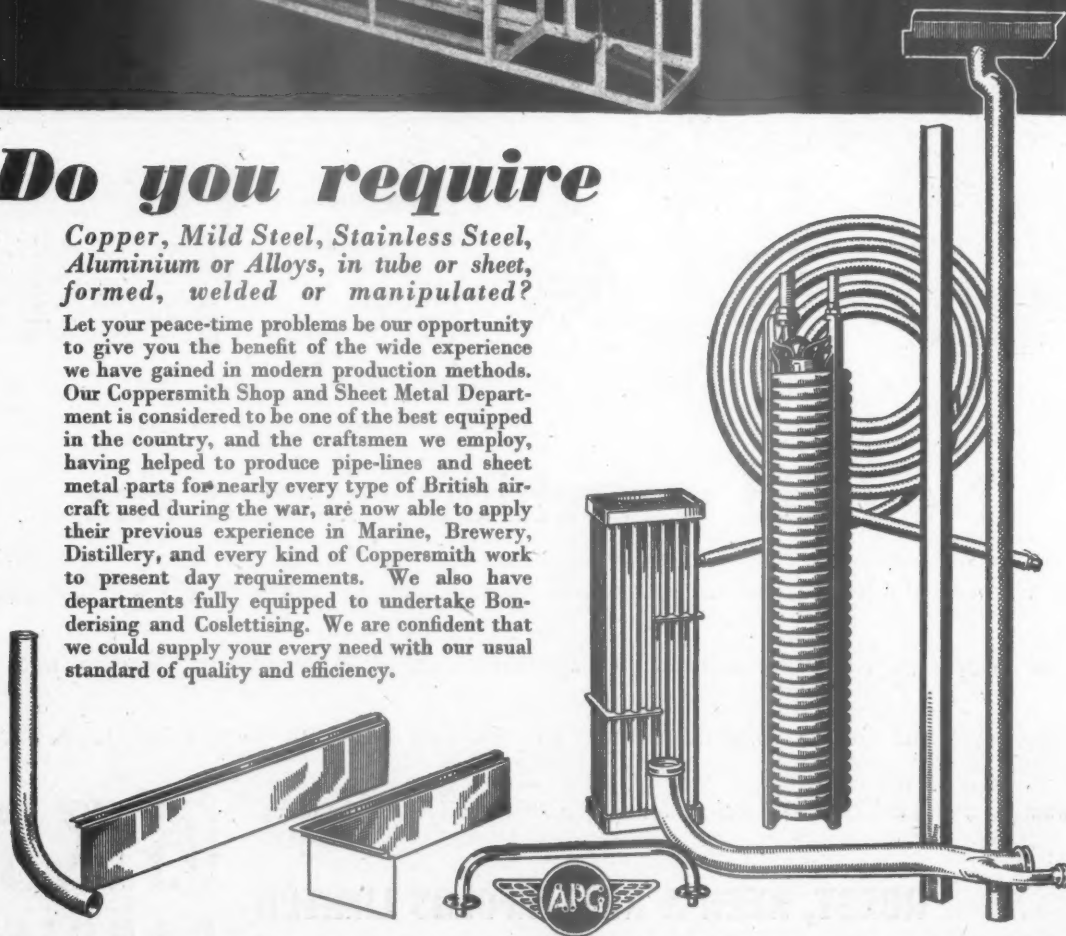
CASTLE WORKS AND ROLLING MILLS, CARDIFF. 66 CANNON ST., LONDON, E.C.4. 111 NEW ST., BIRMINGHAM



## ***Do you require***

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

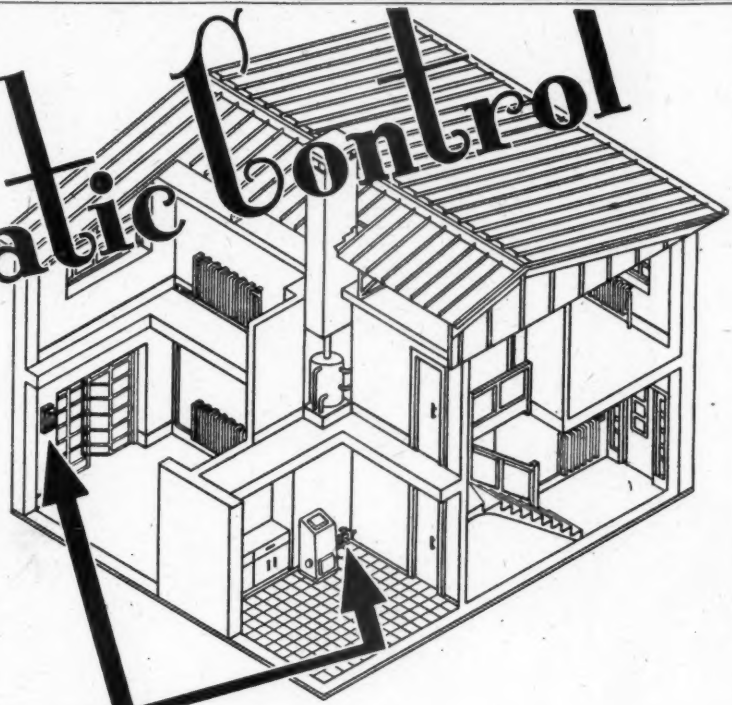
Let your peace-time problems be our opportunity to give you the benefit of the wide experience we have gained in modern production methods. Our Coppersmith Shop and Sheet Metal Department is considered to be one of the best equipped in the country, and the craftsmen we employ, having helped to produce 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**



# Automatic Control



Automatically controlled heating in this small house provides complete warmth and abundant hot water for no more fuel than is used on an ordinary open fire and independent boiler.

How is this possible? Most of the heat in the coal used on an ordinary open fire goes up the chimney and is lost, and the remainder barely warms one room. If most of the heat could be saved it would be sufficient to warm five rooms.

An automatically controlled boiler will extract most of the heat in the fuel, and this heat can easily be distributed to an indirect cylinder for hot water supply and to radiators for warming the whole of the house. Automatic controls will regulate the burning of the fuel and the supply of heat to the house so that only just that amount of fuel is burnt to meet the variable demand for heat, consequently a modern small house can be warmed throughout and have abundant hot water for an average consumption of less than 2 cwt. of anthracite per week. May we send you details of our ideas on this important subject?

**THE RHEOSTATIC COMPANY LIMITED**  
**SLOUGH** ● **BUCKS**

Telephone: SLOUGH.23311/6. Telegrams: RESISTANCE.SLOUGH.



*It comes as a bit of a shock to read in a newspaper column headed "Secret Service News" that one of our allies has developed a process for making bricks from clinker and cement and that this idea may assist our own reconstruction programmes. Sutcliffe Speakman make no secret of the fact that their Emperor Presses have been making similar bricks for a long time now. In fact, people who want to know more about making bricks from waste materials should put their secret service agents on our track.*

**SUTCLIFFE  
SPEAKMAN**

**SUTCLIFFE SPEAKMAN & COMPANY LTD., LEIGH, LANCASHIRE**  
LONDON OFFICE: 82 KING WILLIAM STREET, E.C.4. TELEPHONE: MANSION HOUSE 1283-4

*'Emperor' Presses are made in various sizes capable of producing from 1,200 to 2,400 bricks per hour and of exerting pressures of from 100 to 200 tons. They make excellent Sand Lime Bricks, Refractory Bricks and bricks from waste materials such as shale, clinker, ashes, etc.*

## WIMPEYS AT WORK

Scientific methods in planned Building construction



### OPERATIONS CONTROL ROOM

The brain centre of the Wimpey organisation is the Control Room where every operation is charted and the day by day progress is recorded. The precise timing and plotting of each stage, the determining of the type and amount of plant required, the working out of a balanced labour programme, these are constantly supervised by the experts at headquarters.

"ON TIME," "AHEAD OF SCHEDULE."

These phrases are vital watchwords in Wimpeys, and fulfilment is greatly assisted by scientific co-ordination of the four complementary factors of building—men, machinery, materials, and methods. This unified control has enabled Wimpeys

to complete punctually the most diverse and intricate contracts—from large air stations, ordnance factories and industrial buildings to offices and small dwellings—from one end of the country to the other.

The strength of Wimpey methods is planning, but not planning for planning's sake. Before work begins each job is carefully plotted out to the last man hour and the last ton of material and the last mile of transport. Because this anticipation is not only scientific but based on practical experience, the plan works. Wastage of time and effort is avoided. Time is the essence of the building contract, and planning ensures the best

use of both time and of materials.

Where Wimpey is the contractor, there is order and smooth running and every man from director to labourer has his job to do and his time to do it.

Sixty years of steady growth have taken Wimpeys to the front rank of national building organisations.

# WIMPEY

GEORGE WIMPEY AND COMPANY LTD.  
Tilehouse Lane, Denham, Middlesex  
BUILDING CONTRACTORS SINCE 1880

# STEEL is our Business



**WE MAKE IT!**

Above: 32" Four Stand, Two High Structural Mill at one of our Steelworks.



**WE FABRICATE IT!!**

Right: Office Building in Vincent Square, Westminster, of which the steelwork was erected by our workmen.

A large and qualified staff of technicians is available for the preparation of designs and details for all types of construction.

**CARGO FLEET  
IRON CO. LTD.**  
CONSTRUCTIONAL ENGINEERS  
MALLEABLE WORKS

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Telephone: Stockton-on-Tees 66117 (Private Branch Exchange)  
Telegrams: CARFLECO. PHONE. STOCKTON-ON-TEES  
also at LONDON and MIDDLESBROUGH

We carry out every process . . . from the quarrying of the ore to the erection of the finished steel structure. This is important, because whenever special sections are needed for any particular job, we can adjust our rolling programme to suit, and thus avoid costly delays.

Left: View of one of our 3 Template Shops, showing single span welded construction, giving 110 ft. clear span, and clear floor space of 21250 square feet.



**WE ERECT IT !!!**



# 9 YEARS

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© HOEL HILL FR 18A, M.T.A.  
CITY ARCHITECT  
All communications to be addressed to the City Architect quoting Reference

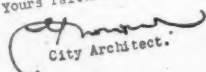
4th July, 1945.

Dear Sirs,

Withington Hospital.  
No. 4 Pavilion - Ward "C".

I am in receipt of your enquiry regarding the rubber flooring laid by you in Ward "C", No. 4 Pavilion, Withington Hospital, in 1936, and have pleasure in stating that the floor covering has given every satisfaction in spite of the fact that during the nine years the floor has been laid the ward in question has been put to heavy use.

Yours faithfully,

  
City Architect.

The Dunlop Rubber Co. Ltd.,  
Cambridge Street,  
MANCHESTER, 1.

# DUNLOP

## RUBBER FLOORING

DUNLOP RUBBER COMPANY LTD.,  
CAMBRIDGE STREET,  
MANCHESTER

BROADCASTING HOUSE, PORTLAND PLACE, LONDON, W.1  
ROOFED WITH NORTH WALES SLATES

*Why*  
**NORTH WALES  
SLATES**  
*for*  
**MODERN ROOFING?**

The simple and enduring dignity of modern slate roofing design makes a special appeal to the architect and builder of to-day.

North Wales Slates are proof against crumbling under the action of heat and frost, impervious to the corrosive influence of acids in the atmosphere, non-porous, completely waterproof and everlasting.

Welsh Slates give the best roofing service in the world.



SECRETARY 5, BANGOR STREET CAERNARVON

# FLEXIBILITY IN WOOD

From hand rails for Staircases

to stern posts for Motor Boats



and back to hand rails

is a matter of the ORGANIZATION

which follows every order through SADD'S works

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HIGH-CLASS JOINERY

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

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Telephone: Maldon 131.

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

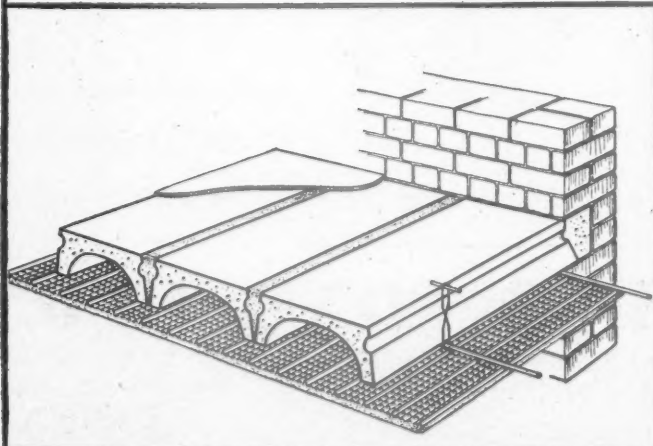
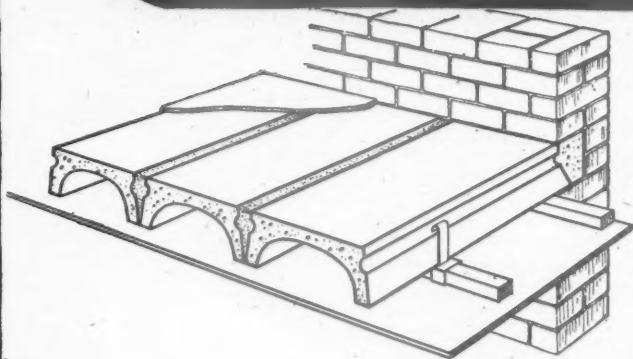
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## TRUSCON PRECAST FLOORS PERMIT THE USE OF ALL TYPES OF CEILINGS



The Truscon Precast Unit System when employed in Floors or Flat Roofs allows simple and accurate provision to be made for receiving all types of ceiling construction irrespective of the process — "dry" or "wet" technique.

Carefully designed suspension hangers are provided for use with the precast Truscon units to suit various systems of ceiling construction. Diagrams on the left show two types of suspension—the upper diagram illustrating the support provided for a "ceiling board and batten" ceiling and the lower diagram the support for the "metal lathing and plaster" process.

Electric light conduits and other services may be accommodated, and the ceiling being suspended, affords a high degree of sound and thermal resistance.

# TRUSCON PRECAST FLOORS

TRUSCON FLOORS  
6 COLLINGHAM GARDENS, EARLS COURT  
LONDON, S.W.5. 'Phone: FR0bisher 8141





**I**T is positively staggering what some folks will put up with—the inconvenience and discomfort they will patiently bear—rather than bestir themselves to look round the corner or to observe how the factory down the street has solved the window problem. We do not for a moment suggest that you are in the same predicament as the gentleman in our funny drawing. But it is just possible you may not have heard of ARENS.

ARENS are the Window Control specialists. Their job is the planning and perfecting of neat, silent, unobtrusive mechanical devices that make window opening and closing the smooth, easy thing it should be, and is in many a modern factory and municipal building. You may depend upon it that Arens can show you a way to put your unruly windows under a nice uniform discipline, that answers to your wishes—instantly!

# ARENS

## REMOTE CONTROLS

ARENS CONTROLS LTD., TUNSTALL ROAD, EAST CROYDON, SURREY

Telephones : ADDISCOMBE 3051/4

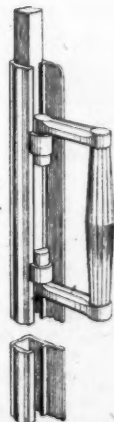
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**SELF LOCKING HANDLE AND SLIDE.** *Ideal for operating controls connected to Windows, Ventilators, Light Dampers, etc. Colour of grip and finish available in a range to harmonise with decorative schemes. Control can be locked in any position by a quarter turn of the handle. An indicating pointer can be fitted if required.*

**JUST SLIDE THE HANDLE!**



# IT PAYS TO USE THEM...

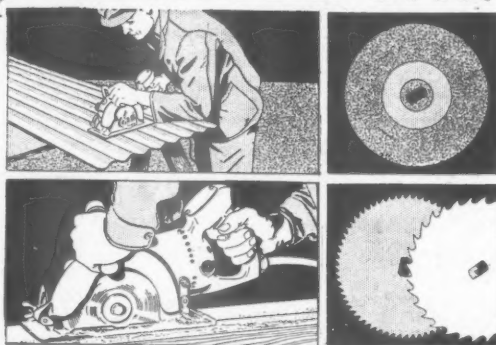


## THE B&D RIPSNOTTER SAW

**B**EFORE they gave him a B & D 'Ripsnorter,' Ted was not too keen on using portable electric tools. But after cutting asbestos guttering with the saw and abrasive disc, Ted said: "This 'Ripsnorter's' got the right name—it just rips through the job."

The 'Ripsnorter' is powerful but easy to use, even without experience, and with its variety of sawblades it will cut bricks, tiles, cement, asbestos, corrugated iron, non-ferrous metals, etc.: and it cuts wood ten times faster than a hand saw. As Ted now says, "It certainly pays to use a 'Ripsnorter' Saw."

Builders all over the country will find 'it pays to use' the wide range of B & D Portable Electric Tools to save time, labour and money.

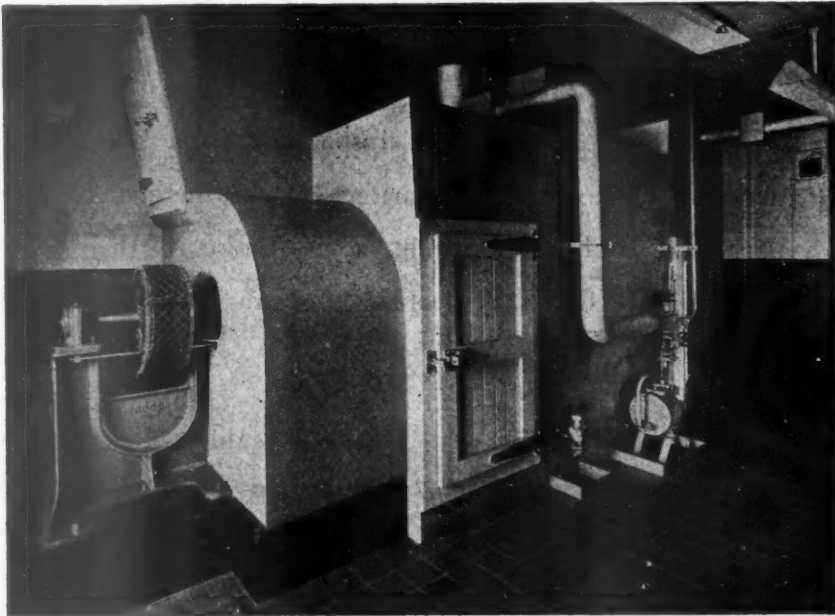


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*Where air-conditioning plant has to be installed, adequate and convenient space should be provided for refrigerating machines and bulky equipment such as that shown. The siting of all this is important, while the construction and layout of the air ducting can only be satisfactory and economical if it is planned by the Architect and Refrigerating Engineer working in collaboration.*

The innumerable applications of  
**REFRIGERATION**

in Department Stores, Retail Shops, Factories, Office Buildings, Hospitals, Laboratories, Schools, Restaurants, Cafés, Theatres, Cinemas, Hotels, Dairies, Breweries, &c., often present Architects with unfamiliar problems of a highly technical nature, which are best solved by obtaining the expert assistance and co-operation of

**J. & E. HALL**

LIMITED

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DARTFORD IRONWORKS, DARTFORD, KENT

Established 1785

Leaders in refrigeration for over sixty years, makers of

**HALLMARK AUTOMATIC REFRIGERATING PLANT**

## "THE CORE OF THE MATTER, MY DEAR WATSON, IS AT MADDOX STREET"

And with flush doors it is the core that is so important.

Will the door warp or twist? Will it bear inspection in a good light after painting or polishing? It depends entirely on the materials and method of construction of the core. Beautiful veneers are only skin deep, it is the core that counts, that is why our exhibit at the BUILDING CENTRE features not an elaborately veneered door, but the part that counts—the core.



The core exhibited is the war-time economy version (to B.S.S. No. 459).

As soon as possible we intend to make the frame-work more substantial, and to use a rather closer mesh.

Meantime, we are quite sure there is no other door which can use small quantities of material to such advantage.

We would like you to inspect this core and form your own opinion. You will be able to imagine what a perfect flush door will result when materials are a little more plentiful.

From our stand you will also be able to obtain information on panel doors, casement doors, garage doors, etc., all of which are made by specialised plant on precision lines. And make a point of inspecting the "FLAPJACK" Ironing Table.

### GLIKSTEN DOORS LTD.

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LIVERPOOL 2.

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Tel.: AMH 4444

30 BROAD STREET  
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Tel.: BRI. 26876

THE GLIKSTEN BUILDING MATERIALS DIVISION  
ARE SPECIALISTS IN  
MODERN INSULATION  
HARDBOARD, WALLBOARD  
ETC.



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# CONSTRUCTORS

## STEEL EQUIPMENT

CONSULT US FOR ALL  
TYPES OF FABRICATED  
STEEL EQUIPMENT



**'VISPANS' AND RACKS**

**'ADJUSTEEL' SHELVING  
FOR ALL  
STORAGE PURPOSES**

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**STILLAGES AND  
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PLATFORMS**

**STEEL  
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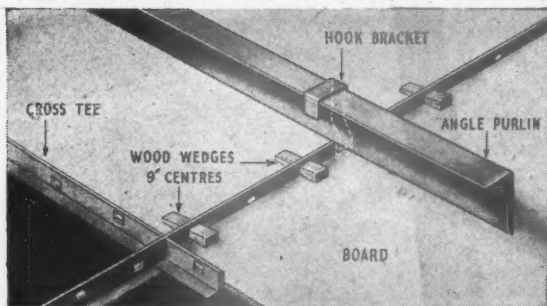
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## FOR APPLYING ANY TYPE OF BOARD TO CEILING & WALLS

The Wallboard is secured to sherardised, pressed steel, slotted T-section by wedges. Below are shown the methods of attaching the support to various forms of purlin.



Escalator Tunnel of St. John's Wood Underground Station. Architect: S. A. Heaps.



