ESTIONNAIRE

A homogeneous fibre building board formed under pressure to a density of not less than 50lb. per cubic foot. Made from pure wood fibre SUNDEALA is hat is grainless, light in weight, and immensely strong. It can be nailed, screwed, sawn, planed Sundeala and drilled, like ordinary wood, and its polished smooth surface Panelling to a Bar in Sundeala Hardboard. permits of any decorative treatment. For greater permanence Hardboa and durability this famous hardboard is scientifically water-SUNDEALA Hardboard is the acknowledged leader in its field. It is extensively used for lining concrete forms, for cabinets, proofed. caravans, counters, signboards, show cases, motor van bodies, railway and general carriage work, etc., and whenever extra hard wear and tear is required. Full details on request.

for EXTERIOR and INTERIOR USE

The Pioneer All-British Hardboard

LOING

P.I.M. BOARD CO. LTD., & SUNDEALA BOARD CO. LTD., ALDWYCH HOUSE, LONDON, W.C.2. Members of Building Board Manufacturers' Association of Great Britain Ltd.

BOARD

#### "HARVEY"

WATERPROOF BOA

Tel. CH Ancery 8159

#### Adjustable Steel Storage Bins and Shelving

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

#### "HARVEY"

#### **Steel Equipment**

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

GAHARVEY & Co(LONDON) LTD WOOLWICH RD



Also at Manchester, Newcastle-on-Tyne, Birmingham, Glasgow, Cardiff, Taunton.







# BIRMINGHAM GUILD

GROSVENOR WORKS, GROSVENOR ST. WEST BIRMINGHAM 16 TEL. MIDLAND 6175-8

#### PLANNING TOMORROW

Typical Example of Recessed Fire Equipment

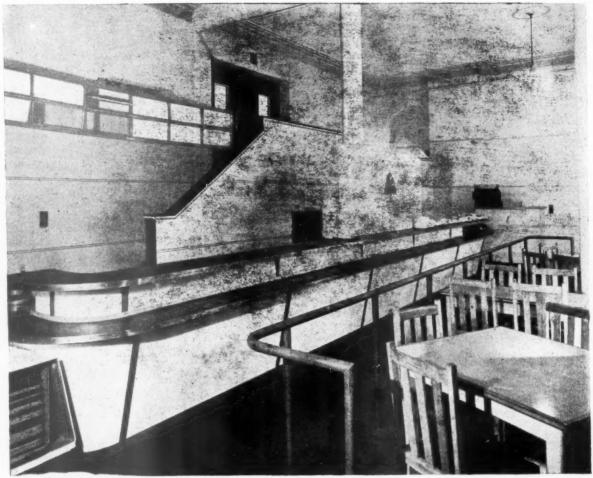
The above illustration is just one example of many ways in which accommodation for "Pyrene" Fire Equipment has been

effectively provided in the Architect's Plans. We should be glad to cooperate and make suggestions from our wide experience; and thus, if we

may, help you to plan fire protection for the buildings of to-morrow, so that they are adequately protected against the ravages of fire.



THE PYRENE COMPANY LTD., GREAT WEST ROAD, BRENTFORD, MIDDLESEX



Architect : W. L. LOWE, A.R.I.B.A. Messrs. Gray Evans & Crossley.



This 40 ft. Cafeteria Service Counter — carried well off the ground on tubular feet for ease of cleaning — is fitted for speedy hot and cold service. The service shelving and tray slide are covered with inlaid linoleum, whilst the main construction is of steel, suitably enamelled. Over 2,000 meals a day are served across it.

The screen is designed, not only to hide an otherwise ugly structural column, but gives cover to a "Bell" automatic Cafe Set.

The counter front is stove enamelled in a delicate shade of oyster and blue; the edging to the tray slide is stainless steel. The menu frame located at the rear swings over to cancel dishes which are 'off' and enables the kitchen staff to change the menu easily. We can design, construct and erect counters to meet your requirements.

REGD. TRADE MARK HIllustrated catalogue available BARTLETT BOO YEARS OLD IN 1932 Designers and Manufacturers of HOOD OF CHURCE HOUSE

B.22

COOKING & FOOD SERVICE EQUIPMENT BELL STREET, LONDON. N.W.1. TELEPHONE: PADDINGTON 8222 viii] THE ARCHITECTS' JOURNAL for June 21, 1945

#### Hotel Reception Hall

A DESIGN BY HUGH CASSON, M.A., A.R.I.B.A.



**ONE** can almost imagine the blasé globetrotter coming in through the swing doors of this hotel and pausing for a moment with the sudden thought—'Can this be Britain?' For Mr. Casson has thrown the classic gilt and alabaster tradition to the winds in designing this reception hall. His medium is Warerite Laminated Plastics—in itself a source of inspiration with its clean colourful surfaces and wide adaptability. MAIN WALLS: Dark green Warerite wall panels.

SCREEN: Pale blue Warerite veneer on laminated wood.

WINDOW REVEALS: Pale blue Warerite veneers on plywood.

COUNTER TOP: Black Warerite blisterproof quality veneer on blockboard.

COUNTER FRONT: Pale blue Warerite veneer on plywood.

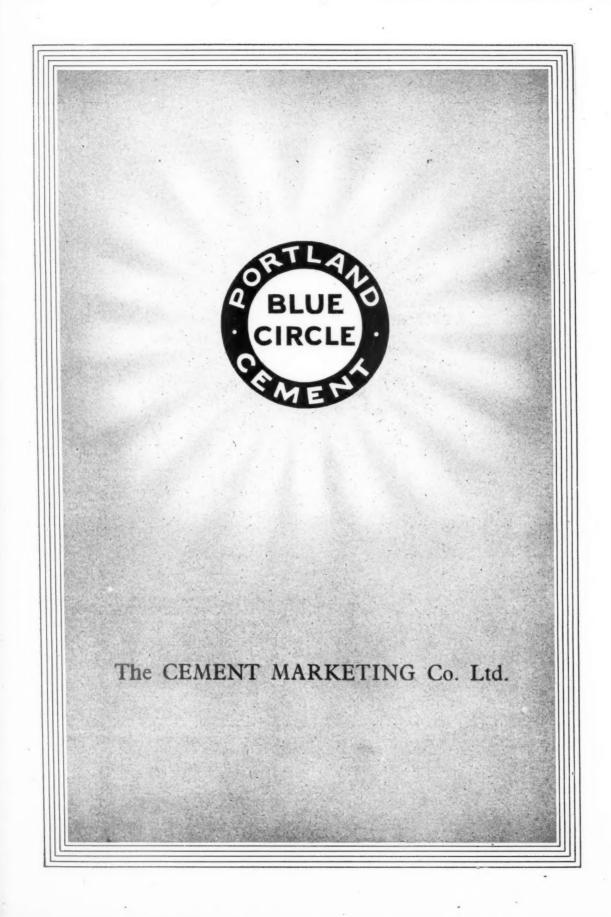
DOORS TO BAR: Flush surface veneered with Warerite pillar-box red veneer.

TABLE TOPS: Surfaced with Warerite blisterproof veneers—biscuit colour.

Trade Mark WARE RERITE UNIT OF BAKELITE LIMITED









# English Electric DOMESTIC APPLIANCE DEPARTMENT

Message for June RIOR to the war, 'English Electric' were large manufacturers of domestic appliances. But these activities have been largely restricted since 1940 and the Company's resources have been devoted to the manufacture of electrical equipment for works' canteens and British Restaurants. The added experiences thus gained is now being utilised in the development of new types of appliances for the homes of post-war Britain. This equipment includes Cookers, Heaters, Hot Water Systems, Washing Machines and other units of advanced design.