### 8 POINTS TO BE NOTED

1. Fixed to **UNDERSIDE** of purlins—steel or wood—covering unsightly hook bolts, clips, etc.
2. Assures the insulating value of air-space between roof and underside of purlins. No dust or dirt.
3. Can be fixed to steel or wood purlins of roofs and joists of flat ceiling.
4. No unsightly nail heads showing.
5. Can be applied to new or old buildings of any construction independently of the roofing contractor,
6. who proceeds with his work ahead of the AnD Wedge Method.
7. Any thickness of board can be used, from  $\frac{1}{8}$ " to  $\frac{1}{2}$ ".
8. This method can be used for applying linings to exterior walls.
9. The simplicity of application is such that any contractor can apply the AnD Wedge Method, and the materials making up this method can be purchased by the contractor.

Full particulars, specification and a typical layout will be sent on request

## C. F. ANDERSON & SON, LTD.

### Wallboards for Government Work

HARRIS WHARF, GRAHAM STREET, LONDON, N.I.

TELEPHONE: CLERKENWELL 4582





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# STEEL STRUCTURES

- Dawnays specialise in the design, fabrication and erection of bridges, riveted and welded platework of every description.
- Steel framed buildings — workshops, office blocks, hangars, factories, cinemas, storage bins, tanks, silos, etc., etc., etc.

WORKS: LONDON, NORWICH, SWANSEA, CARDIFF,  
and WELWYN GARDEN CITY.

**DAWNAYS OF BATTERSEA**

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WORKERS' TRAVEL ASSOCIATION LTD.

# HOLIDAY CENTRES

## ARCHITECTURAL COMPETITION

The Workers' Travel Association Ltd. invites  
the submission of architectural designs

for

## COASTAL & INLAND HOLIDAY CENTRES

each to accommodate 500/550 guests  
with staff of 50.

### PREMIUMS:

Two of £250 Two of £100

LAST DAY FOR QUESTIONS,  
15 DECEMBER, 1945:

FOR SUBMISSION OF DESIGNS,  
31 MARCH, 1946.

### ASSESSORS:

Sir Patrick Abercrombie, M.A., F.R.I.B.A.,  
P.P.T.P.I.; J. H. Forshaw, M.C., M.A.,  
F.R.I.B.A., M.T.P.I.; C. G. Kemp, A.R.I.B.A.

Conditions of the competition, which have been  
approved by the R.I.B.A., may be obtained from  
**The Workers' Travel Association Limited**,  
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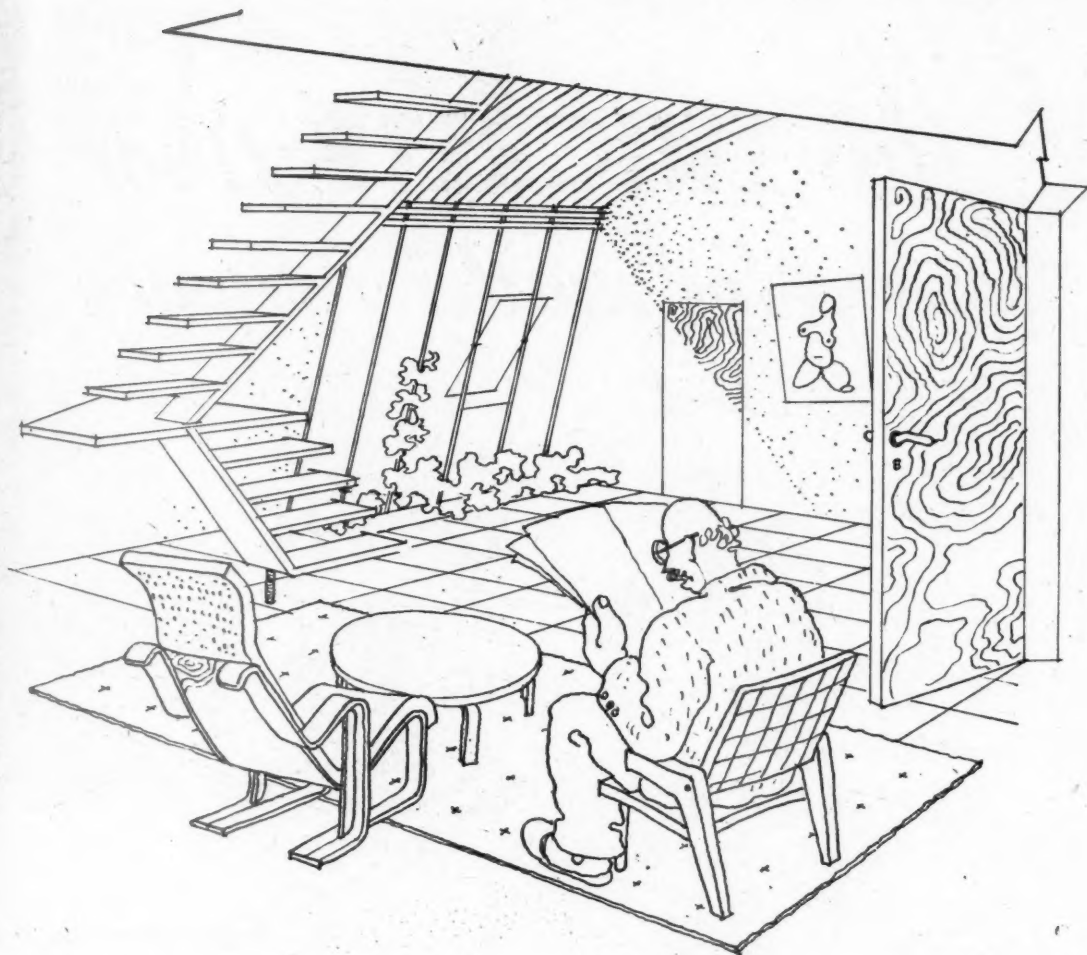


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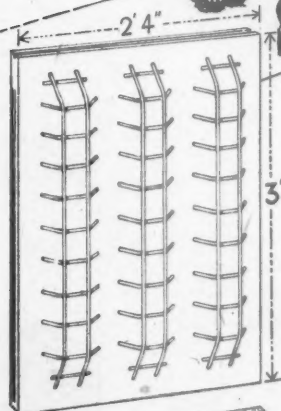
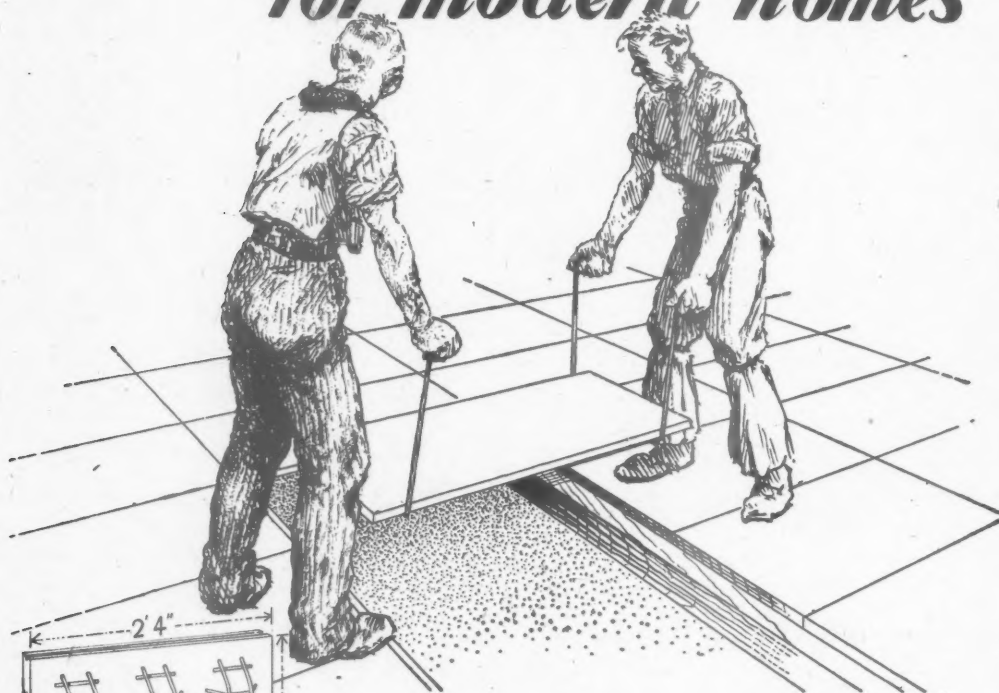
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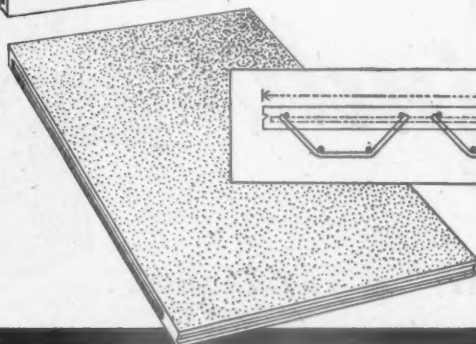


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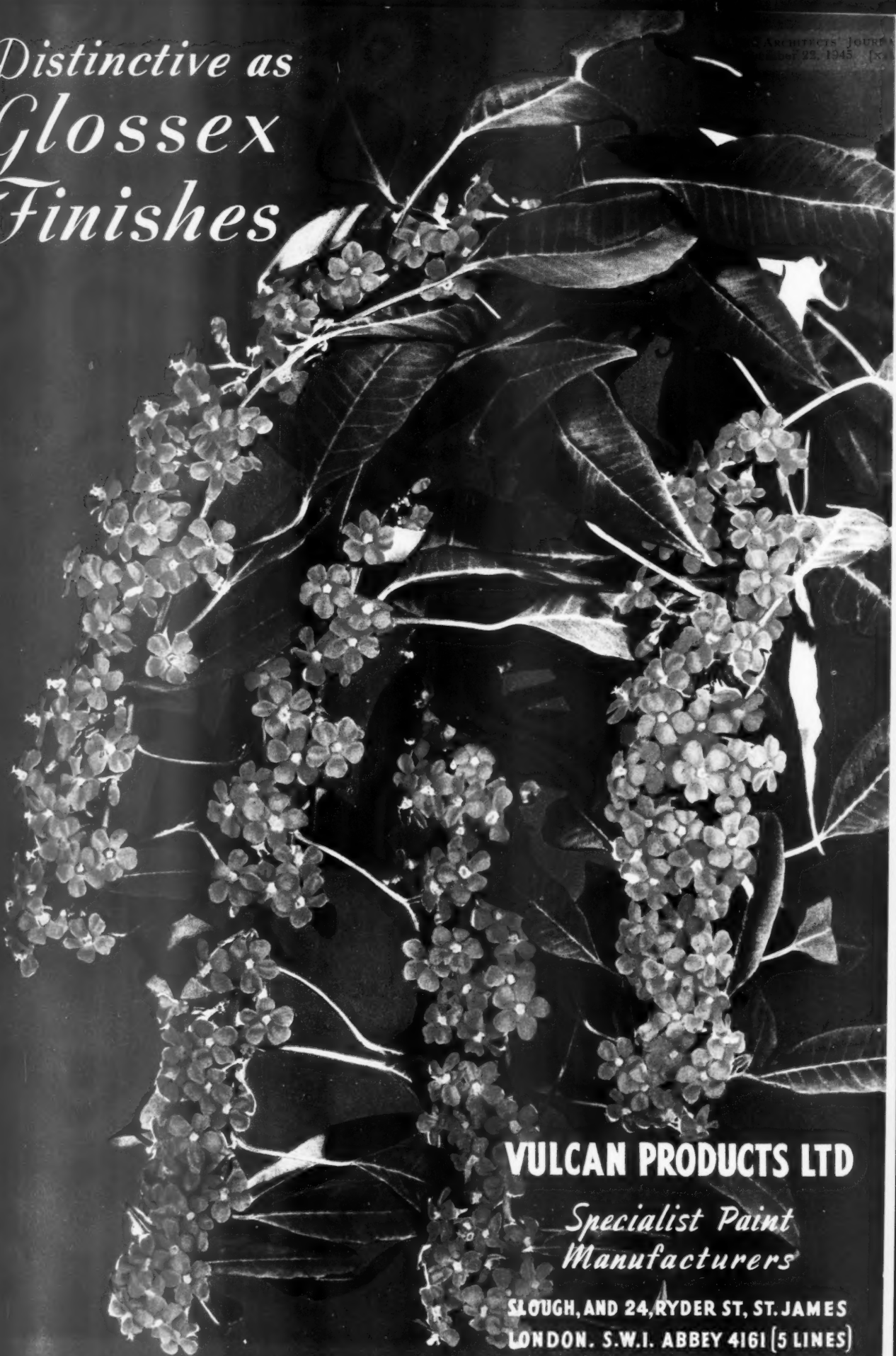
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# NEWS

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No. 2652. VOL. 102

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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.

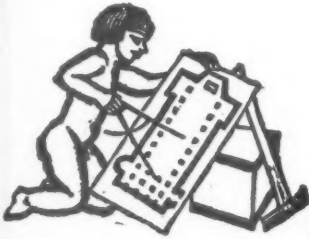
Any feature marked with more than two stars is very big building news indeed.



## The Association for Planning and Regional Reconstruction has started an INFORMATION SERVICE ON PLANNING.

The APRR, which was born in 1940, is an independent planning group, under the Chairmanship of Lord Forrester, working with individuals, organizations, local and national authorities, with the purpose of serving as a centre for research in the planning field. It compiles facts; it renders services to bodies of all kinds; it makes available its gathered information in the form of broadsheets, technical publications, books, etc. Another of its objects is to stimulate the education of qualified planning technicians, and it works closely with the School of Planning and Research for Regional Development. (This school, at the request of the War Office, has been running a correspondence course in planning during the war for members of the Armed Forces and Prisoners of War. Over 1,000 students have enrolled, and those who, on demobilization, have reached a certain standard, are eligible for a Three Months' Completion Course, beginning in January, after which successful students will be exempt from the final examination of the Town Planning Institute. In addition, the School is intending to run Refresher Courses in planning technique, and also a two years' Course in Landscape Design.) The new Information Service of the APRR has been developed to deal with the ever increasing number of requests for information about planning matters. Facilities offered by the Service include (a) copies of all the Association's Broadsheets and Reports, (b) a bi-monthly Information Bulletin, (c) the services of the Association's Library and Information Bureau. The annual subscription fees are £1 for individuals and £5 for corporate bodies.

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, 9d. ; post free, 11d. Special numbers are included in subscription ; single copies, 1s. 6d. ; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. 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.



## DIARY FOR NOVEMBER DECEMBER AND JANUARY

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

**BRISTOL.** *NALGO Exhibition.* At Badminton School. (Sponsor, BIAE.) Nov. 22-25

**CAMBRIDGE.** *NALGO Exhibition.* At Homerton College. (Sponsor, BIAE.) Nov. 22-25

**DERBY.** *The Englishman Builds.* Exhibition. At the County Branch Library, Matlock. (Sponsor, BIAE.) Nov. 22-DEC. 1

**EDINBURGH.** M. Riley. *Design of Building and M/C Structures.* At the Heriot Watt College, Chambers Street, Edinburgh. (Sponsor, Institute of Welding, E. Scotland Branch.) 7.30 p.m. NOV. 30

**LEICESTER.** F. L. Brady. *Joints and Rendering.* At the College of Art, The Newark, Leicester. (Sponsor, Leicester and Leicestershire Society of Architects, in association with the Leicester School of Architecture.) 6.30 p.m. Nov. 29

**LIVERPOOL.** Liverpool Area Branch of the Association of Building Technicians. General Meeting followed by a *Building Brains Trust.* At 62, Hope Street, Liverpool. (Sponsor, Liverpool Area Branch of the ABT.) 7 p.m. Nov. 28

**LONDON.** *Subject Matter in Liturgical Art,* by Miss Joan Morris. November 29, December 6 and 13. Fifteen shillings for a course of three lectures, or 7s. for a single lecture. All are at 5.30 p.m. (Sponsor, Church Artists' Agency.) Nov. 29-Dec. 13

*Germany in Ruins.* Exhibition of Drawings and Water Colours. At Foyle's Gallery, Charing Cross Road, London, W.C.2. (Sponsors, South African Advisory Committee for War Art and the Central Institute of Art and Design). Daily except Sundays, 10 a.m. to 5 p.m. Nov. 22-30

Basil Langton. *Theatres Need Towns.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch 12.45 p.m. to 1.15 p.m. Talk and discussion 1.15 p.m. to 2.15 p.m. Nov. 22

*NALGO Exhibition.* At the Geffrye Museum, Kingsland Road, E. (Sponsor, BIAE.) DEC. 3-15

Gillian Harrison. *Heating and the Family Home.* At the Planning Centre, 28, King Street, Covent Garden, W.C.2. (Sponsor, TCPA.) Buffet lunch 12.45 p.m. to 1.15 p.m. Talk and discussion 1.15 p.m. to 2.15 p.m. DEC. 6

Nikolaus Pevsner. *Visual Planning and the City of London.* At the AA, 34-36, Bedford Square, W.C.1. (Sponsor, AA.) 6 p.m. Nov. 27

A. F. Blunt. *French Art in the 16th Century.* At the Courtauld Institute of Art, 20, Portman Square, W.1. (Sponsor, Courtauld Institute of Art.) 5.30 p.m.

NOV. 28 AND DEC. 5  
Claude Sisley. *Wood Preservation, the Treatment of Dry Rot, etc.* At Caxton Hall, Caxton Street, Victoria Street, S.W.1. The lecture will be illustrated by lantern slides and specimens. Members 6d. Non-members 1s. Tickets obtainable at the door, and from the Secretary, Association of Building Technicians, Westminster Branch, 188, Brockley Rise, S.E.23. Please enclose stamped, addressed envelope for reply. 6.30 p.m. Nov. 23

John W. Laing, of John Laing & Son, Limited, building and engineering contractors. *Modern Methods of House Building.* At the Chartered Surveyors' Institution, 12, Great George Street, Westminster, S.W.1. (Sponsor, CSI.) 5.30 p.m. Dec. 3

G. A. Maunsell. *Menai Bridge Reconstruction.* At the Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, ICE.) 5.30 p.m. Dec. 4

G. L. E. Metz. *The Electrical Engineering Industry in After-War Economy.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. (Sponsor, IEE.) 5 p.m. Dec. 6

*British Building Stones.* Small display of photographs and rock specimens, illustrating the main British building stones, their distribution and their uses. At the Ministry of Town and Country Planning, 32, St. James's Square. The display illustrates a single item in a survey of the national resources on which the Ministry's Research Division is engaged. It is an experiment in the presentation of research work in a form which would interest the public. (Sponsor, MOTCP.) Nov. 22-Dec. 8

**NEATH.** Dr. E. G. West. *The Welding of Aluminium.* (Sponsor, Institute of Welding, South Wales Branch.) Nov. 22

**NEWCASTLE.** *News of the World Housing Exhibition.* Architect for the Exhibition, Frederick W. Hagyard. Nov. 22-Dec. 5

**OXFORD.** *Permanent House Plans.* Exhibition at the Gas Showrooms. The plans were selected in a National Competition organised by The House Building Industries Standing Committee. Nov. 22-30

**SHEFFIELD.** *NALGO Exhibition.* At the YWCA. (Sponsor, BIAE.) Nov. 25-Dec. 3

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*City Architect*



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## From AN ARCHITECT'S Commonplace Book

**THE HOUSES OF PARLIAMENT FIRE: HOW IT ENDED.** [*From The Houses of Parliament, by Hans Wild and James Pope-Hennessy (Batsford).*] But back in Old Palace Yard a new fear gripped the more responsible of the sightseers. Would Westminster Hall succumb? Not only might the brittle fourteenth-century hammer-beams easily catch alight, but also the wooden scaffolding (for repair work) which was, alas, at present inside the Hall itself. The Prime Minister, Lord Melbourne, took charge of operations to save the Hall. Fire engines were drawn up within it, and water played out of Yevele's windows and up to the hammer-beam roof. Connoisseurs were watching even at this crisis of the fire, and afterwards agreed that the Hall had hardly been so beautifully illumined since George the Fourth's famous coronation feast. At length the co-ordinated efforts of the firemen, the soldiery and their civilian helpers were successful, and by three in the morning the fire was considered under control. . . . What had the day before been the proud and ancient Palace of Westminster was now a maze of broken arches, burned beams, rubble, bricks and fallen pilasters, with pools and puddles of water underfoot. Westminster Hall alone stood grand and beautiful amidst the smoking wreckage. At right-angles to it the Chapel of St. Stephen, roofless and windowless, was a delicate Gothic ruin against an autumn sky.

★

### Mr. George Tomlinson to the Building Trade: ACCEPT MECHANIZATION ungrudgingly and use it to the full.

Mr. George Tomlinson, Minister of Works, opening an exhibition at Manchester of modern British machine tools, declared that the use of the machine is the one way now open to the multiplying of man-power, which no amount of priority fixing could do. He appealed to the building trade to accept mechanization ungrudgingly and use it to the full. He said: It is more economical to drive a machine hard than to drive a worker hard. The trench-digger, the bulldozer, and the giant scraper, which in war did the work of the navy, has shown that to be true. He would like to see many more building operations assisted by the machine. He asked the workers not to look on machines as debasing true craftsmanship or as inimical to their best interests, but as instruments providing opportunities for the employment of new skill, giving new satisfaction and pride in one's work, and attracting recruits without imperilling the standards of present employees.

is compulsory, the Report states, schools are the complement of homes; houses and schools are equally essential before family settlement can be complete. The report contains recommendations for speeding up planning and erection of schools and for a certain measure of standardization. The committee considers the preparation of standard plans leading to uniform school buildings throughout the country would be highly undesirable. The committee recommends that a primary school should accommodate not more than 700 pupils so long as classes of 50 are permitted, or 560 pupils if classes are reduced to 40. The standard school should contain an assembly hall, kitchen and dining hall, gymnasium and general purpose room for music and visual aids, two craft rooms and 17 classrooms. The committee emphasizes that a part of this accommodation would serve for community purposes as co-ordination of all local interests is highly desirable in order that there should be no duplication at a time when building labour and materials are in short supply. According to the evidence submitted to the committee, nursery schools should not provide for more than 40 to 50 children in two groups, but the committee

considers that, owing to the administrative accommodation required, a school to provide for double that number would result in considerable building economies. Though looking to the future, the committee has not overlooked existing schools. A large number of these schools will be required for many years to come, and recommendations are made for bringing them up to date. The committee is awaiting the Report of the Advisory Council on Education in Scotland before making more detailed recommendations regarding secondary schools. The Report, *School Buildings for Scotland*, is No. 21 in the Ministry of Works series of post-war building studies and is obtainable from H.M. Stationery Office, price 1s. (1s. 2d. post free).

**Alderman W. E. Mullen, President of the London Master Builders Association, Central No. 3 Area, has been RE-ELECTED MAYOR OF HOLBORN.**

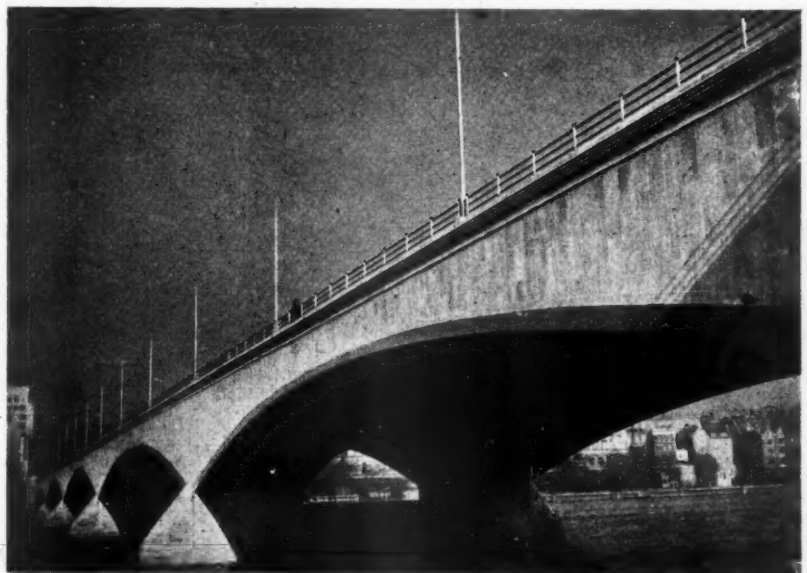
### Liverpool City Council is TO TAKE OVER AN EIGHT MILLION POUNDS FACTORY.

The Royal Ordnance Factory built at Kirkby at a war cost of £8,000,000 is to be taken over by Liverpool City Council. Members at a council meeting described the venture as a great gamble, but worth while. Alderman A. E. Shennan stated that 20 to 30 applications for space had already been received.

★

### The building of schools SHOULD HAVE EQUAL PRIORITY with the provision of houses and, in new housing schemes, schools and houses should be planned and erected at the same time.

This recommendation is made in the Report of the School Building Committee appointed in 1943 by the Rt. Hon. Thomas Johnston, former Secretary of State for Scotland, to consider and to make recommendations as to the planning of schools and other buildings required for educational purposes after the war. Where education



*It is now possible to obtain an uninterrupted view of Waterloo Bridge. The staging has just been removed from the buttresses and the temporary bridge, put up in 1924 beside Rennie's old bridge after it had been closed for demolition, is gone. The new bridge, built on the site of the old one, was begun in 1937 and opened to traffic in 1943. Sir Giles Gilbert Scott, R.A. was the architect.*





## Chief Engineer of Rio

Civil Engineer and Town Planner, University of Brazil, and Regional Chief Engineer of Rio de Janeiro, Madame Carmen Portinho, has just completed a visit to this country, to make a special study of reconstruction and town planning. The visit was arranged by the British Council and Madame Portinho took the opportunity to see Welwyn Garden City, the three new bridges—Waterloo, Hampton Court and Lambeth—and other features of architectural interest in London and the Provinces. Madame Portinho was appointed Practising Technician of the Directory of Public Buildings, Ways and Roads, of the Municipality of Rio de Janeiro in

1926 and after various promotions became Commissioned Regional Chief, her present position, in 1940. First Vice-President of the Trade Union (Sindicato) of Engineers of Rio de Janeiro and member of the Governing Board of the Engineering Club of that City for 1940-1942, she is the present Second Secretary of the Society of Municipal Engineers of the Federal District, Founder and now President of the Uniao Universitaria Feminina (Brazilian Association of University Women) and Founder, First President and now First Vice-President of the Association of Brazilian Women Engineers and Architects.

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***Firms wishing to be considered for invitation to tender for the foundation work and the superstructure of the new Chamber for the House of Commons MUST APPLY TO THE MINISTER OF WORKS BEFORE NOVEMBER 24.***

The Ministry of Works will shortly invite tenders for the foundation work of the new Chamber for the House of Commons from a limited list of selected firms, to be followed later by invitations to tender for the superstructure contract. In making the selection preference will be given to firms capable of undertaking the whole work if their tenders, for both contracts are successful. The total value of the work involved, including sub-contracts, is about £1,000,000. It is intended to start the foundation work in December, 1945. Firms wishing to be considered for invitation to tender for these contracts should apply in writing on or before November 24, 1945, to The Director of Contracts (Con. 2), Ministry of Works, Abell House, John Islip Street, S.W.1, giving particulars of their experience of comparable works and of their available plant, key men, etc.

***Mr. H. Vicars Lobb F.R.I.B.A., in an Architectural Science Board lecture at the RIBA, described how he designed and constructed AN UNDERGROUND FACTORY IN A TUNNELLED CHALK HILLSIDE.***

Mr. Vicars Lobb in his lecture said: The particular interest attached to this scheme is that, I think it is the only factory in the country which has been constructed completely—other underground factories having been converted from extensive excavations, caves, quarries, and the like. The site consists of a thickly wooded hill face on the main chalk escarpment, with a subordinate valley cutting through the northern part of the escarpment and lying roughly at right angles to the main face. The electrical switchgear rooms are at each end of the main galleries, with the ventilation plant at the north end of the gallery, and connected by a short tunnel to the second entrance tunnel, which serves as a fresh air inlet. The method of excavation was by the construction of pilot tunnels starting at both ends, using pneumatic picks supplied with compressed air by a 75 horse-power electric-driven compressor positioned near the entrance of the main traffic tunnel. One interesting point which this factory set out to achieve was attained, that an undertaking of this type could be carried out at approximately the cost of a surface factory, taking into account the expense which would have been necessary with the provision of black-out, camouflage, air-raid shelters, etc.



Constructing an underground factory in a tunnelled chalk hillside. See News Item.

## MARCHING FEET

**M**ARCHING feet of the building trade workers—even if brought about by only a token strike—is something new. For nigh on a generation in the industry there has been no major dispute between master and man. Nor does the present disquiet arise only from the marching feet. Many more men than marched in the recent demonstration feel that something is wrong when the product of their labours earns a sum which may cover essentials but certainly leaves little margin for the pleasures they were able to afford in the “good old days” pre-war. Certainly few men will have income tax problems.

How did this position arise, will be asked by many, particularly since we have had no complaints from the men during the war years? The hourly rate of pay has crept slowly and steadily upwards from the 1939 period, and to-day is some 30 per cent. in advance of the 1939 rate. But in the war years, with summer time and double summer time, the men worked long hours—often the hours of daylight and, at the end of the week, their pay packet brought an adequate reward for their labours and seemed to be in accordance with the rising cost of commodities and relaxation. But summer time and double summer time have gone and with them these extra work hours. That is to the good, but is it only now that the building operative has realised that while his wartime pay packet increased in accordance with rising costs his basic rate per hour showed a certain diffidence? It would seem so.

The wage rate per hour is fixed in Committee by agreement between representatives of the operatives and the employers. For a generation this has been done admirably and no doubt would have continued so. But during the war years and not always with the agreement of the industry representatives, the Government found it necessary to impose upon the industry conditions of work, of welfare, and of bonus on output. Of these conditions, some were good, some not so good, and others definitely unsettling to both operative and employer. Some of these conditions have become part of the Industry's Working Rule Agreement, others operate only in sections of the Industry, and so arises differences in treatment and earnings of the men, and if anything, further fomenting the unrest of the moment. Men between the ages of 18 to 50 may still be directed to a site and on the luck of direction depends whether there are bonus moneys on output. The employers are not free agents. They may negotiate an hourly rate with the men, but the conditions of work are to a large extent dictated to the industry. No doubt the Joint Wages Board will arrive at a solution in the present negotiations, but, if the operatives' demands are met, can it be held that any substantial increase granted in the hourly rate is attributable to an increase in the Cost-of-Living index figures since the last wage increase in July of this year? The work of the Industry in the past five years has been almost entirely in the spending of Government moneys. The work of the Industry

in the next five years—if the policy outlined by the Government Ministers at a recent London Conference is to be fulfilled—will continue to be the spending of Government moneys, so it might not be unreasonable if the Government were to indicate to the Industry what is considered to be a reasonable wage, in the same way that they have indicated what they consider to be reasonable working conditions. Or would it be better still for the Government to leave the Industry to master and man and control only the nature of the work to be done?

Meanwhile, the only positive outcome of the present position has been Marching Feet . . .



*The Architects' Journal*

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MORE INFORMATION, PLEASE

Housing, we have been told, is to be dealt with as a military operation. This should mean, first, a well-thought-out plan of campaign with decisions of policy at high level, and, secondly, clear orders to officers who have to carry out operations in the field.

Recent events such as the statements of policy on temporary houses, limits of size and cost on permanent houses and so on, are an indication of a sorting out of ideas in high places and are to be welcomed whether or not one agrees in all details with the decisions. What is more questionable is whether the architects who have to prepare

designs for operations in the field are being given sufficiently clear instructions.

What, for instance, is the present position of the many private architects who are just beginning to work on house plans? Are they able to discover quickly all the information they need to enable them to prepare plans which are likely to be accepted? Is it sufficiently appreciated that the shortage of manpower for housing is not only a question of bricklayers and plasterers, but that architects, too, are in short supply?

Surely at a time like this there should be a widely publicised official summary of all the latest information. Two examples may illustrate the point. In applying for a licence to build small dwellings it will be found that the fairly well-known statement that houses must not be over 1,000 sq. ft. in floor area is by no means the full story. Note number 4 on the application form has a clause which suggests that any roof space over five feet in height may be included as habitable space whether it is intended to be used for this or not. So far as I am aware this clause has not been given any publicity, and many architects may be doing preliminary work before they proceed with an application for licence.

Not only has this clause been well hidden, but even when it is found its meaning is far from clear, since it is so worded that such space in the roof may or may not be counted. A much clearer direction is needed. Incidentally, it is worth noting that if the restriction is strictly applied it will either prohibit the use of plain tile roofs

of 40 degree pitch or will reduce the floor space of ground and first floors quite appreciably. The only alternative to this seems to be to design the house as a "semi-bungalow" with first floor rooms running into the roof space. It may be that the last alternative is intended as a means of economic construction. If so a statement to this effect would be helpful.

A second example of insufficiency of information is the enormous waste of time involved in designing for materials which are subsequently found to be unobtainable. Timber is a case in point. There appears to be no definite instruction on this, and a strong difference of opinion seems to exist between the Government and the timber trade. A great deal of thought and time could be saved if the position could be made clearer.

#### THE LCC THREAT

Both the ABT and the RIBA have been quick on the draw against the LCC's threat to transfer the ultimate responsibility for housing at present under the direction of the County Architect and Town Planner to the Valuer's Department—and rightly so.

As the ABT points out in a well argued statement: "A Valuer's Department is competent to acquire sites; but not to decide where they should be. It is competent to handle the economics of housing; but not to design the houses or plan the neighbourhoods in which they are grouped. . . To place the final direction of housing work of London with any department other than the Architect's Department . . . shows a weakening of the resolve to do the right thing quickly, a lack of faith in our ability not only to build houses, but to plan a living environment. . . The Council's bold acceptance of the County of London Plan as the basis of their work led us to believe that they had turned their back on piecemeal development. The proposed divorce of housing from town planning gives rise to misgivings as to the Council's continued adherence to the plan."

"Those in favour of the proposal," continues the ABT statement, "point

out that at present the LCC's housing work is divided between the Valuer, the Chief Engineer, and the Architect, and that in the interest of speed the various housing functions should be placed in the hands of a single chief officer. The argument for centralisation is reasonable enough; but why not centralise under the control of the Architect who is responsible for all other architectural work in London?"

The results of the move, points out the ABT, will be the splitting up of the Architect's Department and the loss of valuable experience accumulated over a period of some fifty years. It will also cause dissatisfaction among the architectural staff.

But the publicity created by the RIBA and the ABT may have prevented a secret *coup d'état*. A breather has been given, which must be used to convince the members of the Council of the dangers of the proposal.

#### ONE FOOT EQUALS 120 INCHES

Architectural students are usually shown Piranesi's etchings as examples of how to create an effect of impressive scale by contrasting the very small with the very large. But now they can be given a new example (although 1,000 years old), a photo-

graph of which, taken by Major Andrew Carden of the Royal Engineers while on active service in India, is reproduced below from the annual exhibition of AA members' sketches and photographs now to be seen at Bedford Square.

The gigantic feet are those of the Jain statue of Gomata in Mysore State. Cut from a monolithic block of granite, it forms a landmark over 60 feet high on the top of a hill. So wrapped in holy contemplation stands the saint that vines grow up his legs, ants make hills round his feet, and cobras come and dwell there. Before him squats a tiny figure, two or three feet high, of another Jain saint, and in front of him again sits a still tinier figure.

One doesn't generally associate such simple, bold and dramatic form with Indian art, but rather examples as intricate and sensual as the stone bracket figures at Belar,\* photos of which Major Carden also shows at the AA, where sculpture and buildings are practically indistinguishable. These figures are apparently of slightly later date than the Jain shrine, round about A.D. 1100, when the informal Hindoo spirit was beginning to replace Buddhist convention.

ASTRAGAL

\*See following page.



The feet of the gigantic statue of Gomata, a Jain saint in a Mysore shrine, on which Astragal comments this week. It is shown at the annual exhibition of members' sketches at the AA. Other exhibits are illustrated on the following page.



## LETTERS

G. V. Downer

Howard Robertson, F.R.I.B.A.  
(President, Building Industries National Council)

### Electric Light

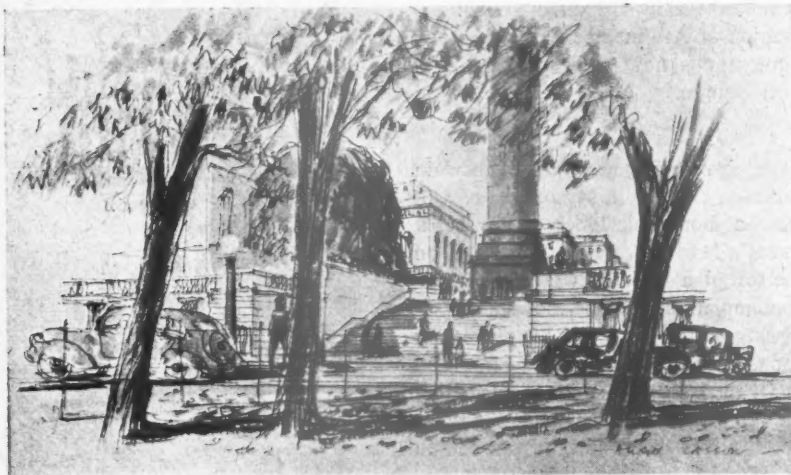
SIR.—I was very interested in the leading article on Electric Light and I agree almost wholly with the first three paragraphs, and especially with your reference to the "dazzling speck," which so graphically indicates the unpleasant and injurious nature of the unshaded electric bulb, and your equally pertinent criticism of the customary placing of the light in the middle of the room.

However, these criticisms are valid only on the assumption that the "dazzling speck" is used for direct lighting, so that "frosted glass, silk shades," etc., have to be used to mitigate the glare. I am a little puzzled at your inclusion of "inverted reflectors" as examples of "wasteful botching," because if you are referring to opaque reflectors which conceal the lamp itself from direct view, this is the ideal form of lighting, i.e., indirect, and completely avoids all glare. Further, this method is no more wasteful of electricity than ordinary direct lighting with its necessary diffusing shades, etc.; indeed, if carried out efficiently, the indirect form of lighting is much more economical. The objection to the central placing of direct "lights" is that it causes the maximum amount of glare and inconvenience by shining in the eyes of "most of the people most of the time," while with indirect lighting, no matter where the fittings are placed, there is no glare, and, moreover, anyone can sit in any position without getting in their own shadow, since there are no shadows.

However, what really did astonish me was your seeming approval of the fluorescent lamp. First, although the surface brightness is less than that of the ordinary filament lamp, it is still quite high enough to involve considerable glare, causing eye-strain and hindering comfortable vision. Secondly, the glow of the fluorescent paint by no means masks the stroboscopic effect,



## AA MEMBERS' SKETCHES



From the annual exhibition of members' sketches and photographs at the Architectural Association. Top, Duke of York's Steps by Hugh Casson. Centre, Merton Lodge by Christopher Knight. Left, stone bracket figure at Belar, Mysore, by Andrew Carden (see Astragal's note). Above, Egerton Mews by Eleanor Godfrey.

which can be very trying, especially when the lamp has been in use for some little time. Thirdly, as you rightly point out, the cost of replacements far outweighs any saving in current. There is also observable a strange tendency on the part of the users to want more and more, so that in several cases known to me, where a single 80-watt fluorescent tube has first been installed and has apparently been quite satisfactory, I have found after a few months the user has added several more and was thus using very much more current than originally, and, in fact, was much worse off in every way.

With regard to the suggested use of fluorescent paint played upon by ultra-violet radiation, I would point out that when ultra-violet rays are used for medical treatment, the eyes have to be protected by special glasses, so that to use these rays for normal artificial lighting would seem likely to have very serious effects on eyesight.

As bearing on the relative costs of ordinary electric lighting and fluorescent lighting as commonly put forward by those who recommend and instal it, a case has recently come to my knowledge of a factory of 60,000 square feet, where the company concerned was advised to instal 5,000 80-watt fluorescent tubes, i.e., one per 12 square feet. In this case the cost of installation would be from £30,000 to £40,000. The current consumption of these tubes, including losses in the necessary chokes, etc., is about 100 watts, so that the total consumption here would be about 500 Kw.; allowing 8 hours a day and, say, 300 days to the year, this would involve a consumption of 1,200,000 units per annum, which at 1d. a unit would cost £5,000. Replacements of tubes, which can reasonably be taken as being required at least twice a year, would cost (at 2s. per tube) £12,000 per annum. In addition to this there would obviously be very considerable labour costs for maintenance, including cleaning and replacements.

This factory could actually be lighted quite comfortably and efficiently by means of about 100 indirect fittings, using a 1,000-watt lamp in each. This need not cost more than £1,500 to instal (instead of at least £30,000). Current consumption would be 100 Kw. (instead of 500 Kw.), costing £1,000 (instead of £5,000) per annum, and bulb replacements at about £1 each would cost £200 (instead of £12,000). The annual maintenance costs would also, of course, be very much less.

In view of the above facts, is it not about time we ceased having our legs pulled?

London

G. V. DOWNER

## The BINC Congress

SIR.—As Chairman of the second Building Congress organised by the Building Industries National Council, I would like to seek the hospitality of your columns to enable me to convey, on behalf of my Council and personally, our grateful appreciation of the time and trouble taken by so many who journeyed to London to attend the two Congress Sessions.

In these days of difficulties of travel and accommodation, the Congress organisers appreciated to the full the support given by such widely diversified sections of the industry, and our thanks are due to them all for an enthusiasm which helped to make the Congress a success.

My Council is also appreciative of the fact that, without the willing and friendly assistance of the technical press, information with regard to the Congress would have been withheld from many.

May I take this opportunity, Sir, to tender grateful thanks for the support tendered to my Council through your Journal.