Whilst your plans are 'still fluid it will be an advantage to discuss them with one of our Development Engineers. In the first instance, you are invited to write to the Domestic Appliance Dept., Queen's House, Kingsway, W.C.2.

The ENGLISH ELECTRIC COMPANY LIMITED

ENLIST THE EXPERIENCE OF ENGLISH ELECTRIC







#### Celotex admirably conforms to the requirements of permanent post-war housing ...

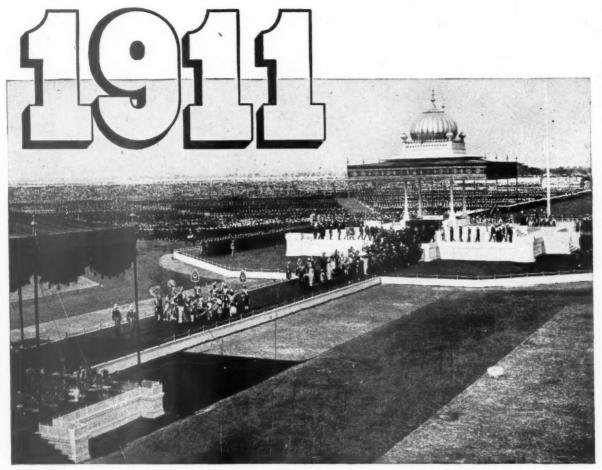
... now beginning to be clearly defined. The 'Burt Report' which marks an important stage in the establishment of post-war standards strongly emphasizes the importance of *thermal* and *sound* insulation. Celotex, as is well known, is most efficient in both these qualities Used for ceilings, walls, roofs and partitions it will have an essential place in the houses of post-war, built to improved standards of comfort and for fuel economy.

CELOTE

INSULATING, BUILDING AND HARD BOARDS AND ACOUSTIC TILES

CELOTEX LIMITED · N. CIRCULAR RD. · STONEBRIDGE PARK · LONDON · N.W.10 Members of the Building Board Manufacturers Association xii] THE ARCHITECTS' JOURNAL for June 21, 1945





The Coronation Durbar, held at Delhi, India. The procession back to the Shamiana Dec. 12, 1911

# WHEN WE WERE YOUNG

The thirty odd years that have followed 1911 have been crowded with events that have influenced the lives of everyone. Industry has been transformed, science has made advances which were undreamt of at the time.

The significance of the year for Cellon is in the fact that it was the year of our foundation and the times have provided a fruitful period for the expression of our ideas and the

development of our theories. Cellon today are grateful for the opportunity which has enabled them to serve the new pattern of industry so effectively and so zealously. CELLON

ERRIC CERRI PEBFECT FINISH THF

CELLON LTD., KINGSTON-ON-THAMES

TELEPHONE: KINGSTON 1234 (5 lines) Thorp-Hambrock Co., Ltd., Montreal, Canada. Cellon Corporation Pty. Ltd., Sydney, Australia CV3-536

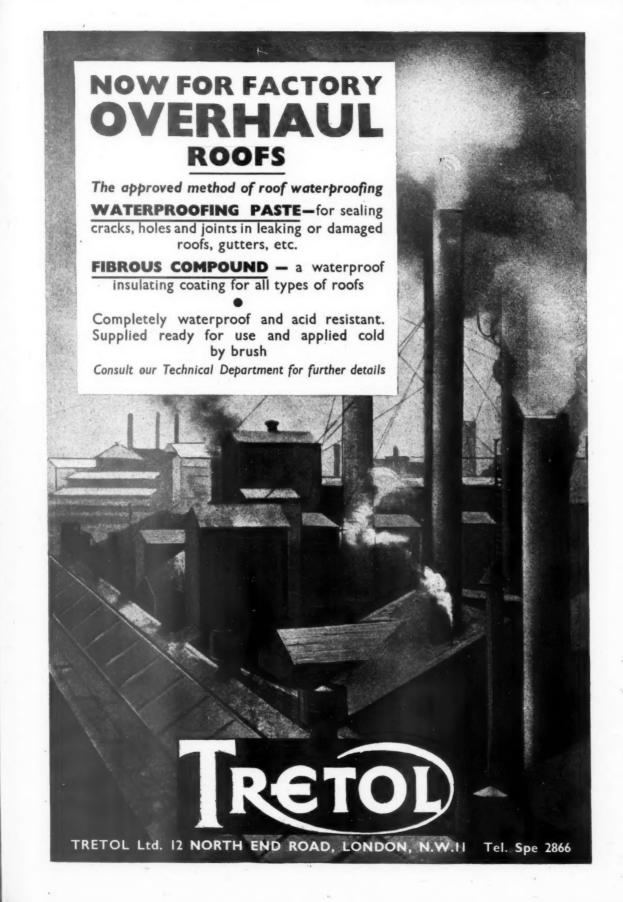


DOOR FRAMES · WINDOW CILLS PRESSED STEEL SKIRTING PICTURE RAIL · CORNER BEAD ETC., ETC.

Metal Trim will undoubtedly play an important part in post-war construction, and those interested are welcome to a copy of our catalogue. For the time being, of course, we are only able to execute orders carrying Government permits.

### JOSEPH SANKEY & SONS LTD.

WELLINGTON, SHROPSHIRE. - LONDON OFFICE : 168, REGENT ST., W.I-



G

an of of : e

#### WIMPEYS AT WORK Scientific methods in Building construction



#### THE LABORATORY IS THE STARTING POINT

The primary function of Wimpeys' laboratory staff is to exercise rigid technical control over the materials used for each contract. Frequent tests, continued throughout the job, ensure that the predetermined standard is fully maintained. Specific problems (concerning soil mechanics, for instance) are also submitted to the laboratory by the men on the site.

Architects have long been familiar with Wimpeys' reputation for sound and speedy construction. It is not so well known, however, that the smooth progress and high quality of every Wimpey job are largely due to the work of analytical chemists, research engineers and other technicians at headquarters. From start to finish of a Wimpey contract, the quality of the building materials is under constant control by the laboratory staff. Tests are continually being made on concrete cubes, on cements, ballasts, sands and gravels, on soils and asphalts. These tests and others, all conducted in close collaboration with the men on the site, ensure that the materials used in every Wimpey building are right for the job.

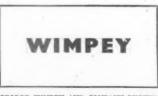
The work of the laboratory is only one aspect of Wimpeys' scientific approach to the problems of building construction. For over sixty years, Wimpeys have taken a leading part in developing methods by which efficient, economical construction can be predetermined. It is these methods which enable the firm to offer an exceptional service as building contractors. R

al B

e

ł

The post-war years will find Wimpeys well equipped for every branch of modern building — from hotels and cinemas to civic centres and labour-saving houses for the people.



GEORGE WIMPEY AND COMPANY LIMITED TILEHOUSE LANE, DENHAM, MIDDLESEX

# POST-WAR HOUSING

#### No. 2. Heat Losses through Walls

#### **RECOMMENDED STANDARDS**

The R.I.B.A. Committee on Walls, Floors and Roofs reports as follows (Post-War Building Studies No. 15, paragraph 99)

"The values of "U" recommended by the B.R.S. have been raised in recent years, and two standards are now recommended according to whether the heating appliance is controlled or not, as follows:

#### STANDARD A

#### STANDARD B

(Uncontrolled heating appliance being of the normal open fire type) (Controlled heating appliance being in the nature of the slow combustion gas or oil stove, or electric heater, or the appliance of a controlled heating system)

External walls generally 0.30 living rooms 0.20 External walls generally 0.20 living rooms 0.15 ''

NOTE: The THERMAL COEFFICIENT "U" represents the number of British Thermal Units lost per hour through one square foot of the structure for one degree F. difference between the indoor and outdoor air temperatures.

#### HOW TO ACHIEVE STANDARDS

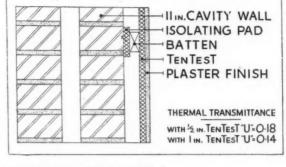
The II in. sealed cavity brick wall, plastered internally, achieves the lowest standard 0.30. For the higher standards (particularly 0.15) special measures must be adopted and the designer must face the impossibility of using an adequate mass of ordinary walling materials and use instead a relatively smaller quantity of efficient insulating materials. (N.B.— $\frac{1}{2}$ in. TenTesT equals II $\frac{1}{2}$ in. brickwork).

Where possible the insulating material should be of low thermal capacity and should be used as the interior lining as this greatly reduces the "heating-up" period.

The accompanying table shows some of the ways in which the recommended thermal standards can be attained at moderate cost.

IF YOU are concerned with the design of post-war building, can we help you in any of the following ways?

- 1. Advise whether your proposed construction achieves the appropriate thermal standards.
- 2. Show how TenTesT products can help and how they can best be incorporated in the structure.
- 3. Send you our booklet "Structural Insulation" showing how, when and where to use insulation and how to calculate the results in terms of fuel, heating plant and  $\pounds$  s. d.



NOTE ON SOUND INSULATION.

The use of TenTesT fixed to battens and plastered, as a wall lining to living rooms is helpful for sound insulation as well as thermal insulation, especially if the battens are fixed over pads of TenTesT or rubber or held in special clips. (See "Sound Insulation and Acoustics," Post-War building Studies No. 14, paragraph 137).

#### TABLE OF

#### THERMAL TRANSMITTANCES

Based on latest official figures; normal exposure.

WALL STRUCTURES.	"U"
9" solid brickwork, plastered internally	0.43
131"	0.35
II" sealed cavity brick wall, plastered internally	0.30
18" solid brickwork plastered internally	0.29
151/2" sealed cavity brick wall, plastered internally	0.26
$4\frac{1}{2}$ " brick, lined $\frac{1}{2}$ " TenTesTon studding, plastered	0.25
9" brick, lined $\frac{1}{2}$ " TenTesT on battens, plastered	0.21
131" ,, ,, ,, ,, ,,	0.19
II" sealed cavity brick wall, lined as above	0.18
II" ,, but lined with I" TenTesT	0.14
6" ballast concrete, plastered internally	0.48
6", but with $\frac{1}{2}$ " TenTesT as permanent	
shuttering	0.58
$6''$ , but with $\frac{1}{2}''$ TenTesT on battens, plastered	0.22
6" " but with I" TenTesT on permanent	
shuttering	0.50
8" lightweight concrete, plastered internally	0.18
8" with $\frac{1}{2}$ " TenTesT fixed to inner face of	
wall and plastered	0.12
2" concrete slab, air space, 1" TenTesT,	
$\frac{1}{8}$ " hardboard	0.19
Steel sheeting on framing lined with $\frac{1}{2}$ " TenTesT	0.29



Made in Ganada

TENTEST FIBRE BOARD CO. LTD., 75 CRESCENT WEST, HADLEY Telephone: BARnet 5501 (5 lines).

WOOD, BARNET, HERTS. Telegrams : Fiboard, 'Phone, London. xviiil 'THE ARCHITECTS' JOURNAL for June 21, 1945

# DEMOLITION

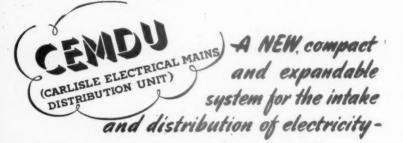
Demolition is a highly specialised trade necessitating experienced direction and the use of skilled top and mattock men.

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



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

Fullest information may be obtained from THE SECRETARY, 13, BLOOMSBURY SQUARE, LONDON, W.C.I Chancery 6731, 2, 3.

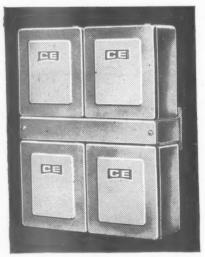


"CEMDU"—Carlisle Electrical Mains Distribution Unit will fulfil your requirements for neater and more flexible arrangements for the intake and distribution of electricity in both large and small buildings.

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

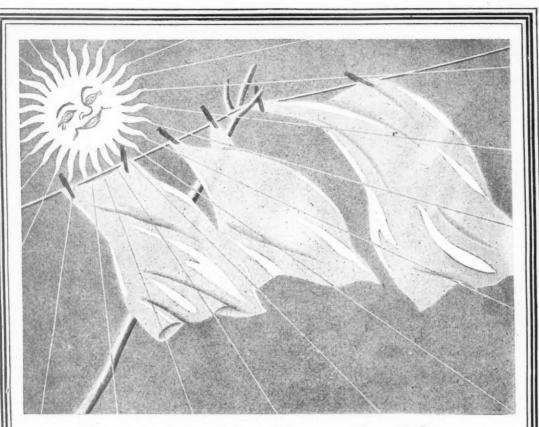
Write for full details to the sole manufacturers:-





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

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



#### Gas gives the sun a holiday

Speed of heating ... wide variations of temperature under strict automatic control ... Gas ... essential to labour-saving ... clean, reliable, and economical ... the fuel for reconstruction.

Labour-saving gas appliances in hotels, hospitals, factories, laundries, and in millions of homes . . . for troublefree cooking . . . for constant hot water . . . for clean, healthy warmth . . . for clothes boiling, cleansing, sterilizing . . . and for efficient drying cupboards that "give the sun a holiday."

Architects specify New World Gas Appliances in the knowledge that their clients will use apparatus embodying results of half a century of research and experience in the use of Gas.

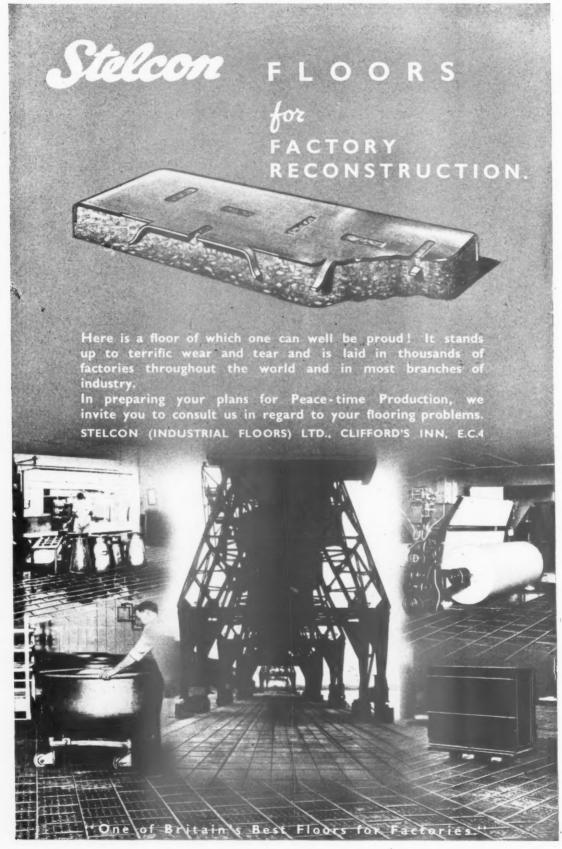


NEW WORLD GAS APPLIANCES



RADIATION HOUSE, ASTON, BIRMINGHAM 6.