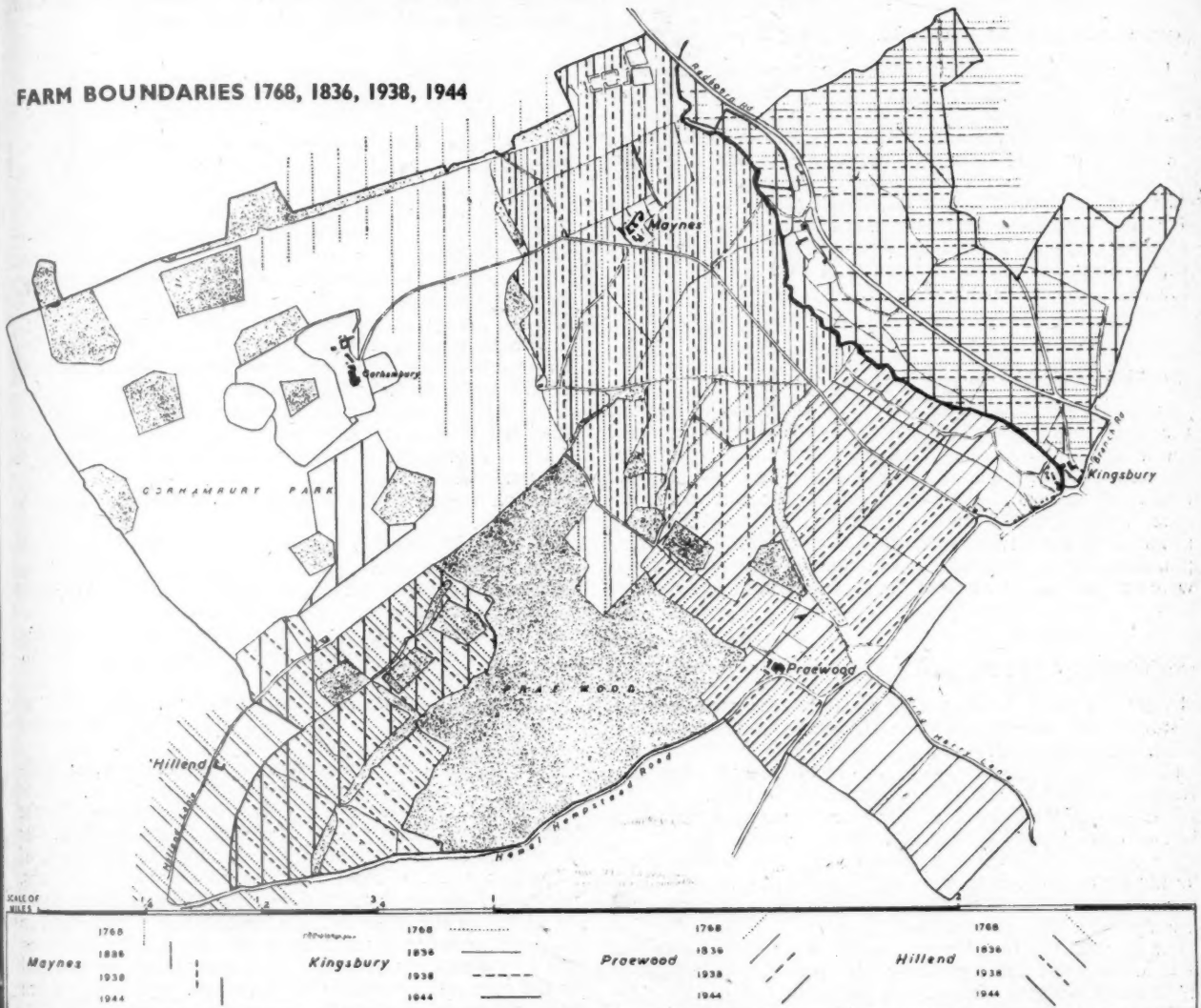
London

HOWARD ROBERTSON,  
President, BINC



# PHYSICAL PLANNING SUPPLEMENT

## FARM BOUNDARIES 1768, 1836, 1938, 1944



Fluctuations in the Boundaries of four Gorhambury Farms since the Eighteenth Century.

## AN ESTATE REPLANNED

a study of Gorhambury in the County of Hertfordshire

To the immediate north-west of St. Albans in Hertfordshire lies the Gorhambury estate, about 1,800 acres of which are attached to the mansion.

In 1944 the Association for Planning and Regional Reconstruction was asked to undertake a survey of this part of the estate with a view to putting forward proposals for its future development. The task of the survey and the resulting proposals was three-fold:—

1. To ensure that the requirements of good farming would be given full consideration; that the best possible use would be made of the land, and that full weight be given to the requirements of the people working on the estate.

2. To study the recreational requirements of the population in St. Albans in relation to Gorhambury, and to consider the development of the estate in conjunction with that of the district around it.

3. To pay full regard to the long and varied history of Gorhambury and to incorporate any outstanding features of historical significance into the general scheme of development.

These three objects overlapped and interlocked at many points, and it was in the solution of these linked problems that some of the most interesting results were achieved.

Before attempting to describe any of the conclusions, it might be useful to give a very brief description of the subjects sur-

veyed under each of the three main terms of reference, and to outline some of the particular problems which needed attention.

### gorhambury: its land and its people

Under the first heading studies were made of such things as:—Historical farm units and field cultivations; soil classifications; microclimatology; forestry; farm buildings. Investigations were also carried out into the type, size and condition of all houses on the estate and the means of access to buses, shops, schools, etc. Further, a survey was made of the number, size, composition, occupation and place of work of all families living in estate houses and of the public utility services, transport, health and education services available to them; also the religious, commercial and leisure facilities located within reasonable distance.

### gorhambury and St. Albans

Under the second heading an attempt was made to discover the extent to which the people of St. Albans entered the estate for walks, fishing, bathing, and other recreational purposes. A study was also made of the use of the land adjoining the estate on the edge of the city. Gorhambury falls within the area of the Greater London Region and, as the preliminary proposals of Sir Patrick Abercrombie's plan for that area were published during the course of the Gorhambury survey, these were accepted as the basis for the general plan of this area.

### gorhambury and its past

Under the third heading a brief study was made of the history of the estate and of those historical features which still exist. These include:—

The Roman Theatre, which was reconstructed when the Roman city of Verulamium was excavated in 1935.

A section of Watling Street which passes through the estate between the Roman Theatre and the Pondyards.

The Pondyards themselves, ornamental water gardens built by Sir Francis Bacon in the early 17th Century, and which, though still retaining their original physical form, are now surrounded by rough pasture land.

The ruins of the 16th Century house of Sir Nicholas Bacon with its mutilated statue of Henry VIII, placed there in honour of Queen Elizabeth's second visit to Gorhambury.

The present mansion, designed by Sir Robert Taylor in the late 18th Century, as a home for the 3rd Viscount Grimston and also to accommodate a famous collection of family portraits. Among these portraits is one of Edward Grimston, Ambassador to the Court of Burgundy, which was painted by Petrus Christus in 1446; this is the earliest painting in this country where the names of both the sitter and painter are known.

### special problems

As the studies progressed certain problems arose which required special attention. Some of these were of the type that arise in nearly all town planning surveys and need not be stressed again here, but it soon became apparent that some had particular application to agricultural development on the fringe of built-up areas. Broadly speaking these problems were:—

1. What type of farming should be carried out and what methods should be adopted in the management and working of the land?
2. Where, in relation to the farms, should the cottages for the rural workers be placed?
3. To what extent is it possible to give urban dwellers easy access, for various recreational purposes, across agricultural

land without interfering with the efficient farming of that land?

To some extent the solutions will depend upon the particular circumstances of the area in question, but it would seem that the proposals suggested for the Gorhambury estate, might, with certain modifications, have wider application.

### proposals

The solution to the first problem of determining the type of farming to be practised and the methods to be used in the management and working of the land is one which must vary considerably from place to place. At Gorhambury it is proposed to keep a dairy herd of approximately 150 milking cows, divided more or less equally between the three farm units which go to make up the estate. These farms will be run by two managers, one for stock and one for arable production and their work will be co-ordinated by the owner. It is further proposed that the buildings on the more central farm unit should be organised for the purpose of rearing the heifer calves born on all three farm units.

The following matters have been taken into consideration:—  
(a) That it is desirable to retain the historical farm units as far as practicable in regard to the methods of farming to be employed.

(b) That the landscape character of the estate should be maintained.

(c) That it is desirable to bring into productive use the 400 acres of parkland surrounding Gorhambury House, but that the park-like character of this land should not be destroyed by subdividing it into a series of small fields.

(d) That the light soil is of a type suitable to dairy farming.

(e) That water should be laid on to all fields and fencing improved throughout the estate.

(f) That it is desirable to use existing farm buildings wherever possible and that where new buildings have to be built these should be of an all-purpose character.

(g) That there is easy access to and a ready market available in the City of St. Albans.

The results of the survey suggested that the cottages for the farm hands should not be scattered at different points over the estate, but that they should be grouped to form part of the village of St. Michael which is adjacent to St. Albans. This would enable better services and social facilities to be provided. At the same time accommodation for one or two families is provided in conjunction with the farm buildings on each of the three farm units. This appears to be essential for the care and protection of the stock, particularly when these are located so close to a town.

### farming and recreation

It is in the solution to the problem of opening up farm land for recreational purposes, that one of the most interesting contributions to rural planning is made. This particular problem of opening up farming land to city dwellers for walks and other forms of recreation is one which must be faced all over the country and it may be useful to outline in rather more detail the suggestions made for Gorhambury.

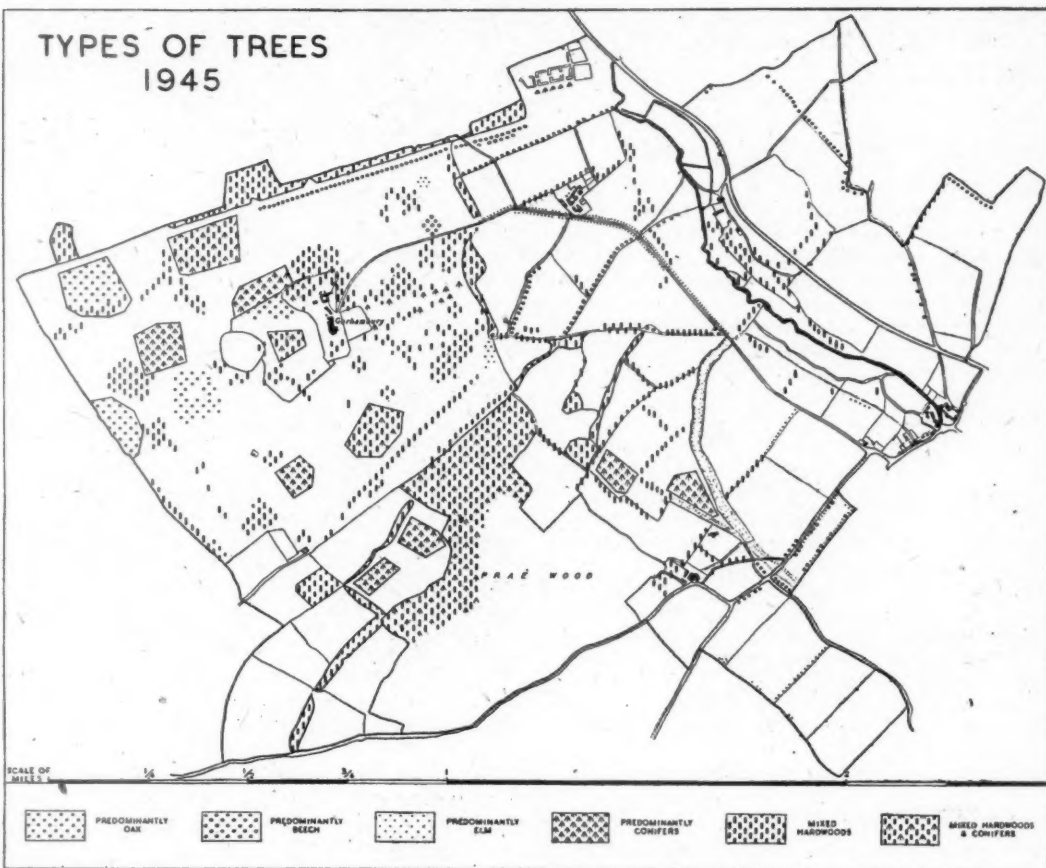
The Gorhambury estate may be divided into five main areas: the three main farm units, each of about 200 acres; the pasture area of the Park, about 400 acres, and Prae Wood, of about 200 acres. Prae Wood is a very old wood and though about two-thirds of it has been felled during the 1939-1945 war it is proposed that it should be replanted. It is a mixed wood, reserved for shooting purposes, but it is famous for its bluebells, which have caused a considerable amount of trespassing by enthusiastic pickers.

In addition to the five main units, the River Ver runs along one side of the estate from north to south continuing in the Corporation Park of Verulamium to the south of the estate. Scattered over the whole estate are various features of historical interest and the people of St. Albans have for long

The ruins  
of Gorhambury  
the war

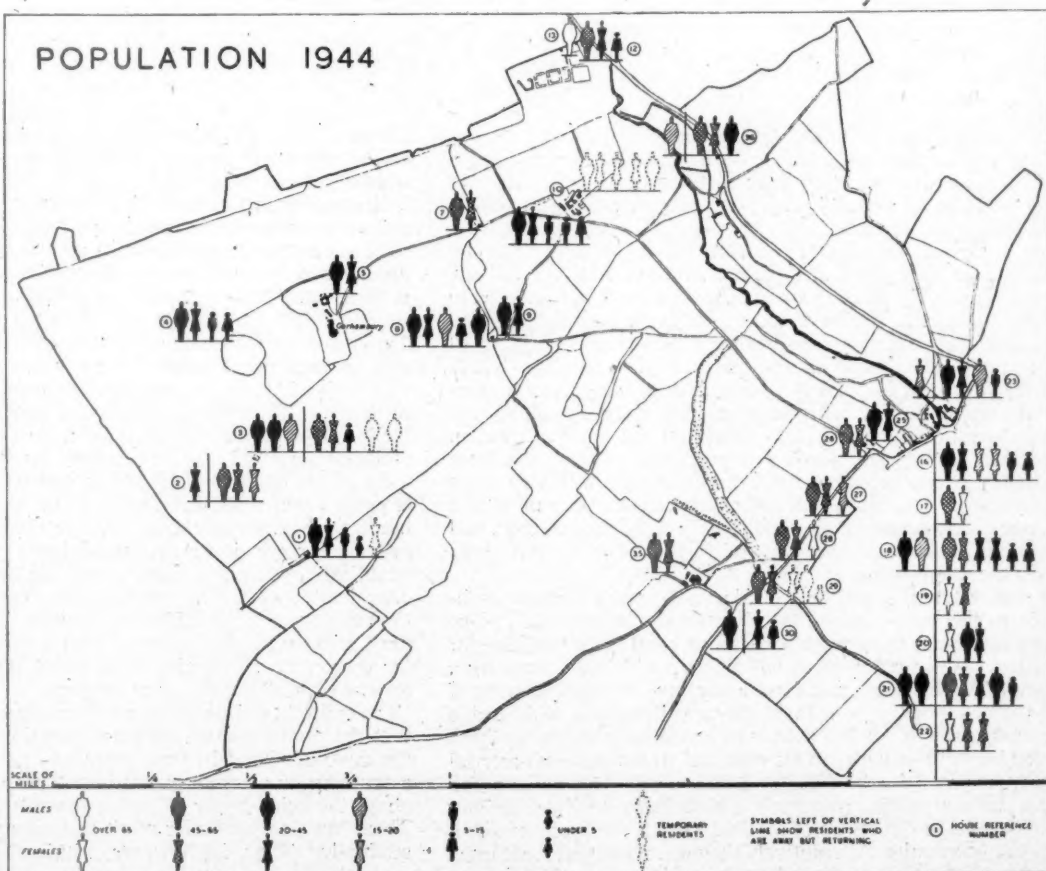
The tenants  
of Gorhambury  
families.

## TYPES OF TREES 1945



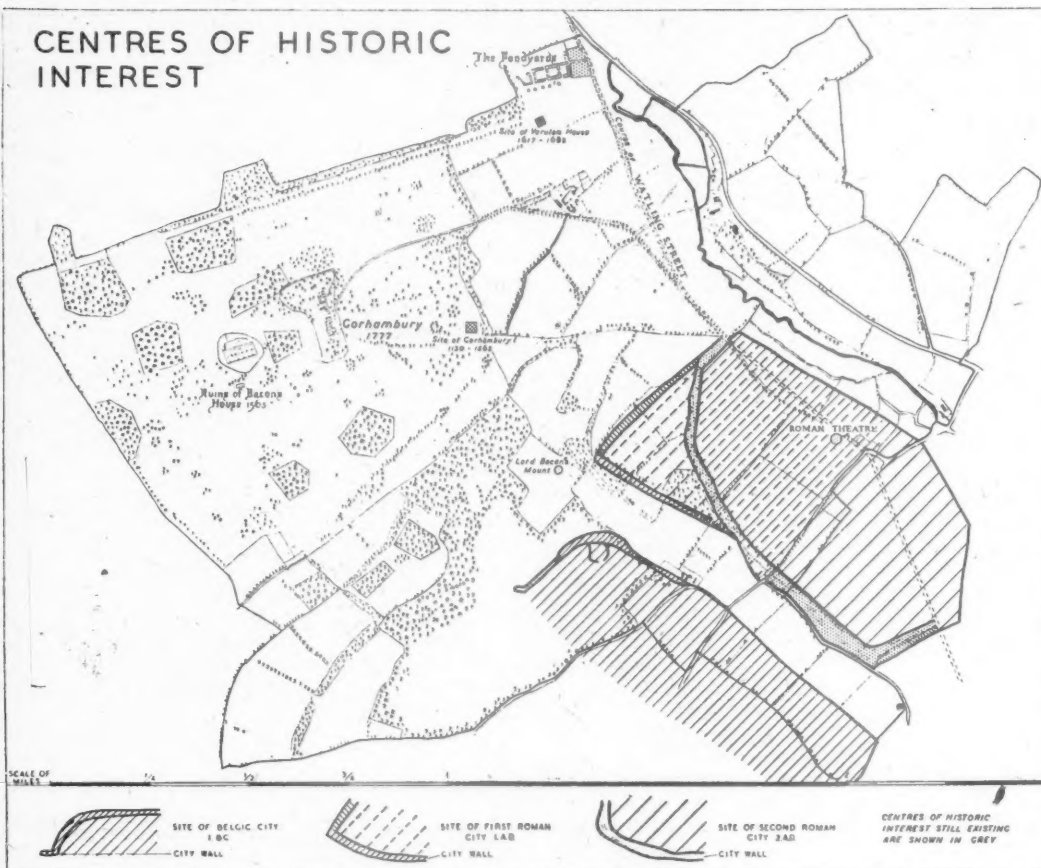
The remaining trees of Gorhambury after the wartime fellings.

## POPULATION 1944



The tenants of Gorhambury and their families.





Gorhambury in the days of the Romans, Elizabethans and the Eighteenth Century.

been accustomed to using Gorhambury for country walks, subject to an annual closure. As has been stated, the problem was to give access to these features of historical interest and to cater for country walks without prejudicing the efficient farming of the land.

A study of the map *Proposals for Estate Development* will give a very good idea of the solution offered. All the areas tinted grey on the map are those places and footpaths to which the public will have access. It must be borne in mind that these are not footpaths in the ordinary sense of the word but grass walks fenced off with post and wire fencing. These walks will be at least 30 feet wide, and in many cases a great deal wider and it will be seen that they lie along the boundaries dividing the farm units and the grazing areas in the Park. They will serve two purposes. They will form isolation areas between the farm units and will also form access lanes for cattle and farm implements as well as the public. The post and wire fences are economical to erect and maintain and create the minimum obstruction to the views over the countryside.

From the map it can be seen that a footpath is made available to the public beside the river to the Pondyards. This path alternates from bank to bank to give better facilities for fishing. When complete it will link up with the Corporation Park of Verulamium and form a continuous riverside walk of about two miles. From the Pondyards the public will be able to walk through the fine avenue of beech trees on the northern boundary of the Park. This will lead to the new sub-arterial road proposed in the Greater London Plan, or walkers can also take a southwards path which leads to Gorhambury House and to the centre of a radial system of footpaths dividing the farm units. Alternatively they can walk from the Roman

Theatre along the Drive and an un-used section of Watling Street (which will be opened as a fair-weather road with cattle stops at either end) to the Pondyards. From the Drive another footpath, dividing two of the farm units will lead to the Park and so to Gorhambury House and its pleasure gardens.

Yet another footpath is shown on the plan running through Prae Wood parallel to the Hemel Hempstead road. It is proposed to throw open to the public a strip of Prae Wood some 200-300 yards deep and to run a footpath through it. This will give the people of St. Albans a pleasant woodland walk within easy distance of the city and should provide them with opportunities of picking bluebells without trespassing further into Prae Wood, which will continue to be preserved for forestry and shooting purposes.

Suggestions have also been made for the use and development of the features of historical interest on the estate. The Roman Theatre has been open to the public since 1935 and needs little or no alteration. At the Pondyards it is proposed to form a recreation area, containing a swimming pool with facilities for changing rooms, teas, etc., and ornamental gardens based, as far as possible, on the ideas expressed by Francis Bacon in his *Essay on Gardens*. Gorhambury House itself might ultimately serve as a conference house or a centre for short term adult education, whilst still providing a home for the owner's family as at present.

The collection of paintings and the library makes it desirable that the public should, on some occasions, have access to it. On the other hand it is too remote to be considered solely as a museum or art gallery. It is not proposed to do anything about the ruins of Sir Nicholas Bacon's 16th Century house. These have no particular merit and may well be left to decay gradually. They lie, however, within the area to which the



public will have access and so can be visited by any who may be interested.