SHOWROOMS AND LONDON OFFICE: 7 STRATFORD PLACE, W.1.

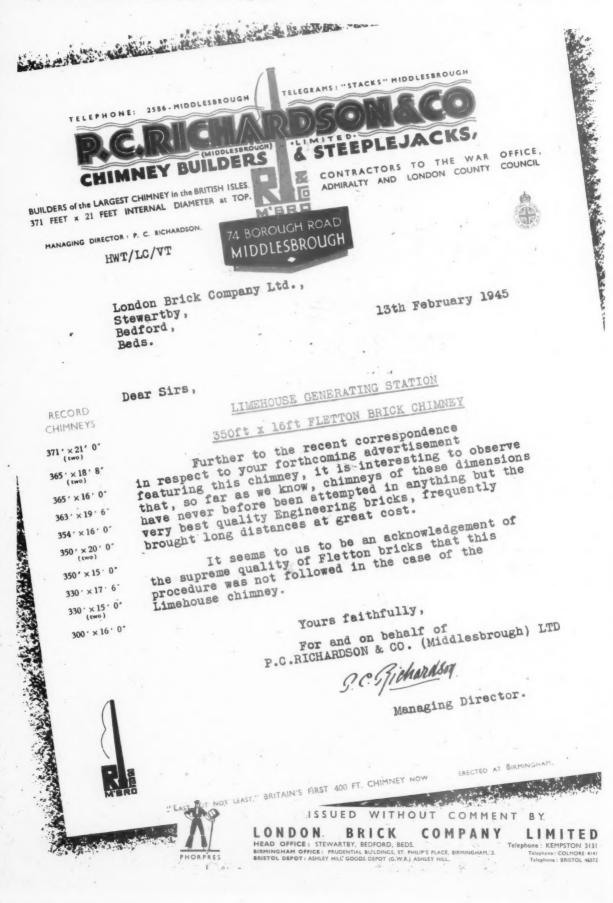








xxii] THE ARCHITECTS' JOURNAL for June 21, 1945





"ORDINARY" TYPE No. I. Mk. II. Socket screwed §in. B.S.P. Nose piece of plug screwed §in. B.S.P.



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

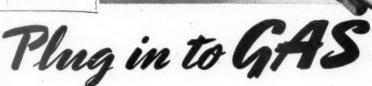


"THROUGH" TYPE No. 5. Mk. II. Socket screwed §in. B.S.P. M. & F. Threads. Nose piece of plug screwed §in. B.S.P.



Socket screwed & in. B.S.P. Nose piece of plug screwed & in. B.S.P.





Wherever gas is installed, in the home or in the factory, EDGAR FLEXIBLE PLUGS AND SOCKETS are indispensable, since only by this method is it possible for any portable gas appliance to be removed from room to room, plugged in and be instantaneously ready for use where needed.

Merely by inserting the plug into the socket and giving it a quarter-turn, the appliance (whether it be gas fire, gas poker, iron or gas copper) is connected and the gas automatically turned on.

In all new buildings specify

4

**PLUGS & SOCKETS** 

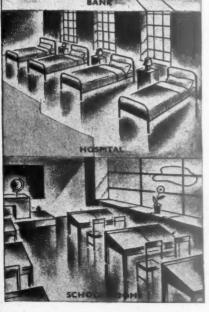


FLEXIBLE

ANY OTHER

WM. EDGAR & SON LTD., BLENHEIM WORKS, HAMMERSMITH, LONDON, W.6

# FLEXIMERS - the New Flooring



SEMTEX FLEXIMER FLOORINGS are available to meet the needs of hotel and institution planning everywhere. They

range from the purely utilitarian to

the ultra decorative.

HOTEL LOUNGE

A BAR

A complete flooring treatment is now possible—from the 'tanked' Service Bar flooring, impervious to beer and spirit stains, to the most modernlounge, vestibule, ward or schoolroom. Each section of a building can have a fleximer floor specially adapted for its own particular need-SEMTEX FLEXIMER FLOORINGS may be used as a protective, resistant base to receive other applied floorings of a decorative character. SEMTEX FLEXIMER FLOORINGS are applied cold *in situ*. They form an integral part of the building itself, and are damp-proof, resilient, silent, hygienic and long wearing.



SEMTEX LIMITED

SALES DIVISION

91 REGENT STREET

LONDON . W.1.



A LL electrical installations provided by Telephone Rentals conform with the strictest engineering standards. We have the strongest possible reason for assuring this, since the T.R. Services referred to below are normally rendered on terms that throw the whole responsibility and cost of maintenance upon our own shoulders for a term of years.

We do not claim that faults never occur; but we have skilled maintenance staffs in all parts of the country, whose work is organised on a basis of periodical routine inspection. As a consequence the fault rate is very low and our maintenance resources enable us to attend to all reported faults at short notice—never exceeding 24 hours.

Professional men considering Telephone, Broadcasting or Time Control installations are invited to avail themselves of our long and wide experience before making final decisions.



Installation Companies in London, Birmingham, Bristol, Cardiff, Leeds, Manchester, Newcastleon-Tyne, Sheffield, Glasgow, Belfast, Dublin; and Maintenance Engineers throughout the Country.

ern ave

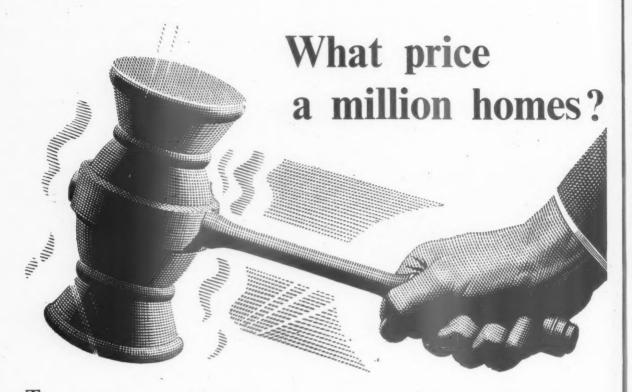
ed.

ive,

ter. hey ent,

W. 1.

M/102



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 after the war.



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



n

in oat dy nd at in

AR

11

rd, 3

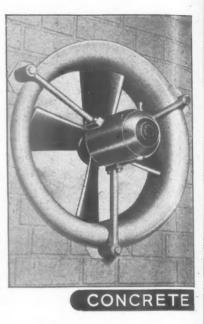
xxviii] THE ARCHITECTS' JOURNAL for June 21, 1945





#### Simple Application of a Scientific Principle

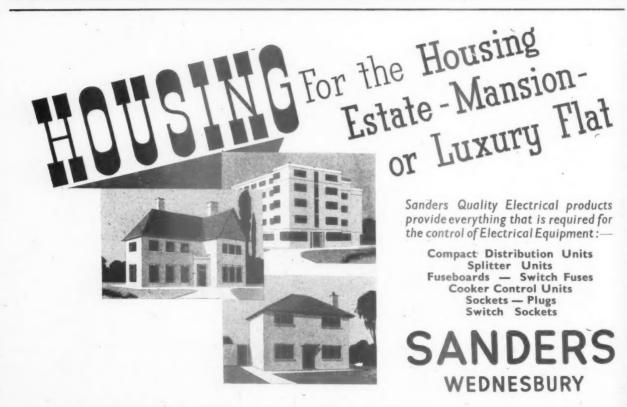
The Type "40" Airscrew wall mounting fan possesses both novel and practical features. It can be easily and quickly installed in new or existing buildings. Precision made spun steel or pre-cast concrete fairings are supplied ready for grouting into position. The motor and fan impeller is an independent unit supported by arms with resilient mountings direct to the wall. Designed on proved aerodynamic principles with true aerofoil section impeller blades of high grade wood or metal. High air volumes can be developed at low rotational speeds and with the minimum of loss due to re-entry of air. Sound level is extremely low. Available in 12in., 15in. and 18in. diameters. Detailed particulars sent on application.