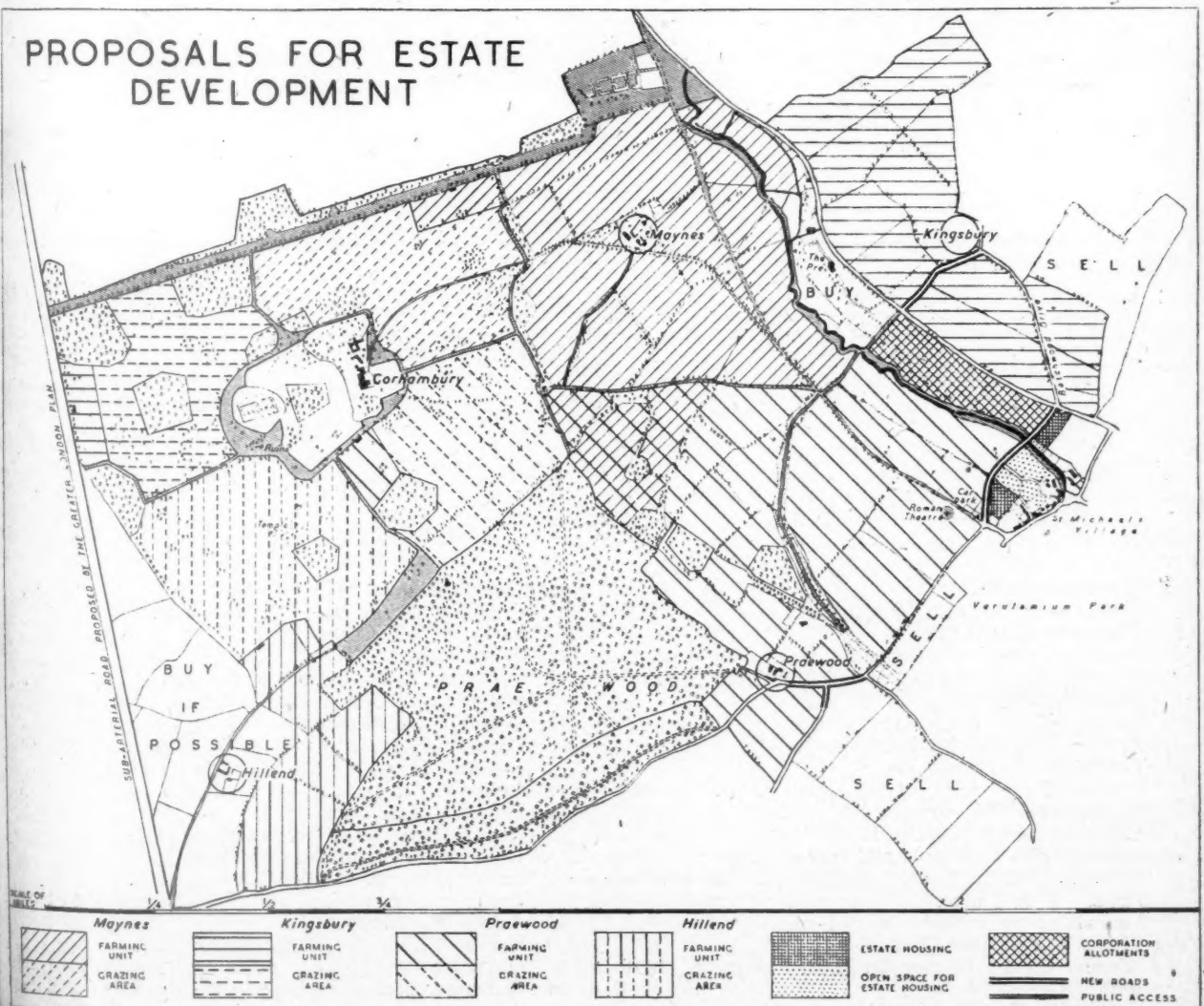
Though all the proposals are concerned with the development of one particular estate, it is thought that some of them may be found of value in other agricultural areas, more particularly those on the fringe of populous towns.

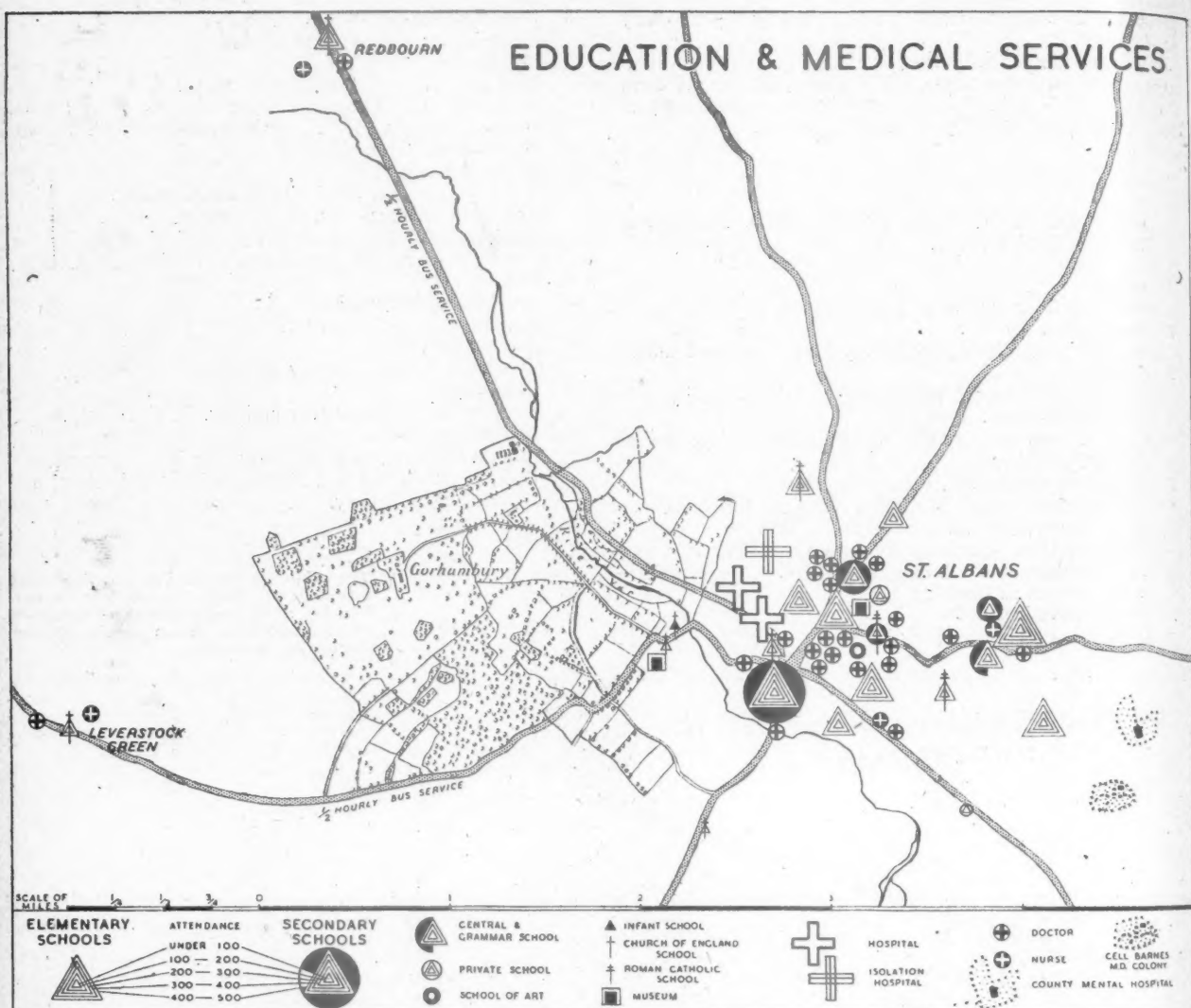
# LIST OF SURVEY MAPS AND SOURCES OF INFORMATION.

- 1. Relief.**  
Contours from Ordnance Survey Maps. 1" to 1 mile.
- 2. Rock Types.**  
Adapted from Geological Survey Maps. 1" to 1 mile.
- 3. Rainfall.**  
Data supplied by the Royal Meteorological Society.
- 4. Soil Classifications.**  
From a map prepared by the School of Agriculture, University College of North Wales.
- 5. Farm Boundaries 1768, 1836, 1938, 1944.**  
1768—Contemporary Map and Schedule (original).  
1836—Tithe Map and Schedule (original).  
1938 and 1944—Gorhambury Estate Field Records.
- 6. Field Cultivations 1768, 1836, 1938, 1944.**  
Same sources as for Map 5.
- 7. Field Cultivations 1938.**  
Gorhambury Estate Field Records.
- 8. Field Cultivations 1944.**  
Gorhambury Estate Field Records.
- 9. Woodlands.**  
1634 and 1768—Contemporary Maps.  
1883 and 1924—Ordnance Survey Maps. 6" to 1 mile.  
After 1924—Mr. H. E. Asprey and Mr. S. G. Brown.
- 10. Predominant Types of Trees.**  
Inspection on the site.
- 11. Adjoining Owners, Field Names and Contours.**  
Adjoining Owners—Mr. H. E. Asprey.  
Field Names—Gorhambury Estate Field Records.  
Contours—Surveyed by students of Birkbeck College, London.
- 12. Population Distribution.**  
Housing and Social Survey.
- 13. Housing Conditions.**  
Housing and Social Survey and Mr. H. E. Asprey.
- 14. Occupations.**  
Housing and Social Survey and Mr. H. E. Asprey.
- 15. Gorhambury 1634.**  
From a copy of a contemporary map in "Transactions," 1933, of St. Albans and Hertfordshire Architectural and Archaeological Society.

The plan for the Estate showing road alterations: farm boundaries: a new housing site: and a system of footpaths to give access to towns people without disrupting farming.

## PROPOSALS FOR ESTATE DEVELOPMENT





22

Schools, doctors, nurses and hospitals available to those working at Gorbunbury.

# 16. Gorbunbury 1768.

From the original of a contemporary map.

# 17. Centres of Historic Interest.

From the book "Verulamium," written by R. E. M. Wheeler, D.Litt., V.P.S.A., and T. V. Wheeler, F.S.A. Ordnance Survey Map. 6" to 1 mile. "Transactions," 1933, of St. Albans and Hertfordshire Architectural and Archaeological Society.

# 18. Pondyards.

"Transactions," 1933, of St. Albans and Hertfordshire Architectural and Archaeological Society. Ordnance Survey Maps. 25" to 1 mile.

# 19. Administrative Boundaries and Built-up Areas.

Ordnance Survey County Diagram of Administrative Areas. 1/4" to 1 mile. Ordnance Survey Maps. 1" to 1 mile.

# 19a. Graph of Population Changes.

Victoria County History Statistical Summaries, 1801-1901. Census Reports, 1911-1931.

# 20. Communications.

Ordnance Survey Maps. 1" to 1 mile. Railway Time Tables.

# 21. Traffic Flow.

Ordnance Survey Maps. 1" to 1 mile. Ministry of Transport Traffic Census 1936 and 1938.

# 22. Education and Medical Services.

Board of Education list of Public Elementary Schools. Board of Education list of Secondary Schools. Ordnance Survey Map. 6" to 1 mile. Hospitals Year Book, 1938. Kelly's Directory of Hertfordshire, 1937.

# 23. Religious and Commercial Facilities.

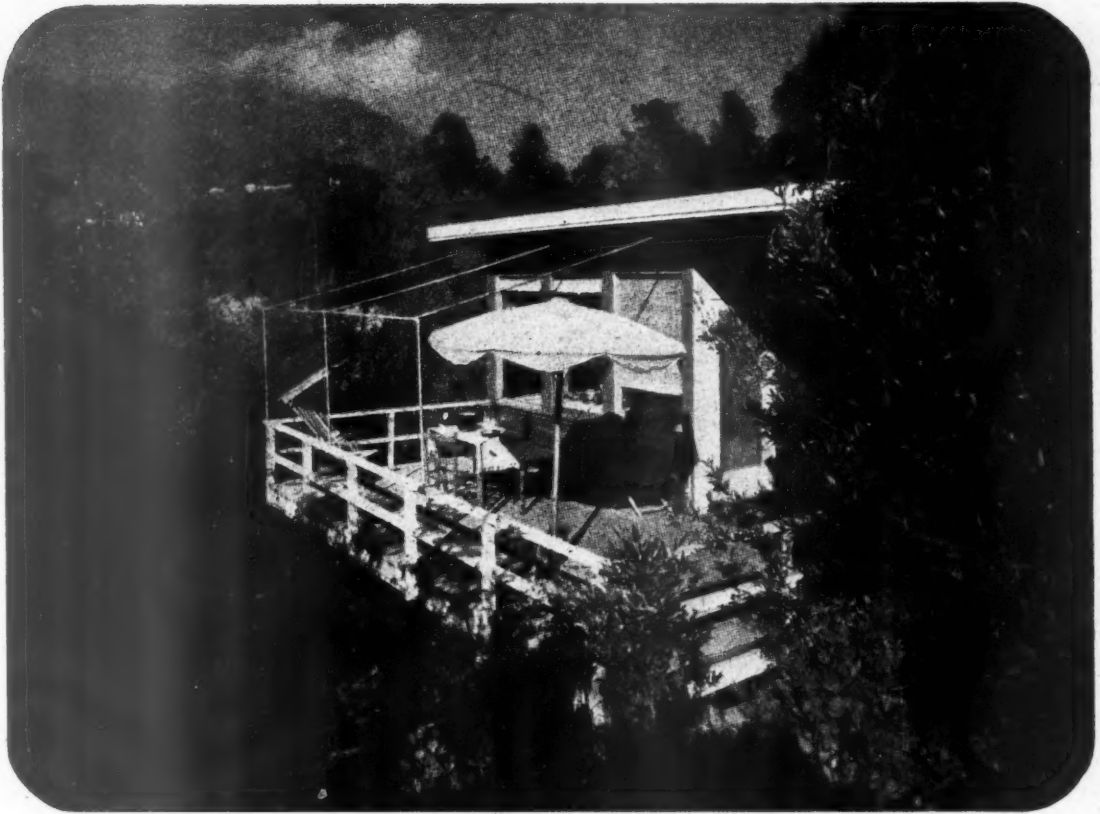
Kelly's Directory of Hertfordshire, 1937. Ordnance Survey Maps. 1" to 1 mile and 6" to 1 mile.

# 24. Leisure Facilities.

Kelly's Directory of Hertfordshire, 1937. Ordnance Survey Maps. 1" to 1 mile and 6" to 1 mile.

# 25. Communications as proposed by The Greater London Plan.

Greater London Plan, 1944, Preliminary Edition.



# MINIMUM HOUSE IN THE USA DESIGNED BY W. W. WURSTER

This little cottage, designed by William Wilson Wurster of the firm of Wurster and Bernardi, has the look of a week-end house, but it was actually designed for year-round occupancy by a relatively old client and, while eliminating non-essentials, provides all living facilities for less than 2,600 dollars including architect's fee.

Apart from the entrance porch, it is square in plan. The exterior walls are of standard American timber frame construction, finished outside with red wood siding and inside with fir plywood. Flooring

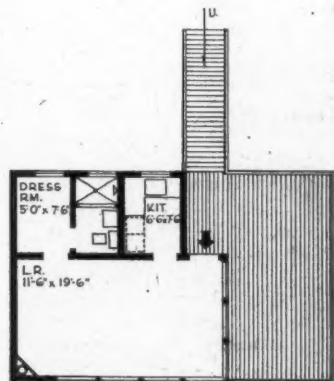
is of T. and G. fir, finished with one coat of oil.

The slope of the site allowed a low-cost, full-height basement which could be used as a garage as well as providing storage space and room for the water heater.

The cottage has a generous veranda and a large living room off which are placed a kitchenette, small dressing room and bathroom with shower. There is a log-burning stove with openable front in a corner of the living room. Two sides of the living room have large windows along their whole length.



PLOT & BASEMENT PLAN



0 5 10'

Top, general view. Above, plot and basement plan and plan of cottage.



Left, approach to entrance. Above, view from west. Below, the living room.



MINIMUM HOUSE IN THE USA

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# 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.

## STRUCTURE

### 2197 Atom Bomb Damage

ATOM BOMB RUINED NAGASAKI BY PRESSURE AND SUPERHEAT. H. W. Richardson. (*Engineering News Record*, September 27, 1945, pp. 397-398.) First authoritative report by an engineer on effect of atomic bomb on structures.

The author, an editor of ENR, visited Nagasaki early in September. Destruction is of three types, that resulting from direct blast, from searing superheat from the bomb and from conflagrations started by existing open fires. The bomb was perfectly placed for maximum industrial damage, exploding over the centre of the Urakami River industrial district, hemmed in by high side ridges that confined the blast to a long, narrow valley. The blast centre is located by the orientation of leaning poles and by the direction towards which buildings collapsed. An area roughly of a half-mile radius around the blast centre is completely demolished, including all types of structures. Beyond that, damage lessens according to construction. In general, reinforced concrete stood up best, but some such structures were wrecked or badly damaged as far as  $\frac{1}{2}$  mile from the centre of the blast. Heavy brick wall structures collapsed as far as  $\frac{1}{4}$  miles away. Ordinary houses and stores were wrecked up to 2 miles, and in freak cases 3 miles. Large light buildings, like barracks, were knocked down 5 miles away. Windows were broken at from 7 to 10 miles. The huge Mitsubishi steel plant, mostly steel frame structure with corrugated sheets as walls and roofs, was reduced to tangled wreckage. Inconsistent with other damage, high circular concrete stacks are standing, although some of them cracked at the base. An interesting effect is evident on the heavy reinforced concrete medical school building on a hillside 2,000 ft. east of the blast centre. Although the structures are standing, they are partly shattered, and every room, even protected interior rooms, show charring and spalling from terrific heat. Every bit of combustible material is completely consumed. No charred fragments or ashes remain, indicating simultaneous spontaneous combustion throughout the buildings.

### 2198 Timber Hangars Destroyed

THREE HUGE BLIMP HANGARS DESTROYED IN 130 MPH. FLORIDA HURRICANE. (*Engineering News Record*, September 20, 1945, p. 87.) Timber structures at Richmond Naval Air Station near Miami fall on planes and burn.

The huge blimp hangars of the USA Navy the world's biggest timber structures—have been mentioned several times in the Information Centre (No. 1140:13.5.43, 1340:30.12.43, see also ARCHITECTS' JOURNAL, March 9, 1944, p. 182). A total of 17 such

hangars were built at shore locations throughout the country and have satisfactorily housed blimps. Three of them, all at Richmond Naval Air Station 30 miles south of Miami, Florida, failed on September 15 in a tropical hurricane, when the wind velocities reached an estimated 130 m.p.h. The hangars housed 25 blimps and 366 planes. The falling structures smashed the planes and started fires that it was found impossible to control. Value of the hangars and aircraft was estimated at \$30 to \$40 million. Original cost of hangars was \$2,800,000 each. The timber for the structure was pressure treated with a mixture of ammonium and boron to make the wood as nearly flameproof as possible. The structures were apparently blown down before the fires started.

### 2199 Cancellation of USA Houses

BRITISH CANCEL ORDERS FOR HOUSES DESIGNED AND PREFABRICATED IN US. (*Engineering News Record*, September 20, 1945, p. 355.) American comments on cancellation of 17,000 houses scheduled for production under lend-lease arrangement.

Designed by the Federal Public Housing Authority (FPHA), the houses for Great Britain (see ARCHITECTS' JOURNAL, May 10, 1945, pp. 353-6) have been criticised by some prefabricators in USA as a poor demonstration of American practice. According to a statement made by one of them to an ENR editor, the house was

wasteful of material, contained far too many parts and could be erected only with skilled help. The editors of *Prefabricated Homes* stated that FPHA houses called for a much greater variety of wall panels than required in most American systems. It was predicted that through offering of this type of house to the British public, prefabrication would become synonymous with temporary construction, and such houses will be harmful to the prestige of the industry.

### 2200

### Foundations

FOUNDATIONS AND SUB-STRUCTURE. *British Standard Code of Practice CP:1945, Draft for Comment.* (British Standards Institution, 2s. 0d.) Draft code for houses, flats and schools of not more than two storeys.

This Code has been prepared by a Committee convened by the Institution of Civil Engineers. It deals with site exploration, the determination of bearing capacities and suitable depths for foundations, the selection and design of the appropriate type of foundation, and the execution of the work on site up to the damp-proof course.

### 2201

### Time and Wages Sheet

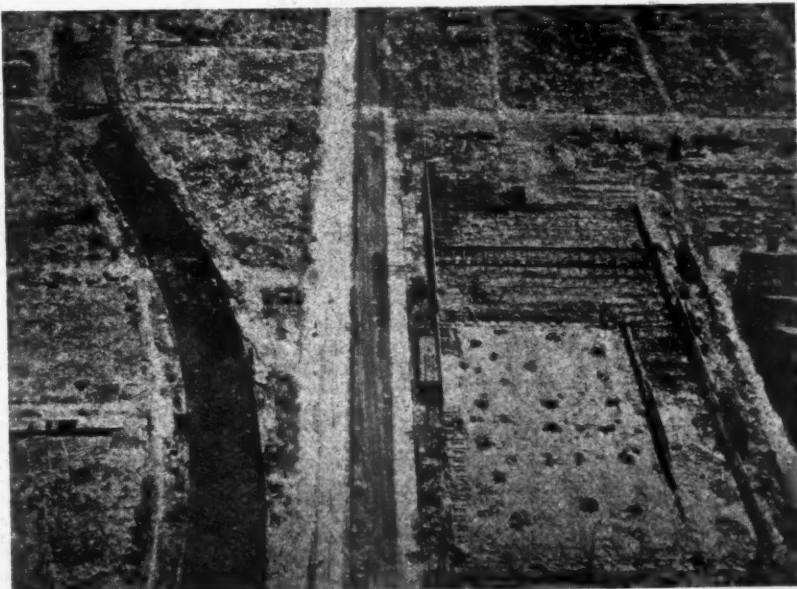
STANDARD FORM OF TIME AND WAGES SHEET AND PAY PACKET FOR THE BUILDING AND CIVIL ENGINEERING CONTRACTING INDUSTRIES. B.S. 1151: 1945. (British Standards Institution, 2s. 6d.) 2nd revision, issued September, 1945, due to National Joint Council for Building Industry's new wage agreement in respect of inclement weather time allowance and guaranteed make-up.

## MATERIALS

### 2202

### Green Timber

GREEN TIMBERS IN AUSTRALIAN STRUCTURES. Ian Langlands. (*Engineering News Record*, September 6,



"Masses of steel and piles of rubble are all that is left of the centre of Nagasaki, Japan," says the first authoritative, eye-witness report of an engineer on the real effects of atom-bombing there. See No. 2197.

1945, pp. 290-1.) Some failures caused by permanent loading.

Australia has experienced some difficulties in use of green timbers. Green hardwoods, mainly eucalyptus, are used almost exclusively for timber structure in Australia. The Division of Forest Products of the Council for Scientific and Industrial Research of the Australian Government has made a comprehensive series of tests on split ring connectors following the usual technique of testing joints in compression under loads of short duration. From these tests working loads were obtained by dividing by a factor of four. Experience has shown that these working loads, although safe under wind and live loads and the usual combination of wind, live and dead loads, are, at least in some cases, unsafe when dead loads only are acting, failure occurring some weeks or months after erection by end splitting and shearing. Such failures are confined to tension joints, but they can occur at dead loads equal to about 75 to 80 per cent. of the working load, i.e., they can occur at loads equal to 1/5 of the average value obtained in short time compression tests. In no case have failures due to live load been noted.

In the author's opinion, the major factor of such failures, at least in green hardwoods, is the effect of creep associated with shrinkage stresses. He reports on columns tests in which a load equal to 66 per cent. of the short time ultimate load caused failure in 6½ days, and a load equal to 80 per cent. of the short time ultimate load caused failure in 28 hours. (The relationship between duration of loading and strength of wood in bending was illustrated by a graph in No. 1146:20.5.43.)

2203

Ready Made Mortars

**READY-MADE MORTARS AND CONCRETE AND THEIR APPLICATION.** L. J. Eichlgün. (*Civil Engineering*, October, 1945, pp. 223-225.) Advantages of ready-mixed lime mortar and concrete. USA methods for mixing and transport.

2204

Plasterboard

**GYPSUM PLASTERBOARD.** B.S. 1230: 1945. (*British Standards Institution*, 2s. 0d.) Definitions, dimensions, test requirements, methods of test.

2205

Plastics

**TALK ON PLASTICS.** L. G. Couzens at meeting of the Design and Industries Association. (*The Architects' Journal*, October 4, 1945, pp. 251-252, xlv.) Examples of misuses. Only laminated sheets may be applied structurally. Plastics are auxiliary materials but have many uses of their own. Varieties of plastics almost infinite. Right use of properties of material essential.

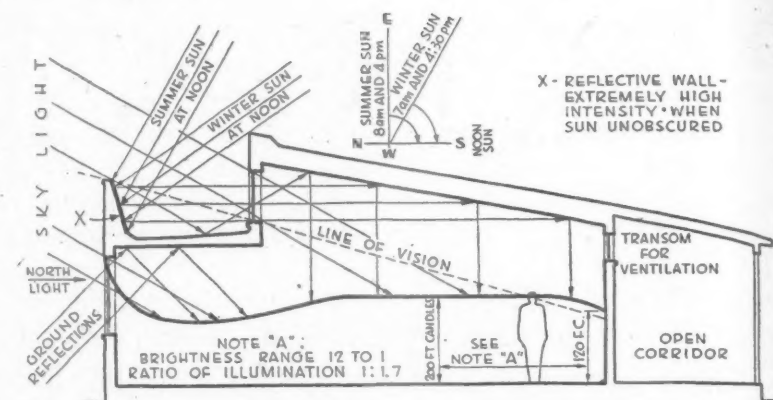
## LIGHTING

2206

School Lighting

**SCHOOL LIGHTING.** D. Haskell. (*Architectural Record*, June, 1945, pp. 83-5.) Part of note on neighbourhood schools. Classroom lighting using sawtooth roof and reflected sunlight.

The interest of this note lies in the example of natural lighting in a school classroom by a sawtooth roof. In this case, due to the climate of California, the classroom faces north, but some advantage is taken of sunlight reflected by a parapet located just



Above, section through a USA classroom showing foot-candle range line. Left, general view of the room which is flooded with daylight well diffused and of high intensity, both visually and by meter test, a fact not wholly evident in the picture. See No. 2206.

outside the window of the sawtooth roof. The distribution of light is good, as shown in the diagram and photograph illustrated on this page. There is a remarkable resemblance to some of the designs recommended in the recent MOW Study Report on the Lighting of Buildings.

2207

Colour in Moulding Shops

**COLOUR-HARMONY IN THE MOULDING SHOPS.** J. A. Meacham. (*Modern Plastics*, June, 1945, p. 105.) General guidance. Use of colour to prevent glare. Some decoration systems.

The article commences with four points of guidance:—

First: Avoid a riot of colour. In particular keep pipe and service systems to the wall colours except at connections. For these there is in America a Standard Colour Code.

Second: Use red sparingly, mainly for things connected with fire, and not for danger areas, where a high-visibility yellow is preferable.

Third: Avoid the accent colours unless strictly necessary. Used too often they lose value.

Fourth: Use colour to avoid glare. Build up high reflection values for backgrounds so that sources of light are not too contrasted.

Some stress is laid on the use of colour as a factor in morale. There is also an interesting point about the use of colour in association with high intensity lighting. Where 100-250 foot-candles are now recommended for specific tasks, it is pointed out that, unless the decoration is carefully considered and kept in "key," the risk of glare is high. That is probably a justified claim.

One final practical point is worth noting. There is said to be no hope that the manufacturers of machinery can turn out standardized-coloured machines, because the requirements of plant and surroundings can-

not be separated. Presumably the makers of machines could paint to order, however.

It is to be hoped that architects in this country are reading up the American experience of colour in factories. We are now far behind the USA in a field which is peculiarly suitable for inclusion in the architect's purview.

2208

Lighting Maintenance

**SOLVING LIGHTING MAINTENANCE PROBLEMS IN AIRCRAFT PLANTS.** W. Davis. (*Illuminating Engineering*, April, 1945, p. 234.) Arrangements for re-lamping and cleaning fixtures. Life of lamps in service.

There is real, solid information in this paper, of first-class importance to factory designers.

The Douglas aircraft makers decided that 400-watt mercury-vapour lamps were among the best pre-war sources for all-round use, but before they could use them widely they had to solve re-lamping and cleaning problems. They tried telescopic poles for re-lamping, and also improvised cat-walks. Neither was successful. Permanent cat-walks and "crow's nests" (boom trucks) seem to work well. Cat-walks are centred between trusses.

A portable, electrically heated de-greasing bath was designed to travel along the cat-walks and the fixtures, lamp and all, could be submerged. These were better than other alternatives which were tried. The cleaner carries enough material to work for several hours without interruption.

Cleaning is estimated to cost about 30 cents (about 1s.) per unit. Intensity drop was found to be about 20 per cent. in two months, due to dirt alone. When areas were re-lamped, a 25-30 per cent. improvement took place.

The mercury lamps had a long life. At 18,000 hours only about 50 per cent. had been replaced.

# KINGSTON

## *factory-made*

# PERMANENT HOMES

AN ANNOUNCEMENT OF TARRAN INDUSTRIES, LTD.

Kingston Building Industries, Ltd., a subsidiary of Tarran Industries, Ltd., has now completed plans for Kingston factory-made permanent homes and production is about to begin.

The Kingston method of construction, perfected by the Company's technical experts, provides for the complete manufacture of houses, flats and other buildings with a life of at least 60 years, using factory production methods throughout.

Tarran Industries, Ltd. are at present engaged on Ministry of Works contracts for 11,000 temporary houses. Of these, 1,000 houses in the Hull programme will be manufactured by autumn, and erected before the end of the year.

At the same time, the organization of the Company is being extended to accommodate a greatly increased future production of Kingston factory-made permanent homes.

**1** The Company at present operates factories at Hull, Thorpe, Middlesbrough and Bellshill, Glasgow.

**2** The Company proposes to acquire or erect a further seven factories in carefully chosen districts dividing the country into regions. This makes possible the full utilization of local labour and minimizes transport difficulties.

**3** The Kingston method of construction is based on the principle of producing the complete house in the factory and reducing site work to a minimum.

**4** The Kingston method of construction is not tied to any one material. Materials are used according to their suitability.

**5** Kingston factory-made permanent homes offer a diversity of colour and texture in the outer skin in order that they may be in keeping with varying local traditions and landscapes.

**6** Interior equipment is efficient and comprehensive and great care has been given to the planning of the kitchen and bath room. Every home will have constant hot water and an open fire in the living room.

**7** Kingston factory-made permanent homes are despatched from regional depots in complete units ready for immediate erection on site. Thus, delay caused by incomplete deliveries is avoided.

**8** Using the Kingston method of construction, a complete house can be erected on site within two days.

## PANEL OF TECHNICAL EXPERTS AND CONSULTANTS

• Elizabeth Denby, Hon. A.R.I.B.A. ... Director of Housing.

• A. Kershaw, A.M.I.E.E., M.Inst.W ... Technical Director.

• J. K. Winsor ... Materials.

• David Booth, A.R.I.B.A. ... Architect.

• O. W. Roskill ... Industrial Consultant

• Thomas Sharp, L.R.I.B.A., F.I.L.A. ... President, Town Planning Institute, Civic Design.

• Clough Williams-Ellis, F.R.I.B.A., M.T.P.I ... Landscape Architecture.

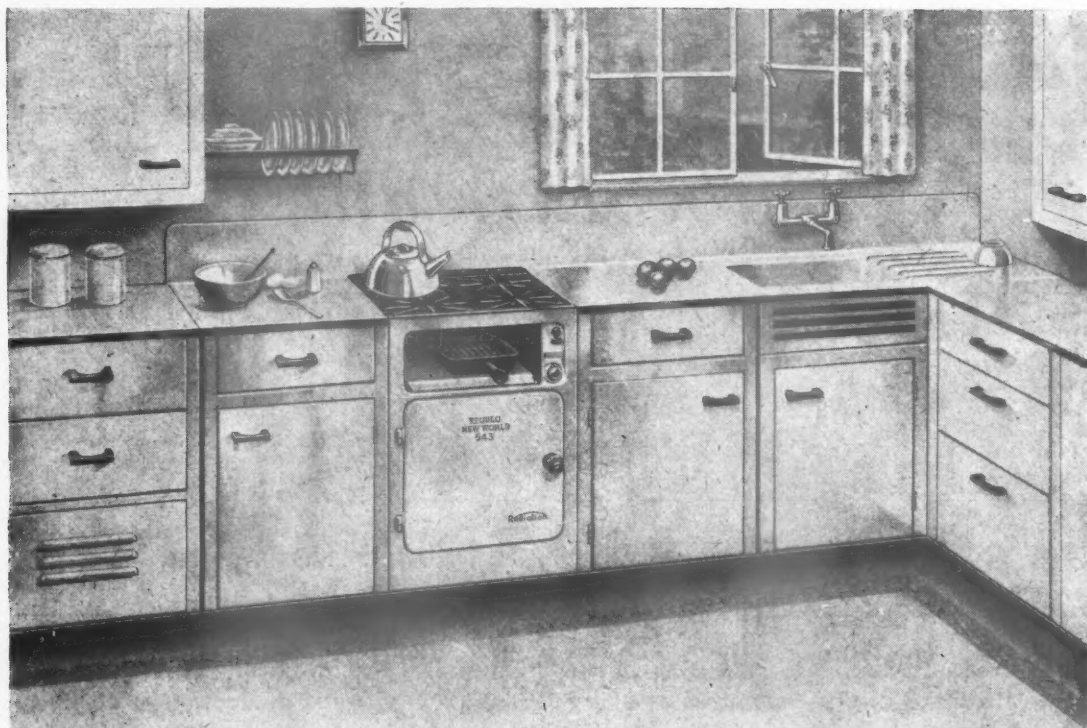
Local Authorities desiring further information should write to:

Kingston Building Industries, Ltd., subsidiary of Tarran Industries, Ltd.

Head Office: 32, Duke Street, St. James, S.W.1

Telephone: Whitehall 0321





## FOR KITCHENS LARGE OR SMALL

Designed to fit snugly into lines of kitchen equipment, New World gas cookers are available with these features:

1. All controls on the front.
2. Vertical or horizontal models, i.e. with hotplate over oven or with hotplate alongside oven.
3. Regulo oven-heat control, New World oven, Radiation hotplate features and finishes.

Radiation Ltd. Service is available to help in the development of your plans.

# NEW WORLD

**Radiation Ltd** Radiation House, Aston, Birmingham 6  
Showrooms and London Office: 7 Stratford Place, W.1



Fluorescent lamps proved to have a life of about 4,000 hours. Lighting levels for various rooms range from 25 foot-candles up to 65.

## 2209 Vision in Industry

VISION AND INDUSTRIAL PRODUCTION. J. Tiffin. (*Illuminating Engineering*, April, 1945, p. 239.) Statistical data relating visual performance to productive capacity.

## 2210 Display Lighting

BACKGROUND AND LIGHTING MOST IMPORTANT FACTORS IN DISPLAYING GLASSWARE. (*Lighting and Lamps* (USA), July, 1945.) Description of new display showroom for Owens Illinois Glass Co.

## 2211 Office and Shop Lighting

RAISING OUR LIGHTS TO MEET TOMORROW'S HORIZONS. K. A. Staley. (*Lighting and Lamps*, May, 1945, p. 28.) 140 foot-candle intensities in office and shop.

The article describes the lighting installation in a new building in Chicago. The ceiling is constructed with deep RC ribs at about 2-ft. centres, with a depth of 12 in. The concrete is painted a flat white, and recessed between the ribs are fluorescent fittings. The ribs act as louvres to prevent glare from the lamps, and the intensity on the working plane is 140 foot-candles. This must be an all-time height for general artificial lighting to date.

The colour schemes and ventilation system are described briefly.

# EQUIPMENT

## 2212 Draining Boards

DRAINING BOARDS. *British Standard 1226:1945*. (*British Standards Institution*, 2s. 0d.) Deals mainly with quality of materials and method of manufacture and defines method of measurement for lengths. Covers asbestos cement, cast iron, fireclay, plastics, pressed steel, stainless steel and wood.

## 2213 Cookers

KITCHEN EQUIPMENT: NO. 1, COOKERS. (*Architectural Design and Construction*, June, 1945.) First of series of reference sections. 45 illustrations of electric, gas and solid fuel and oil cookers and combination appliances with notes by Jane Creswell and Owen Evans. Name of manufacturer and overall dimension of appliance given in each case.

## 2214 Water Heaters

KITCHEN EQUIPMENT: NO. 2, WATER HEATERS. (*Architectural Design and Construction*, July, 1945.) Second of series of reference sections. 28 illustrations of electric, gas, solid fuel and oil water heaters with notes by Owen Evans. (Reference also to previous notes in June issue dealing with combination appliances for hot water plus cooking.)

# PLUMBING and Sanitation

## 2215 Water Piping

DESIGNING WATER SUPPLY FOR BUILDINGS. Fred. W. Hanburger. (*Plumbing and Heating Journal* (USA), July, 1945.) Method of sizing water piping in buildings from small apartments to sky-scrapers. Some of data previously unpublished are results of survey by author.

## 2216 Rural Water Supply

WATER SUPPLY IN RURAL DISTRICTS FROM THE ENGINEERING POINT OF VIEW. Aubrey J. Allen. (*Journal of the Royal Sanitary Institute*, July, 1945.) Quantity of water required, particularly for farms, water mains, pressures, etc., water supply sources.

## 2217 Rural Water Supply

WATER SUPPLY PROBLEMS IN RURAL DISTRICTS. Sir William Savage. (*Journal of the Royal Sanitary Institute*, July, 1945.) Paper deals mainly with legal aspects, methods of financing. Also considers estimation of water needs and purity of supply.

## 2218 Concrete Pipes

CONCRETE CYLINDRICAL PIPES AND FITTINGS. BS 556: 1945. (*British Standards Institution*, 2s. 0d.) Quality of material, control of manufacture, methods of test and sizes for concrete pipes from 6 in. upwards internal diameter, including bends, junctions, manholes and inspection chambers.

## 2219 Asbestos Cement Pipes

ASBESTOS CEMENT SOIL, WASTE AND VENTILATING PIPES AND FITTINGS. *British Standard 582:1945*. (*British Standards Institution*, 2s. 0d.) Materials, workmanship, methods of test and specification of dimensions of pipes and fittings.

## 2220 W.C. Cisterns

W.C. FLUSHING CISTERNS. *British Standard 1125:1945*. (*British Standards Institution*, 2s. 0d.) General requirements for high and low level cisterns and standard dimensions for each type.

This is largely the same as the war emergency specification which was issued primarily to conserve materials but with a number of dimensional standards added.

## 2221 Insect Pests

INSECT PESTS OF FOOD, AND THE CONSUMER. R. V. Wadsworth. (*Journal of the Royal Sanitary Institute*, July, 1945.) Although general content of Paper is hardly concern of architects author refers to need for smooth and easily cleanable surfaces in buildings. Illustrations given of old and new methods. Welding advocated as providing cleaner job than riveted steel-work.

# 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.

## 2222 Prospects for Surveyors

Q 1. My Age is 27 years 5 months.  
2. CAREER. Articled 3½ years to a Borough Engineer and Surveyor. Served 6 months as Junior Engineering Assistant. (Housing, Roads, Sewers, Private Street Works.)

3. WAR SERVICE. Served in Army since September, '39. Out of this: 3 years on R.E. Works Services as Draughtsman and later S/Sgt. Military Foreman of Works. Good building experience, all at Gibraltar. Commissioned in 1945 and now serving in India as Lieut., R.E.

4. QUALIFICATIONS. Before the war, had passed: Intermediate Exam. Chartered Surveyors Inst. Part Inter. Testamur. Inst. Municipal and County Engineers.

5. FUTURE. (a) Return to Municipal Engineering involves taking A.M.I.C.E. and major part of Testamur of Inst. Mun. and Cy. E. plus possible completion of Finals Chartered Surveyors Inst. Estimate at least six years' work.

(b) Consider changing to Quantity Surveying branch of the profession. Could take Finals Chartered Surveyors Inst. in Quantity Surveying Sub-Division provided obtain job under Quantity Surveyor. Exam. Concessions due to interruption of career may enable me to obtain Finals in one year, but in any case I could obtain them in 18 months. My interests and experience lie with building rather than with engineering.

6. PROSPECTS. (a) What prospect is there of obtaining a post under Quantity Surveyor as Ex-Service Trainee in (1) Local Government (2) Private Practice?

(b) Roughly what salary could be expected and what salary could I expect on qualifying?

(c) Would help be obtainable under the Further Education and Training Scheme?

(d) What are the future prospects as a qualified Quantity Surveyor, Local Government preferred?

A (a) The prospect of obtaining a post as a Quantity Surveyor either in a Local Government Department or in private practice is good.

(b) Salaries fluctuate according to supply and demand, but we expect that you would be able to obtain a commencing salary of £5 0s. 0d. per week, although it is doubtful whether your experience warrants such a salary in a purely Quantity Surveying post.

I regret that it is impossible for us to state what salary you could obtain upon qualifying, but it may be of some assistance for you to know that the salaries of Takers-off range from £500 to £650, according to experience and ability. Assistants approaching the £650 level would be expected to see a medium-size job through to completion, including agreeing prices. Salaries above this level are for people in executive posts who are able to manage and direct a considerable volume of work.

(c) Help can be obtained from the Ministry of Labour if circumstances warrant it, i.e., if the Ministry of Labour is satisfied that you are a suitable person to become a

Trainee, and that your circumstances warrant financial assistance. Assistance takes the form of making up salary to a minimum subsistence level and/or educational grants. You can apply to the Ministry of Labour now, if you so desire, but it is unlikely that you will obtain any definite information, and it would be better to wait until you are in England and ready to start work.

We would remind you that the Chartered Surveyors' Institution is in closest touch with the position, and would advise you from time to time.

(d) The future prospects of a qualified Quantity Surveyor, either in a local Government Office, or in private practice, are good.

It is only necessary to mention that Quantity Surveying has never been an overcrowded profession, and that the cessation of Civil Building during the war and war damage have been responsible for making the volume of building work to be undertaken in the future abnormally great.



*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.*

ABT

## Aneurin Bevan

At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. Conference sponsored by the Association of Building Technicians on HOUSING. Speakers included the Rt. Hon. Aneurin Bevan, M.P., Minister of Health.

**A. Bevan:** I hope by a tripartite combination of local authorities, the Government, and the building technicians and the building industry generally, to be able to get the job (of housing) done. I am not pessimistic about it; on the contrary, I think that we are going to do the job in a way which will astonish the world,

provided we get the co-operation of all the elements in the building industry. But we start off with certain disadvantages, disadvantages that are already revealing themselves in technical designs and, in particular, in the relationship between the production engineer on the one hand and the architect on the other.

I believe it was a great mistake to have started on a temporary housing programme. It has already had unfortunate consequences, and one of the most unfortunate of all the consequences is the fact that the type of temporary house which has been constructed has gravely injured the relationship of the public towards prefabrication. The lamentable fate of the Portal house, and the structures that are going up all over the country as temporary houses, are hardly having the effect of converting people to a belief in modern housing systems.

One of the disadvantages is the fact that the type and structure of the temporary house was frozen in such a fashion as to deny all flexibility and play to the architect. We take the house from the factory and put it up on the site, and at no point between those two operations is the architect permitted to interfere. I regard that as wholly disastrous. If prefabrication is to succeed, if it is to satisfy our needs, we have to find a system of prefabrication so flexible, so fluid, that the architect can co-operate with the production engineer. In other words, we have to have a system of construction that the architect can handle. That does not mean that we must not try to produce as much of the house as possible in the factory; in fact, that must be one of our chief aims; but the kind of system of construction that we get from the factory must be one that imposes no restrictions on the creative energies of the architect.

I believe that you will find that before the middle of next year we shall have been able to discover and to put into production a system of prefabrication which will satisfy all modern, scientific, factory requirements, and which will be flexible enough for the architect to handle in almost as fluid a fashion as bricks. I believe that to be a very great departure, and I think it is exceedingly important that we should not allow ourselves to be disappointed or dismayed by the unfortunate fate that overtook some prefabricated designs in the temporary housing programme.

There was a great temptation for me, in view of the unfortunate results of temporary housing, to turn my attention almost exclusively to traditional building; but I believe that to confine ourselves wholly to traditional building would be a very great mistake.

There are, of course, some systems of semi-prefabrication which are very useful, and which are proving much more successful than was at first thought probable. I do not hide it from this Conference that I am extremely interested in some of these systems of semi-prefabrication from another angle. Traditional building costs are far too high, and some of these systems of semi-prefabrication are able to compete quite successfully with traditional building at the present level of costs. The building industry emerges from the war in a very sick state, and it is therefore necessary to have some rods with which to whip it into a healthier condition. Some of the systems of semi-prefabrication which have to do particularly with treated forms of cement are proving, at the existing price levels, to be effective competitors with traditional building.