## RSCREW FAN SYSTEMS

THE AIRSCREW COMPANY LIMITED . GROSVENOR GARDENS HOUSE . WESTMINSTER . LONDON, S.W.1 TELEPHONE: VICTORIA 4527 . TELEGRAMS: AIRSCREW, SOWEST, LONDON . AND AT WEYBRIDGE . MANCHESTER . GLASGOW

A\$214



Write for List No. 137, WM. SANDERS & CO. (WEDNESBURY) LTD. · WEDNESBURY ·

STAFFS.

THE ARCHITECTS' JOURNAL for June 21, 1945 [xxix

[No. 10]

#### THE ADVANTAGES OF THE UNDERFEED STOKER FOR HEATING • PROCESS STEAM • & FURNACES

The Underfeed Stoker saves fuel, it saves labour. When fuel was *half* the cost it is today, and wages on a corresponding scale, Underfeed Stokers were fitted into boiler plants and furnaces throughout the length and breadth of the Country, because it paid users to do so, at the fuel and labour costs *then* prevailing.

At the fuel costs ruling today—and these may not come down for years—the Underfeed Stoker has everything in its favour. Its outstanding efficiency and economy of operation help to offset the increased costs. It permits a higher output from boiler or furnace without increasing plant or fuel consumption.

For full details of the principle, performance and applications of the Underfeed Stoker write to this Association or to its members.

This advertisement is sponsored by the following Members of U.S.M.A.

 "BEANESS," Binns & Speight Ltd., Bradford \* "C.G.S.," Bastian & Allen Ltd., London
 "IRON FIREMAN," Ashwell & Nesbit Ltd., Leicester \* "MIRRLEES COMBUSTIONEER," Mirrlees, Bickerton & Day Ltd., Stockport \* "MOTORSTOKOR," Hope's Heating & Lighting Ltd., Birmingham \* "PRIOR," Prior Stokers Ltd., London
 "RILEY ROBOT," Riley Stoker Co. Ltd., London \* "UNICALOR," Joshua Bigwood & Son Ltd., Wolverhampton \* "VULCAN," John Thompson (Triumph Stoker) Ltd., Leeds

ts

)1

FFS.



UNDERFEED STOKER MAKERS' ASSOCIATION, 12 RICKETT STREET, LONDON, S.W.6. (FULham 7881)



In tim page

Γ

J Ti paby C (S) K (S) L Puking RCIR

L E IthbicbyCOCbyBdeininatGatthdhinthsC

al OP tr TAL

CASLN2

Hand in hand with the great advances made in the technique of synthetic resin products, this Company looks forward to playing its part in the great reconstruction.

# The Midland Woodworking Company Ltd MELTON MOWBRAY

Craftsmen in Domestic Joinery

In common with every other periodical this JOURNAL is rationed to a small part of its peacetime 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, §1 155. 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 155. 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 JUNE IULY AND AUGUST

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

CHELMSFORD. Country Life and Coun-try Needs Exhibition. At the Shire Hall. (Sponsor, BIAE.) JUNE 21-30

KETTERING. Rebuilding Britain Exhibi-tion. At the Alfred East Art Gallery. (Sponsor, BIAE.) JUNE 21-30

LIVERPOOL. C. O. Stallybrass, Deputy Medical Officer of Health, Liverpool. Public Health and the Social Services. L. H. LIVERPOOL. Keay, City Architect and Director of Hous-ing, Liverpool. *Post-War Housing*. At the Royal Institution, Colquitt Street, Liverpool. Chairman: Lt.-Col. W. Butler. (Sponsor, Royal Sanitary Institute.) 10.45 a.m. JUNE 22

LONDON. Royal Academy of Arts. One Hundred and Seventy-Seventh Summer Exhibition. JUNE 21 to AUG. 15

To demonstrate Newer Heat Exhibition. the great advances in the design of solid fuel burning appliances for domestic heating, cooking and hot-water supply brought about by recent research. At the Building Centre, Conduit Street Entrance, London, W.1. Organized by the Coal Utilization Joint Council. The exhibition has been designed by Darcy Braddell; F.R.I.B.A., and Mrs. Braddell. The appliances themselves, some demonstrated under fire, are displayed in settings similar to their actual surround-ings when in household use, and their suit-ability for the type of house envisaged in the ability for the type of house envisaged in the Government's post-war building programme are clearly illustrated. Although open to the general public, the exhibition has been designed primarily to assist local authorities, housing officials, architects and builders, by indicating the types of solid fuel appliances that will be available for post-war housing schemes. (Sponsor, Coal Utilization Joint Council.) Week-days, 10 a.m. to 7 p.m. JUNE 21-30

Nigel Hannen (Messrs. Holland & Hannen td.). The Contractor's Site Fourth of five lectures on and Cubitts, Ltd.). Organization. Organization. Fourth of the factors on Post-War Problems for the Building Indus-try. At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.I. Admission 2s. (Sponsor, University of London.) 5.30 p.m. JUNE 21

A. Harris (Messrs. Widnell and Trollope). Contract Preparation and Settlement of Accounts from the Quantity Surveyor's Standpoint. Last of five lectures. At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. Admission 2s. (Sponsor, University of London.) 5.30 p.m. JUNE 28

Donald Barber, Secretary of the Retail Distributive Association. *Planning of Shop-ping Centres.* At 13, Suffolk Street, Hay-market, S.W.I. Admission with buffet lunch (12.45 p.m.), 2s. 6d.; with coffee only, 1s. Talk and discussion 1.15 p.m. If lunch is required notify Housing Centre, Whitehall 2881, before 10 a.m. (Sponsor, HC.) IULY 3

JULY 3

Conversion and Reconditioning. One-day Conference at the Housing Centre, 13, Suf-folk Street, Haymarket, S.W.1. Mrs. Muriel Gee, Conversion of the Town House. Walter H. Godfrey, Conversion of the Country House. Conference fee, 2s. 6d.; lunch, 2s. 6d.; conference report, 5s. (Sponsor, HC.) 10 a.m. to 5 p.m. JULY 6

AA Annual Prize Day and Exhibition of School Work. At 34-36, Bedford Square, W.C.1. Speeches in the Library 3.30 p.m., when the exhibition will be served from 4.30 p.m. A dance, arranged by the AA Students' Club will begin at 8 p.m. and end at 5 a.m. Tickets 5s. each. The exhibi-tion will remain open until August 10. (Sponsor, AA School of Architecture.) JULY 13

National Federation of Building Trades Employers' Half-Yearly Meeting. At the Connaught Rooms. G. W. Buchanan will preside, and representatives of the eleven Regions into which the Federation is divided -they cover every county in England and Wales-will be present. JULY 18

BINC Second Building Congress. At the Central Hall, Westminster. Congress to be opened by the Archbishop of York. (Sponsor, Building Industries National Council.) JULY 24-25

MANCHESTER. Worthwhile British Products. An exhibition of furnishing fabrics, glass, pottery and printing showing our pre-war attainment and chosen from the Manchester City Art Gallery Collection. At the Municipal School of Art, All Saints, Manchester, 15. Open during school hours. Closing 8 p.m. on Monday, Tuesday and Thursday and 12 noon on Wednesday and **JUNE 21-23** Saturday.

Town Planning Institute Conference. In connection with the Planning Exhibition arranged by the Corporation of Manchester and the Manchester and District Regional Planning Committee at the City Art Gal-lery, Mosley Street, Manchester. Chairman, the President-elect of the Institute. Thomas AUG. 31-SEPT. 1 Sharp. 3 p.m.

Ν	E	W	S

THURSD	AY,		JUN	E 21,	1945
No. 263	30.			VOL	. 101
News					451
A Slice	of Hou	use			452
This We	eek's L	eading	Article		453
Astraga					454
Letters	from R	eaders			455
Physical	l Plan	ning S	upplen	nent.	
'Chelr	nsford	Survey			457
The Pr				min-	
		rary H			.461
Informa					467
Societie			ons		468

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.

 $\star$  means spare a second for this, it will probably be worth it.

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

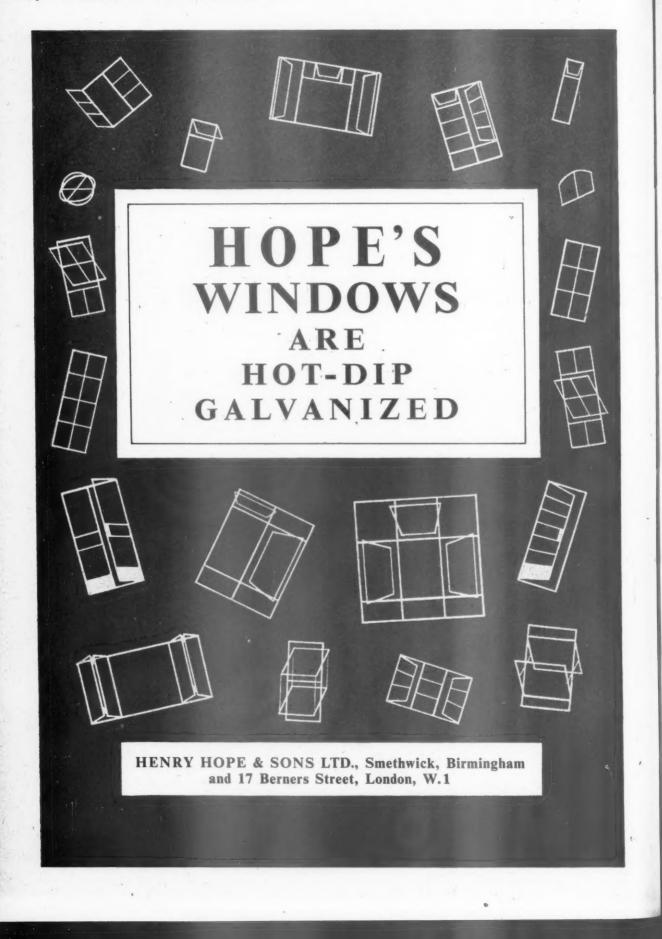
Any feature marked with more than two stars is very big building news indeed.

\*

The National Playing Fields Association views with concern the possible APPROPRIATION OF PLAYING FIELDS FOR TEMPORARY HOUSES. Sir Noel Curtis-Bennett, chairman of the National Playing Fields Association, speak-ing at the association's annual meeting in London, said: We view with concern the possibility of many grounds being appro-priated as sites for temporary houses. If that were to take place the position of small cricket and football clubs might become critical. The duty of ensuring the removal of any temporary houses erected on public open spaces should be definitely placed on the Minister of Health, who should be also made responsible for seeing that the land is restored to public use. A great number of schemes hung up by the war are ready for reconsideration, and 180 other schemes are expected to be initiated. The association had received the gift of further playing fields Sir Noel Curtis-Bennett, chairman of the had received the gift of further playing fields at Burghwallis, Yorks; Hannington, Hamp-shire; and West Backwell, Somerset. Lord nd West Backwell, Somerset. Lord was re-elected president of the Derby association.

In Westminster Hall breeze block huts are going up for use as temporary offices while THE NEW HOUSE OF COMMONS is being built. Since it was built by William Rufus, West-minster Hall has been used for many purposes—Court assemblies, theatrical shows, Coronation feasts, the feeding of the poor, marriage banquets, lyings-in-state, and great trials, such as the trials of Charles 1, Guy Fawkes, and Warren Hastings. From the days of Henry III till 1882, the law courts, too, were held at the south end and from the time of Edward II shops and stalls lined the hall.

xxxii] THE ARCHITECTS' JOURNAL for June 21, 1945



#### From AN ARCHITECT'S Common place Book

REBUILDING LONDON IN 1817. [From Walks Through London, by David Hughson, published in The London Miscellany, compiled by Robert Harling (Heinemann).] The Regent's Park is very extensive, and though it is not likely to receive a speedy completion, it is one of the greatest Sunday promenades about town. An immense sewer, extending from hence to the river Thames, is in great forwardness. A new chapel, at the northern extremity of this park, is a very elegant building. The canal adds considerably to the beauty and verdure of this delightful place. With the showy improvements, or rather, the alterations that were intended to connect the communication between Carlton House and the Regent's Park, some extravagant ideas were evidently connected ; 'Circusses were to be made where the new connecting street was to cross Piccadilly and Oxford-Road.' The reason given for which by Mr. Nash, the surveyor, was, 'that it would avoid the sensation of passing Oxford-Street, and insensibly unite the two divisions of the city.' The given estimate of the expense of this intended street was 300,000l. ; but there was no doubt that it would cost a great deal more. The imperious necessity of retrenchment, however, has altered this plan, and the new street therefore is to be no farther proceeded in than Piccadilly : it will be continued so far with facades of Ionic columns in plaster, corresponding with those in the square opposite Carlton House. The two lodges will be erected on the east and west of the Regent's Palace. The screening colonnade of the latter will be taken down, and some light description of railing or balustrade be substituted in its place.

\*\*\* The following BIRTHDAY HONOURS have been conferred by the King. Knights Bachelor: Holloway, Henry Thomas, chairman, Uniformity Joint Board, Building and Civil Engineering Industries. Tennyson, Charles Bruce Locker, chairman of the board of governors, National Register of Industrial Art Decioners, ORF: A H of Industrial Art Designers. OBE: A. H. Adamson, member of Council, National Federation of Building Trades Employers. A Blok, Temporary Principal Scientific Officer, Department of Scientific and Industrial Research.

The Minister of Fuel and Power announces the publication of the NORTH MID-LAND COALFIELD REPORT. The report (H.M. Stationery Office, 1s.) is the third of the series on the present position and future prospects of the British Coal-fields. The committee comprised four representatives of the mineworkers; four reprepresentatives of the mineworkers; four repre-sentatives of the colliery owners; two representatives of the Ministry of Town and Country Planning, a member of the Notting-hamshire County Council, and a Professor of Mining. They were assisted throughout of Mining. They were assisted throughout by members of the Geological and Fuel Re-search Surveys. The Report includes a Schedule of Housing shortages and points out that if more labour is to be introduced to enable maximum production to be achieved this shortage will be proportion-ately increased. Recommendations repard ately increased. Recommendations regard-ing the siting of houses and new settlements for communities are made, and the need for special consideration to be given to the type of dwellings in which the miner and his family are to live is stressed.