Furthermore, some of these systems of semi-prefabrication are entitled to consideration in their own right: not merely because they compete successfully at present prices with traditional building, but because they are extremely interesting in themselves, if only because of the fact that they are of a kind that the small building contractor

can handle. One of our difficulties is that we have to build large numbers of houses in rural areas. People are apt to concentrate their attention far too much on the spectacular buildings in urban areas, but one of the practical problems with which the Government are faced is to build houses in rural Britain in clusters of anything from 10 to 50 or 100, and to do so fairly quickly. If we do not succeed in doing it, we shall not retain any rural population.

Those schemes do not attract the public attention they deserve, but we are concentrating, with the assistance of some of my friends, on trying to develop schemes which can be easily used by small building contractors, and which can be dealt with by unskilled labour; because one of the problems of rural building is the fact that skilled labour in the rural areas is very scarce, and it is very difficult to persuade labour to go there.

Very large numbers of working-class people have had their attitude towards flats poisoned by tenement dwellings. When we talk about flats, however, we are not talking about tenements, but about something entirely different.

It seems to me that the arguments in favour of at least experimenting with high buildings in the countryside are overwhelming. I know very well that some of the French experiments proved to be disappointing, but I believe that they proved to be disappointing because they were largely derivative; they were merely attempts at playing with skyscrapers in the countryside, and not at building communal units.

I am told by some people that if we attempt this we shall destroy some of the æsthetic beauties of the countryside, because these high dwellings will dominate the scene too much. I do not accept that. No one complains that the scene is spoilt by a lovely church steeple, though it may dominate the countryside for miles around, or by some of our castles—though they may have spoilt the countryside to get up. As a matter of fact, these high buildings can be an adornment of the countryside if they are themselves æsthetically correct.

But there are other reasons why it is necessary that we should experiment with this new idea. Somehow or other, some of the functions have to be taken out of the modern home and put somewhere else.

I think we must be reconciled to the fact that in the future women will not be content merely to live and work at home. They will want to work elsewhere; and, if we are able to organize these communal units in high buildings in the way that I suggest, there is no reason at all why the mother should not leave her baby in the crèche which would be provided in a part of the building and go to her work, picking it up again as she comes home. I am not going to make any reference at all to the fact that people do not seem to show any enthusiasm for domestic work, and that therefore it will be necessary to provide for homes in which domestic work is reduced to a minimum, with central heating and laundries. We all know now that that is essential, but it is very difficult to do this in Garden Cities and urban sprawls.

We are therefore going to try to persuade one or two of the great cities of this country to make themselves the foster-parents of an experimental scheme of clusters of high buildings with the countryside around them. I do not know what the response is going to be to that in the country as a whole, but I believe that the only way in which people are going to be converted to wanting to live in these buildings is by having a chance to live in them. They are never going to be able to make a comparison unless the buildings are there for them to see. I believe that it is a much more civilized life for a man to be able to live in these flats and step straight out into the countryside rather than for him to buy a small

# Battle of Britain....

One great battle, gloriously won, lies behind us; those who willed destruction came and were themselves destroyed.

The great 'battle of reconstruction' lies ahead... the building industry will supply the 'army' and the 'weapons.'

• EXETER • GLASGOW • HIGH WYCOMBE • HULL • LEEDS • LIVERPOOL • LONDON • MANCHESTER • NOTTINGHAM • NEWCASTLE • PLYMOUTH • PORTSMOUTH • SOUTHAMPTON

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Ford car and poison the whole atmosphere every Sunday morning. It may be a much richer life for the cow to come strolling round the flats, rather than for a man to have to get into a car and go and look for the cow.

You know that the Ministry of Health has always—not, perhaps, with sustained emphasis—placed a great deal of importance on the employment of the architect. In a few days I hope to be able to give further emphasis to that by the appointment of a very distinguished architect at the Ministry of Health.\* That is not to say that the architects whom we have had have not been distinguished; they have been.

One of our difficulties has been to persuade local authorities to employ architects. I know that they employ officials. There is, however, quite a dearth of architects in some parts of the country, and indeed there is a dearth of building technicians, such as surveyors, costing clerks, and clerks of works. In some parts of the country the position is quite frightening.

I have determined that for the 3-bedroom house there shall be no lower standard anywhere in Great Britain than 900 superficial feet, and that is a *minimum*. There are other things about the house which some people try to persuade me should be taken out; but, you know, we ought to try to build the kind of house in the next few years that we are going to be proud to look at after the next twenty.

I hope, therefore, that all of you who have anything at all to do with building houses will bear in mind that not only are you dealing with building materials and plans, but that you are thinking of and dealing

and working in the most precious thing in the modern community. The house is the most complex of modern social production. It is the nerve-centre of civilisation. It levies tribute upon every kind of industry and every sort of artifice, and itself is an expression of the kind of society in which it is found. I hope, therefore, that in your endeavours you will try to make the houses of the future a worthy expression of the splendours of the British people.

## Trade Notes

Messrs. Callender's Cable & Construction Company have issued two booklets, one entitled *Electro Farming*, the other *Callender Farm Wiring System*. The purpose of *Electro Farming* is to illustrate some of the many ways in which electricity is helping the farmer in agricultural and horticultural work. There are reproductions of nearly 100 actual photographs referring to farms or agricultural buildings in 20 counties of this country; a comprehensive list of the uses of electricity for electro-farming purposes; and many uses are shown in pictures. "In the British Isles, of approximately 300,000 farms each having an area exceeding five acres, some 48,000 are already equipped with wiring installations and electrical appliances." In *Callender Farm Wiring System* it is stated that the number of farms using electricity is increasing every year at an extraordinary rate and it is only a matter of time before the large majority of farms and agricultural establishments are connected to the mains. Electric wiring contractors who have had experience of farm wiring installations will be aware of the unusual conditions and problems concerned

with the application of electricity to farm premises. Callender's have for many years past been investigating and testing different types of cable and accessories under agricultural conditions. As a result the Callender Farm Wiring System has been introduced and is fully described.

Wartime contracts carried out by the Biddle Group of Companies were considerably over £1,000,000, said Mr. J. Platt Mills, M.P., speaking at the Victory dinner given by the Group to the staff and employees as a peace celebration. In addition many large contracts had been undertaken for private firms engaged on war work. He said: special air heaters were supplied to the Admiralty for H.M. ships serving in the Arctic on the Convoy Route to Russia. Vectairs had been installed in every type of vessel, and battleships and cruisers had been fitted with air heating batteries of special design. In the shore establishments steam installations had been supplied for heating, processing, filtration, cooking, etc. Space heaters had been supplied for over 20 gigantic ordnance factories, more than 40 aircraft factories, large numbers of RAF stations, and air conditioning equipment for the Far East. Certain equipment had played its part in the D-Day operations. These were some of the many ways in which the Group had helped the war effort.

## ANNOUNCEMENT

Mr. Herbert J. Stribling, F.R.I.B.A., chartered and registered architect and surveyor, having been released from the Royal Engineers, is resuming his practice for the time being at his home, Rotherfield, Stoke Poges, Bucks (Telephone: Fulmer 124), owing to the temporary lack of suitable office accommodation in Slough.

\* Mr. J. H. Forshaw, Architect to the LCC since 1941 has been appointed Chief Architect and Housing Consultant to MOH, and will take up his appointment on January 1.—Ed., A.J.

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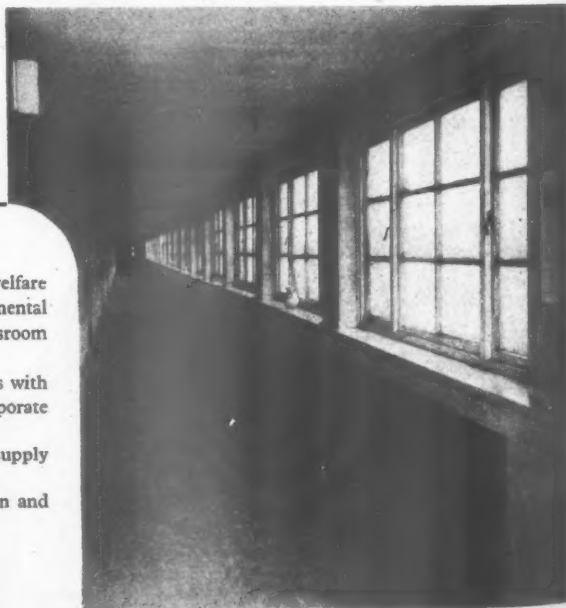
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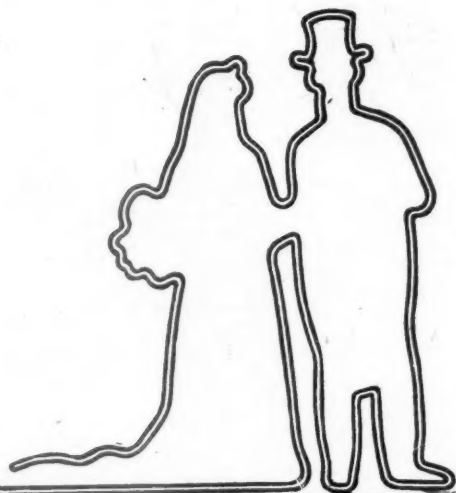
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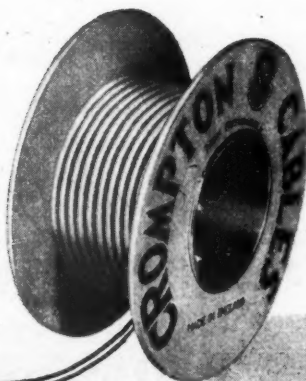
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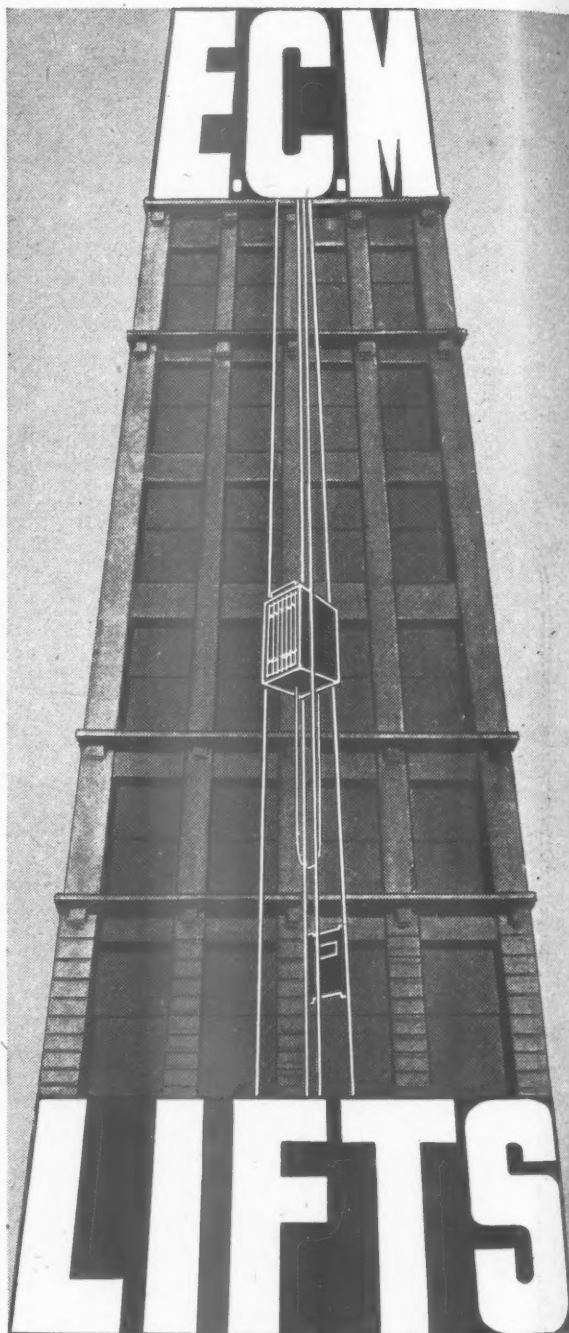
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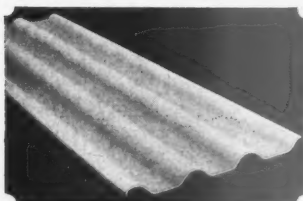
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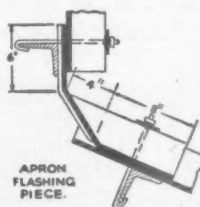
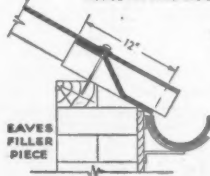
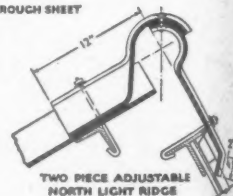
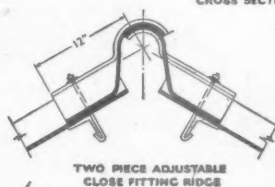
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SIZE	AREA IN SQ. YDS.	APPROX. WEIGHT IN LBS.	Nb. OF SHEETS	COVERING WIDTH	Nb. OF SHEETS	COVERING WIDTH
10' 0"	4.444	157.87	1	4' 0"	14	57' 6"
9' 6"	4.222	149.98	2	7' 6"	15	56' 6"
9' 0"	4.000	142.08	3	11' 0"	16	60' 3"
8' 6"	3.778	134.19	4	15' 0"	17	64' 0"
8' 0"	3.556	126.30	5	19' 0"	18	67' 6"
7' 6"	3.333	118.40	6	22' 6"	19	71' 3"
7' 0"	3.111	110.51	7	26' 0"	20	75' 0"
6' 6"	2.889	102.62	8	30' 0"	21	78' 6"
6' 0"	2.667	94.72	9	34' 0"	22	82' 0"
5' 6"	2.444	86.83	10	37' 6"	23	85' 6"
5' 0"	2.222	78.94	11	41' 0"	24	89' 3"
4' 6"	2.000	71.04	12	45' 0"	25	93' 0"
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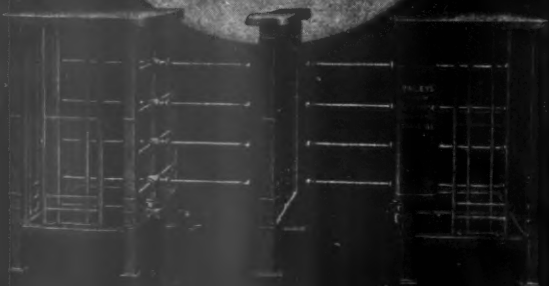
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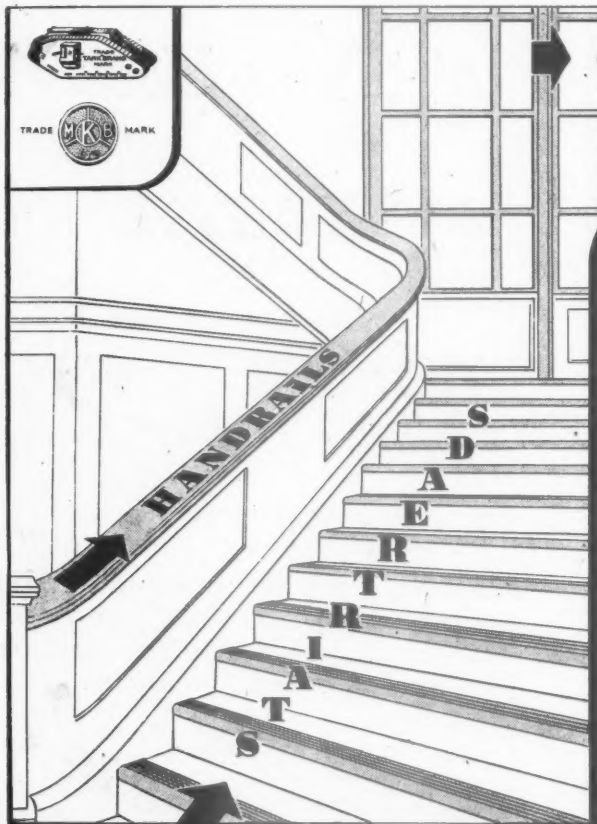
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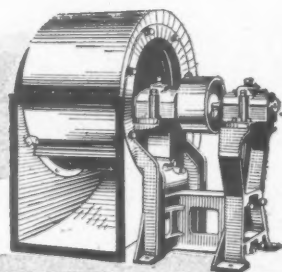
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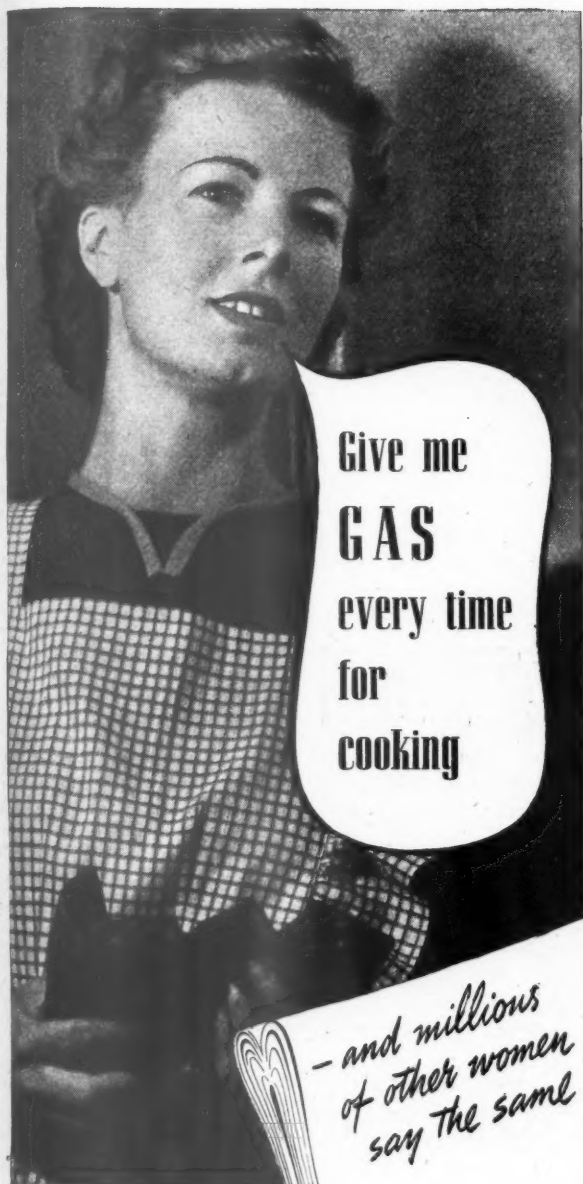
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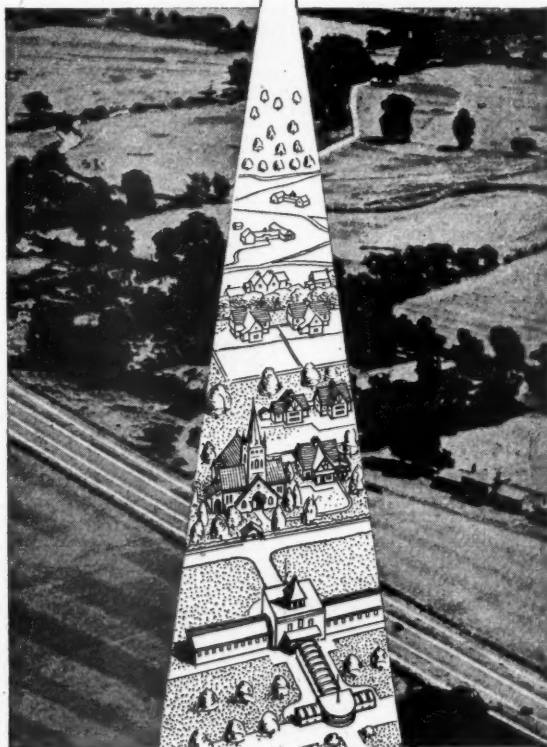
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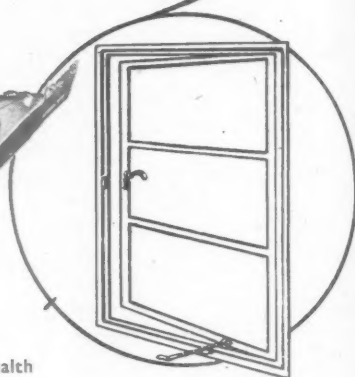
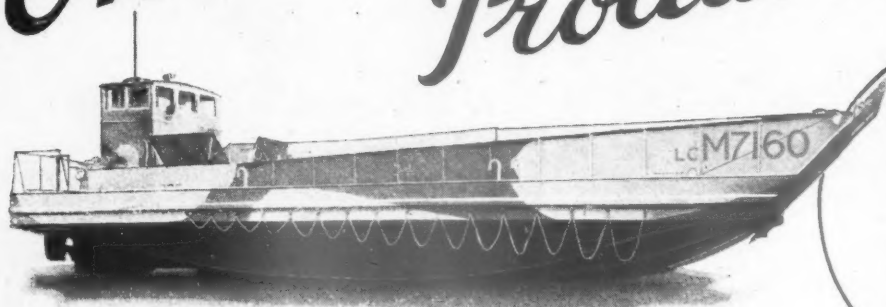


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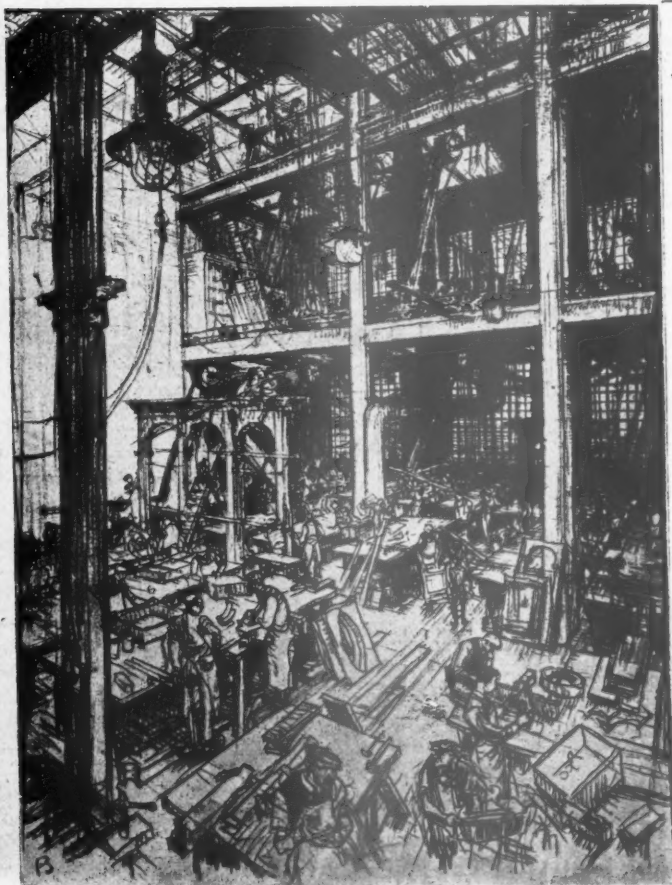
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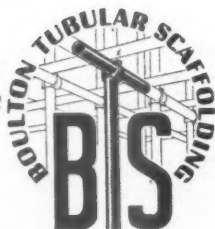
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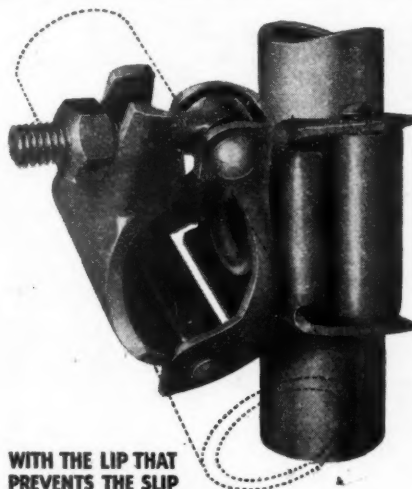
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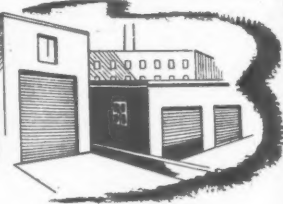
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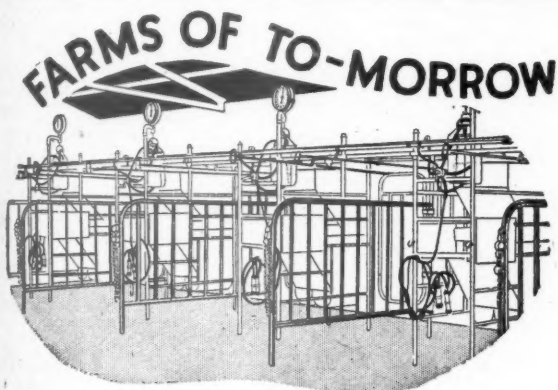
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One CHIEF QUANTITY SURVEYOR. Salary commencing at £500, and rising annually by £20 to a maximum of £600.

One SENIOR ASSISTANT ARCHITECT. Salary commencing at £350, and rising annually by £10 to a maximum of £400.

One ASSISTANT ARCHITECT. Salary commencing at £305, and rising annually by £15 to a maximum of £350.

One JUNIOR ARCHITECTURAL ASSISTANT. Salary commencing at £200, and rising annually by £10 to a maximum of £260.

Salary increments are subject to satisfactory service, and in the case of the Chief Quantity Surveyor the appointment will be subject to three months' notice on either side; the other appointments will be subject to one month's notice on either side.

The posts will be subject to the provision of the Local Government Superannuation Acts, as amended in regard to annuities to widows by the Coventry Corporation Act, 1936, and a satisfactory certificate will be requisite from the Council's medical referee. The officers appointed will also be required to contribute to the Coventry Municipal Officers', Widows' and Orphans' Pension Fund.

The age limit for applicants in the case of each appointment is 40.

All the above posts will be subject to the Council's cost-of-living war bonus, which may vary, but which at present amounts to 23s. per week for men, and 18s. 6d. for women.

#### TEMPORARY ASSISTANT QUANTITY SURVEYORS AND SURVEYORS'

Applications are also invited for a number of posts as Temporary Assistant Quantity Surveyors and Surveyors' Assistants. Salaries offered will vary, according to the qualifications and experience of the applicants, but will in no case exceed £300 per annum for unqualified persons, or £450 for qualified persons, in addition to which there will be the war bonus as described above.

Applications, giving particulars as to age, training, qualifications and experience, should reach the undersigned not later than Monday, the 26th day of November, 1945. Applicants should state which post they wish to apply for.

Canvassing, directly or indirectly, will be a disqualification.

D. E. E. GIBSON, M.A., A.R.I.B.A., A.M.T.P.I.

City Architect.

14, Warwick Row, Coventry.

871

### COUNTY BOROUGH OF NEWPORT, MON.

#### APPOINTMENT OF DEPUTY BOROUGH ARCHITECT.

Applications are invited from properly qualified Architects for the appointment, at a salary commencing at £650 per annum, and rising by annual increments of £50 and £100 to £600 per annum, plus cost-of-living bonus of £50 16s.

The appointment, which will be held during the pleasure of the Council, will be subject to the appropriate Local Government Superannuation Act, and the successful candidate will be required to pass a medical examination.

Applications, stating age, qualifications, and experience, together with two recent testimonials and the names and addresses of two responsible persons of standing to whom reference may be made, must be delivered to the undersigned, endorsed "Deputy Borough Architect," on or before Monday, 3rd December, 1945.

JOHNSON BLACKETT, F.R.I.B.A.,

Borough Architect.

Town Hall, Newport, Mon.

12th November, 1945.

892

### WEST CORNWALL JOINT PLANNING COMMITTEE.

#### APPOINTMENT OF PLANNING ASSISTANT.

Applications are invited for the appointment of a Planning Assistant, whose basic training has been in Architecture.

The Joint Planning area comprise six Municipal Boroughs, three Urban Districts, and three Rural Districts in south-west Cornwall; a total area of approximately 500 square miles.

The salary will commence at £350 per annum, rising by two annual increments of £15 and one of £20 to a maximum of £400 per annum, plus cost-of-living bonus, at present 23s. per week; the first increment to take effect on 1st April, 1947.

The appointment will be full time, and the Officer appointed will be required to provide a motor car, for which a mileage allowance will be paid.

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

Applications, stating age, qualifications and experience, accompanied by copies of not more than three recent testimonials, should be sent to the undersigned not later than 30th November, 1945.

D. J. BEATTIE,

Secretary.

Municipal Buildings, Penzance.

850

### BOROUGH OF DEAL.

#### APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of a permanent Architectural Assistant in the Borough Engineer and Surveyor's Department, at a salary of £400 per annum, plus full cost-of-living bonus.

Candidates should preferably be Associates of the Royal Institute of British Architects, with experience in general architectural works, and in the preparation of working drawings, specifications, and quantities.

The appointment will be subject to the Local Government Superannuation Act, 1937, and to one month's notice on either side, and the successful candidate will be required to pass a medical examination.

Applications, endorsed "Architectural Assistant," stating age, qualifications, past and present appointments, and experience, and accompanied by copies of three recent testimonials, should reach the undersigned not later than the first post on Tuesday, 27th November, 1945.

D. A. DANIELS,

Town Clerk.

Municipal Offices, Queen Street, Deal, Kent.

883

### WILLENHALL URBAN DISTRICT COUNCIL.

#### APPOINTMENT OF ARCHITECT (ENGINEER AND SURVEYOR'S DEPT.).

Applications are invited for the appointment of a qualified Architect in the Engineer and Surveyor's Department, at a salary of £450 per annum, rising by annual increments at £25 to a maximum of £500 per annum, plus war bonus (at present £59 15s. 3d. per annum).

Candidates must be qualified by examination of the Royal Institute of British Architects, and will be required to carry out architectural work for housing and public buildings under the direction of the Engineer and Surveyor.

Applications, stating age, qualifications, present and previous appointments, particulars of experience, and liability for military service, accompanied by copies of three recent testimonials, must reach the Engineer and Surveyor, Council Offices, Willenhall, Staffs, not later than 26th November, 1945.

Candidates must in their applications state whether they are to their knowledge related to any member or senior officer of the Council. Canvassing will disqualify.

H. D. ELSTON MACVITTIE,

Clerk of the Council.

Council Offices, Willenhall, Staffs.

885

### COUNTY BOROUGH OF CROYDON.

#### EDUCATION DEPARTMENT.

#### APPOINTMENT OF FIRST ARCHITECTURAL ASSISTANT.

Applications are invited for a permanent appointment as First Architectural Assistant in the Education Architect's Department. Salary £400 per annum, rising by £15 per annum to £445 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Candidates should be Associate Members of the R.I.B.A., with good experience in school construction and design. The appointment will be subject to the Council's general service conditions, to the provisions of the Local Government Superannuation Act, 1937, and to a satisfactory medical examination.

Forms of application may be obtained from the Education Officer, Education Office, Katharine Street, Croydon, and should be returned to him not later than the 8th December, 1945.

E. TABERNER,

Town Clerk.

894

### CORPORATION OF KIRKCALDY.

#### APPOINTMENT OF ASSISTANT ARCHITECTS.

Applications are invited for two Assistant Architects in the office of the Burgh Engineer and Surveyor.

The appointments will be on the temporary staff in the first instance, but there may be a possibility of permanency at a later date.

Salary will be in accordance with the age, qualifications, and experience of the candidates, but the commencing salary will not exceed £310 per annum, plus cost-of-living bonus, which is at present £60 per annum.

Applications, giving full particulars of age, qualifications, past and present appointments, and experience, must be submitted to the Burgh Engineer and Surveyor, Osborne House, East Fergus Place, Kirkcaldy, not later than 10th December, 1945. Not more than three recent testimonials may be submitted with the application.

Applicants serving in H.M. Forces should state their release group, and in lieu of testimonials may submit the names of persons to whom reference may be made.

The appointments are subject to the appropriate section of the Local Government Superannuation (Scotland) Act, 1937, dealing with whole time officers appointed in a temporary capacity.

JOHN H. McLUSKY,

Town Clerk.

886

### NEWMARKET URBAN DISTRICT COUNCIL.

#### APPOINTMENT OF ARCHITECTURAL ASSISTANT.

Applications are invited for the appointment of an Architectural Assistant in the Architect's Department, at a salary of £240, rising by annual increments of £15 to a maximum of £270, plus war bonus, amounting at present to £59 16s. per annum.

The appointment is temporary, but is expected to last two years.

Applicants should have had experience in the preparation of plans, specifications, and quantities for public and domestic buildings.

Preference will be given to persons who have passed R.I.B.A. Intermediate Examination, or its equivalent, and who have had experience in the preparation of housing schemes.

Applications, endorsed "Architectural Assistant," stating age, qualifications and experience, past and present appointments, accompanied by copies of three recent testimonials, must be submitted to the undersigned not later than 7th December, 1945.

JOHN CRABB,

Clerk of the Council.

Stratford House, Old Station Road, Newmarket, Suffolk.

10th November, 1945.

### WEST SUSSEX COUNTY COUNCIL.

#### APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited from Fellow or Associate Members of the Royal Institute of British Architects for the whole-time appointment of County Architect, at a salary of £1,200 per annum, rising by annual increments of £100 to £1,700 per annum, plus bonus, travelling, and subsistence allowances in accordance with the Council's scales for the time being in force. The appointment may be made at a commencing salary higher than the minimum of the scale should the qualifications, age, and capability of the successful applicant justify it.

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

Forms of application, together with particulars of duties and terms and conditions of appointment, may be obtained from the undersigned, to whom applications should be sent not later than the 31st December, 1945.

T. C. HAYWARD,

Clerk of the County Council.

County Hall, Chichester.

November, 1945.

### CITY OF LEICESTER EDUCATION COMMITTEE.

#### COLLEGE OF ART

(Principal: KENNETH HOLMES, A.R.C.A.)

#### SCHOOL OF ARCHITECTURE.

INSTRUCTOR required for general studio work up to third year. Salary in accordance with revised Burnham Scale, and allowance for professional experience.

Duties to commence January, 1946. Applications should be forwarded to the Registrar, Colleges of Art and Technology, The Newark, Leicester, not later than 7th December, 1945.

H. S. MAGNAY,

Director of Education.

Education Offices, Newark Street, Leicester.

12th November, 1945.

887



## ESSEX EDUCATION COMMITTEE.

SOUTH-EAST ESSEX TECHNICAL COLLEGE  
AND SCHOOL OF ART, LONGBRIDGE  
ROAD, DAGENHAM.

Applications are invited from suitably qualified men for the post of LECTURER IN ARCHITECTURE AND BUILDING CONSTRUCTION, for courses leading to the Examinations of the E.I.B.A. Knowledge of surveying an advantage. Applications from men serving in H.M. Forces will be considered.

Salary: Burnham Scale (London allowance), and additional increments for approved training and graduation, where applicable.

Forms of application, obtainable on receipt of a stamped addressed envelope from the Clerk to the Governors at the College, should be returned to him by the 8th December.

B. E. LAWRENCE, -  
Chief Education Officer.  
County Offices, Chelmsford. 890

## CITY OF GLOUCESTER.

APPOINTMENT OF TEMPORARY  
ARCHITECTURAL ASSISTANT.

Applications are invited for the post of Temporary Architectural Assistant in the City Architect's Department, at a salary in accordance with Scale "B" of the South-Western Provincial Council, commencing at £315 per annum, rising by annual increments of £15 to £300 per annum, plus cost-of-living bonus, at present £59 16s. per annum.

Preference will be given to candidates who have passed the intermediate or final of the Associate R.I.B.A., examination, and experienced in school work.

Applications, stating age, qualifications, and experience, and accompanied by copies of three recent testimonials, must be submitted to the undersigned not later than Thursday, the 6th December, 1945.

A. MORGAN, L.R.I.B.A.,  
City Architect.  
Suffolk House, Greyfriars, Gloucester. 895

## COUNTY BOROUGH OF SWANSEA.

## BOROUGH ARCHITECT'S DEPARTMENT.

## QUANTITY SURVEYING ASSISTANTS.

Applications are invited for the appointment of Three Assistant Quantity Surveyors, at the following salaries:-

(a) One at £300 x £12 10s. annual increments to £350 per annum.

(b) One at £250 x £10 annual increments to £290 per annum.

(c) One at £210 x £10 annual increments to £240 per annum.

Plus cost-of-living war bonus, as determined by the Council (current rate 23s. per week).

Candidates for (a) and (b) must have passed the Intermediate Examination in Quantities of the Chartered Surveyors' Institution, and have been trained in a quantity surveyor's office.

The appointments 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.

Candidates must be under 45 years of age. The appointments may be terminated by one month's notice on either side.

Applications, stating age, training, qualifications, and details of experience, together with copies of three recent testimonials, to be delivered to the undersigned not later than 8th December, 1945.

Candidates must state clearly the position they desire to apply for, and must also endorse the envelope, externally, "Assistant Quantity Surveyor."

Canvassing will disqualify.  
(Sgd.) T. B. BOWEN, Town Clerk.

Guildhall, Swansea.  
14th November, 1945. 896

## SOMERSET COUNTY COUNCIL.

## COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of Temporary Class II(a), ARCHITECTURAL ASSISTANT, at a salary within the scale £360 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 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 Saturday, 1st December, 1945.

R. O. HARRIS, A.R.I.B.A.,  
County Architect,  
Park Street, Taunton, Somerset.  
14th November, 1945. 899

## Tenders

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

## "HOUSE OF COMMONS: REBUILDING."

The MINISTRY OF WORKS will shortly INVITE TENDERS for the foundation work from a limited list of selected firms, followed later by invitations to tender for the super-structure contract.

In making the selection preference will be given to firms capable of undertaking the whole work if their tenders for both contracts are successful. The total value of the work involved, including sub-contracts, is about £1,000,000.

It is intended to start the foundation work in December, 1945. Firms wishing to be considered for invitation to tender for these contracts should apply in writing on or before 24th November, 1945, to The Director of Contracts (Con.2), Ministry of Works, Abell House, John Islip Street, S.W.1, giving particulars of their experience of comparable works and of their available plant, key men, etc. The possession of facilities for working stone within reasonable distance of London is desirable. 888

## LLANFYLLIN RURAL DISTRICT COUNCIL.

## PERMANENT HOUSING.

Tenders are invited for the erection of Six Dwelling Houses at Meifod and Six at Llanfyll. Separate tenders are requested for each site.

Plans, specifications, etc., may be obtained from the Council's Architect, Mr. R. Arthur Jones, "Bwthyn-Hedd," Llanfyllin, Mont., upon payment of a deposit of £2 2s., which will be refunded on receipt of a bona-fide tender and the return of all plans and documents.

No contract will be entered into until the sanction of the Welsh Board of Health has been received.

Sealed tenders, endorsed "Housing Tender," should reach the undersigned not later than Tuesday, 27th November, 1945.

GLYN JONES,  
Clerk to the Council.  
Rural District Council Offices, Llanfyllin.  
17th October, 1945. 893

## Architectural Appointments Vacant

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

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

ARCHITECTURAL and Surveying Assistant required for busy Sussex Coast practice; must be fully experienced in preparing surveys, specifications, and agreeing dilapidations; good draughtsman and knowledge of present day pricing an advantage; age under 40; professional qualifications an advantage, but not essential; excellent prospects and good salary for fully capable man. Please write in confidence, giving experience and age, to Box 865.

CHARTERED SURVEYOR requires Assistant; must have had professional office experience, and be capable of carrying matters through to completion; salary £500 per annum; permanent and progressive post. Box 864.

ARCHITECTS' ASSISTANTS (Senior and Junior) required. Apply, stating age, experience, and qualifications, to Duncan Clark & Bockett, 7, West Stockwell Street, Colchester. 874

ARCHITECT, Senior Assistant, preferably with a knowledge of surveying, required; starting £400-£500, according to qualifications; with good prospects. Reply Barnard & Smith, 50, Knightsbridge Court, S.W.1. Sloane 2642-3074. 887

ARCHITECTURAL ASSISTANT required in Professional Office near Charing Cross; experience in industrial planning and industrial architecture, essential.—Box 897.

ARCHITECTURAL ASSISTANT and ENGINEERING DRAUGHTSMAN are required by a firm of industrial designers in the Kensington district engaged in the development of new products for quantity manufacture; shop-fitting, display equipment, domestic appliance and novelty goods; applicants should be capable of developing working details from sketches and specifications, and must have had considerable practical experience of design in sheet metal, extruded sections, press work, and fine mechanisms; previous employment in aircraft or an allied industry an advantage; an interesting appointment for a man of 25/35 years. Write, stating full details of experience and commencing salary required, to Box 898.

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## Architectural Appointments Wanted

Advertisements from Architectural Assistants and Students seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice.

**PERSPECTIVES** in line or colour, sketch schemes, etc., A.R.I.B.A., offers spare time services in the London area. Box 175.

**ARCHITECTURAL ASSISTANT** (Registered), age 33; experienced in London building regulations, working drawings, surveying and levelling, etc.; London district preferred. Box 174.

**A.R.I.B.A.**, Architectural School training, A. seeks permanent engagement (view to partnership if private practice); over 25 years' experience; good draughtsman. Box 175.

**ARCHITECT** (34), L.R.I.B.A., 15 years' experience all types of architecture and surveying, good organiser, used to control of staff and workmen, and lecturing on building subjects, seeks permanent position, preferably administrative; willing to go anywhere. Box 148.

**A.R.I.B.A.** (Dip. Arch.), just released from the Forces, possessing own office and staff, offers services in free lance capacity to Architects in private practice and Architects to Municipal and Local Authorities anywhere in British Isles; distance no object; any quantity of work undertaken, including sketch schemes, contract drawings, perspectives in water colour, etc.; personal visits for purpose of interviews at own expense. Box 176.

**CHIEF ASSISTANT**, wide and varied experience, mainly in London, seeks change to post of responsibility, with definite prospects, either with private office or commercial concern. Box 177.

**SENIOR ASSISTANT** (31); nearly qualified; long experience; draughtsmanship would satisfy most; interested only in design for to-day; London, preferably 3 miles radius Charing Cross. Box 179.

**JUNIOR ASSISTANT** (Female) requires position in Architect's Office; Liverpool district; National Building Certificate standard. Box 180.

**ARCHITECTURAL ASSISTANT** (29) requires appointment in any locality offering early prospects of living accommodation; experienced in preparation of working drawings—industrial, agricultural, and domestic work; surveys; specifications; sketch designs, etc.; preparing for R.I.B.A. final examination. Box 178.

**ARCHITECTURAL ASSISTANT and SURVEYOR** (land, building, and knowledge of quantities and estimating) requires position in or near London; 37 years' experience in housing and general work. Letters only to H. E. J., 83, Dalmeny Avenue, Norbury, S.W.16. Box 181.

**PROGRESSIVE young Man**, full architectural apprenticeship, complete engineering training, comprehensive knowledge of modern testing practice, seeks responsible position with Architect or Business Firm engaged on prefabrication. Box 182.

**TWO STUDENTS**, R.I.B.A., would like to do spare-time Architectural work. Box 183.

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**WANTED.**—One set of "Arts & Manners Graphiques." Please reply to Box 5.

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**WANTED.**—A Copy of "The Architectural Review" for December, 1935. Box 152.

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### 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.E.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).

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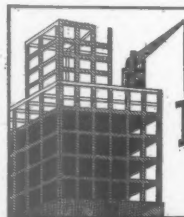
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