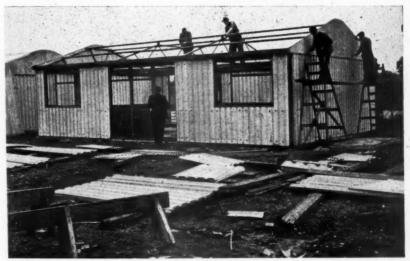
\*\*

Permission has been refused by. the Ministry of Town and Country Planning for building in SHEF-FIELD GREEN BELT. The Minister of Town and Country Planning (Mr. W. S. Morrison) has dismissed an appeal against the Sheffield Corporation's refusal of permission to erect dwelling houses at Fulwood, Sheffield, on a

prominent ridge overlooking the Mayfield Valley, which is of considerable beauty. The Corporation refused permission on the grounds that the layout was unsatisfactory, and that the siting of the proposed buildings would seriously injure the amenities. After considering the report of the Inspector, who held an inquiry into the appeal, the Minister decided to dismiss the appeal on the grounds that the proposed development would seriously prejudice the general character of the surroundings, and would involve some additional expenditure on public services. public services. He considered that de-velopment in the valley should stop short at its present point east of this site, and that there were sufficient sites available in the area north-east of it allocated by the Corporation for housing to meet the needs of this part of the City.

The Architects' Registration Council of the United Kingdom has received the approval of the Privy Council to the follow-ing NEW DISCIPLIN-ARY REGULATION. The ARCUK. The ARCUK. Amending Disciplinary Regulation made in Pursuance of Section 13

Regulation made in Pursuance of Section 13 of the Architects (Registration) Act, 1931. After Regulation 12 add: "12A. When the Council has passed a resolution under Regu-lation 12 directing the Registrar to remove the name of a registered person from the register, the Council shall, unless it by reso-lution otherwise determines, cause a notice of its resolution and of the findings, or a eport of the findings, or the Discipline Com-mittee to be published."



An Arcon house being erected under the supervision of Croydon Borough Council at Long Lane, Croydon. Erection on the concrete slab was begun at 5 a.m. By 1 p.m. the house, composed of some 400 large pre-fabricated parts was complete (except for decoration) with all Lane, Croydon. Erection on the concrete slab was begun at 5 a.m. services connected. The test was carried out in wet weather by the contractors who are supplying 25,000 of these houses under the Government's temporary housing scheme. The object was to devise a practical schedule for speeding up erection by local contractors. A team of 32 expert workmen was involved in the test, members on the site at any one time being from 6 to 19. Every operation was carefully phased so that as many jobs as possible were done simultaneously without interference with one another. Films are being made of the method and instruction is to be given to local erection contractors in all parts of the country. The photograph shows the state of erection at 6 a.m. The managing contractors are Messrs. Taylor Woodrow.



### A Slice of House

One of the four sections of the temporary aluminium house being transported to a site behind Selfridge's building in Oxford Street, where it is now on view as part of the Aluminium Exhibition. The first prototype of the house was illustrated in the Journal's frontispiece for April 19, when we criticized its design. Since then the design has been improved as far as is possible within the official restrictions. The design of the house, however, is less interesting than the system of construction, which is the most highly prefabricated yet evolved. The new proto-type, of which 50,000 are to be produced, is fully described on pages 461-466 of this issue.

The new constitution of the British Iron and Steel Federation which has just come into operation is based on MEMBERSHIP BY CONFERENCES representing manufacturers of the various products of the industry. Under the old constitution now to be superseded the Federation membership was composed of individual firms and affiliated associations. The largest of the thirteen conferences, which will constitute the Federation next month, is the British Steel Producers' Conference, comprising firms engaged in the heavy steel industry throughout the country. The British Steel Producers' Conference has adopted a constitution and appointed as first chairman, Mr. Ellis Hunter, Deputy Chairman and Managing Director of Dorman, Long & Co., Ltd. Mr. N. H. Rollason, Managing Director of John Summers & Sons, Ltd., is deputy chairman of the conference.

### \*

Tenants for temporary bungalows at Surbiton are to receive MUNI-CIPAL FINANCIAL HELP TO BUY FURNITURE. Surbiton Borough Council, by a majority of six votes, has adopted the scheme put forward by Alderman H. G. Reynolds. Chairman of the Housing Committee, of financial help to tenants of temporary bungalows on the Middleton Estate to buy essential furniture. Arrangements will be made with a firm to provide the council with furniture at a discount, and the council to supply it to tenants, who will pay a deposit of 15 per cent. and repay the balance ever a period of two years. The value of the furniture will be £50. Alderman Reynolds said that although the scheme will not be limited to ex-Servicemen, all tenants of the bungalows will necessarily be men from the Forces because of the points scheme.

Estates in County Durham, Surrey and Cornwall have been GIVEN TO THE NATIONAL TRUST. The estates, which number three, are: In County Durham 60 acres of woodland have been presented in memory of George Robert and Hugh Fenwick Boyd, of Moorhouse, Durham. In Surrey, Lady Pigott-Brown, of Mosses Wood, has given some 70 acres near the summit of Leith Hill; and in Cornwall Mr. Meyer has given 12 acres, including Mullion Island and the Mullion Harbour.

The house in Devonshire Terrace, Marylebone, WHERE DICKENS WROTE "THE OLD CURI-OSITY SHOP" has been sold. The house at No. 1, Devonshire Terrace, St. Marylebone, where Dickens lived from 1839 to 1851, and wrote some of his best-known works, has been sold for post-war reconstruction. It will be demolished and offices or flats will be erected in its place. Dickens wrote "The Old Curiosity Shop," "David Copperfield," "Barnaby Rudge," "Martin Chuzzlewit," "Dombey and Son," and some of the Christmas books in the house.

### THE ALUMINIUM DILEMMA

A MONG architects and artists it is axiomatic that the design of two similar objects in different materials should be approached in two different ways : the stainless steel sink, for instance, has nothing save function in common with the fireclay type, and the Hopton Wood figure looks very different from its counterpart in bronze. Yet when any attempt is made to introduce a new material, it is only on the rarest occasions that its sponsors show any understanding of the way in which the designer's mind has been trained to work. All too easily one calls to mind the slavish imitations of brass and wooden ash trays which were turned out in black and brown marbled plastic, the steel doors with a photographically faithful finish of some exotic wood, and the composition sheets indistinguishable from *Verde Antico*.

This outlook on the part of the manufacturer is such a matter of routine to the average designer that it is taken for granted that few materials will be properly used until such time as unsuccessful designs have revealed its limitations and, in effect, carried out the experimental work which the manufacturer should have done for himself. Some of the items at the current aluminium exhibition at Selfridge's provide cases in point.

The AIROH house, though it has been improved, is still unsatisfactory. That it has been designed by the aircraft industry under conditions imposed by MOW, is not the fault of the aluminium manufacturers, who are merely concerned with the supply of the raw material, but they must accept partial responsibility at least for the poor design of some of the goods shown at the rest of the exhibition. In any collection of the work of a large number of different producers there is bound to be some second-rate work, but it must not be forgotten that any poorly-designed fitting is likely to reflect upon aluminium as a material rather than upon the maker who designed it.

Having so far been destructive, it is only fair for us to add that the aluminium industry is comparatively young, for the strong alloys now almost universally used in the aircraft were only developed towards the end of the 1914-18 war. Prices have remained high, but the sevenfold increase in pre-war production capacity is already leading to reductions in cost, and if full advantage is to be taken of this, it is essential that the material should be rightly used. It is possible to imagine a dream world where we shall live in aluminium houses, reading our news sheets printed on aluminium foil, until weare all finally welded into our anodized aluminium coffins. In the meantime, aluminium is a metal which can easily stand by its own particular virtues and justify its use by making the final product better. A stainless steel type sink made in aluminium has no especial virtues unless it turns out to be cheaper : a window designed with sections to be extruded could easily be very much better as a window than a mere copy of the ordinary steel window, whose sections are

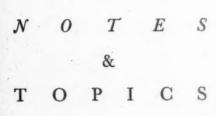
### 454] THE ARCHITECTS' JOURNAL for June 21, 1945

restricted in shape by the limitations of the rolling process by which they are produced.

Here it seems that the architect and the experienced industrial designer must be allowed to have a say in the matter, for only a very few engineers may be trusted to design any object which is to be judged by its appearance as well as by its utility. We say this deliberately, for although we fully appreciate the beauty of the Spitfire or the Merlin engine, it must be remembered that the continuous process of highpressure technical refinement over a number of years through which they have passed has produced a purely incidental visual appeal. The aluminium industry is in a dilemma ; either it can sell a maximum tonnage to any fabricator who will buy it, and then take no further interest in the affair, or it can take steps to see that the product is intelligently used. If aluminium is to be widely used, as it deserves to be, if its use is to be protected from the whims of fashion, and the subsequent unpopularity and falling-off in demand when it is found to be unsuitable for purposes it should never have been put to, there can be only one answer.



The Architects' Journal War Address: 45, The Avenue, Cheam, Surrey Telephone: Vigilant 0087-9



### STUDENTS' MAGAZINES

A few weeks ago I was rash enough to refer in this column to the scarcity of students' magazines. How unwise. How irresponsible. Above all, how inaccurate. From all sides welldeserved and well-aimed fire is returned. The editors of students' journal *Plan* point out coldly that this scarcity is only apparent to those who are either too lazy to open their correspondence or too ill-educated to read it once opened, and Sir Charles Reilly reproachfully forwards his own wellthumbed copy of the Liverpool School's News Letter.

Clearly no words of appreciation, however genuine, can make amends when they come so tardily. Already the word has gone round the studio and lecture room. Over drawing-board and coffee-cup heads are shaken, fists are pounded, teeth are ground. Even to Astragal, crouching miserably behind his desk, the whispers penetrate and to his ears they are laden with doom "... hopelessly out of touch ... more active man required ... vested interests ... rule of the old men ..."

What use now those passports to the favour of youth—a back number of *Focus*, the invitation to a party at Claridge's from the Society for Cultural Relations with Soviet Russia, the snow ostentatiously displayed upon the reactionary boots?

Nevertheless for those who, too, need to be reminded, *Plan* is the modishly printed quarterly of the Architectural Students' Association, whose purpose it is "to promote the realization that architecture is not only a profession but a social service to the community." The current issue has an exciting cover by a girl student—a true Alice in

Sutherland—from the Regent Street Polytechnic, an illustrated account of the work of that school, and a report of the 1944 ASA Conference at Bristol printed in a Cheamly way on pale blue paper.

Less spectacular but equally racy is the Liverpool production in which the school's accomplishments are written up by representatives of each year. Apparently the First Year have put on bow-ties, dusted down their Penroses and Pennethornes, and got down once more to a Greek Programme. (Department of Ho-Hum for this news item.)

### AND ANOTHER SORT

From the next envelope—opened with the haste of guilt—fell this time an adult journal—the May issue of the *True Temperance Quarterly*, still in pursuit of the perfect pub. "The beerhouse, the ale-house and the gin palace of yesterday are disappearing," writes the Chief Constable of Hull, "and their places are being taken by wellplanned commodious and attractive buildings." Ho-Hum again. But if this admirable statement strikes a little cold on your heart—as it does on mine—let us together be honest about it.

If we prefer scrubbed boards, smokeblackened ceilings and worn lino in our hostelries, is it not, partially at least, because these materials are not conspicuous in our own cosy bourgeois homes? If we lived day and night in such bare surroundings—the adjective is not used in its Arundel Clarke sense —perhaps we should welcome more warmly the illusion of luxury provided by peach mirror and flush panelling.

Hearty support, anyway, for the T.T.Quarterly's appeal for better lavatories and cleaner washing-up facilities. There is no romance about a choked urinal or smeary lip-sticked glass.

### **KEEP FLAT**

KEEP FLAT was printed on the outside of the envelope. It might well have been printed in the title page of the book inside—Bombed Churches as War Memorials.\* As the title implies, it is an appeal for a few of our blitzed churches to be preserved in their ruined state as permanent memorials. This • Architectural Press, 3s. 6d. Destruction can be barbarous and reconstruction can be senseless. The preservation of a ruin on the other hand could, in certain circumstances, have a triple value. Enhanced by skilled planting it could be a sanctuary for open-air service or private meditation, an open space or garden for the relaxation and delight of city workers, and a war memorial of beauty and significance standing upon what was once actually a battlefield.

This imaginative theory is persuasively argued—the case against utilitarian memorials is strongly put-and it is supported by plans fully worked out by experts for putting it into practice in three specific cases, St. John's, Red Lion Square, St. Anne's, Soho, and Christchurch, Newgate Street.

1

e

d

e

t-

11

of as

ed

is

These experts (painter Barbara Jones, landscape gardener Brenda Colvin, and architect Jacques Groag) handle their sites with enterprise and skill—the treatment of St. Anne's is particularly successful—and the whole project is handsomely put over in line, photograph and glorious technicolour, with characteristic drawings by Peter Shepheard and Neville Conder, a foreword by the Dean of St. Paul's, and a racy cover by Barbara Jones.

Sooner or later most architects are asked these days what would be the most sincere and beautiful memorials to our war dead. Here anyway is one answer worth your attention; it is an answer most of us as designers would find more genuinely inspiring than more conventional solutions.

### FAIR EXCHANGE

Below is a sketch by Hidalgo Moya suggesting what might happen if the traditional building industry were to reverse the AIROH situation and muscle in on aircraft production. It's a funny drawing, but there is a serious moral in it somewhere—and a moral that's not for the Old Firm alone.

### ASTRAGAL



### LETTERS

W. Greville Collins
E. G. West
W. Prescott
G. J. Allday
Alvar Aalto

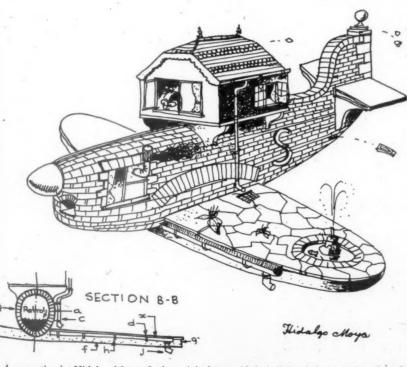
### Strange Paradox

SIR,—As Chairman of the Technical Committee of the Aircraft Industries Research Organization on Housing, I write in reply, on behalf of that organization, to the criticism contained in a sentence in the caption to the frontispiece, Strange Paradox.

... " It is strange indeed that the aircraft industry, which has been responsible for creating such beautiful forms as those of the Spitfire (shown above) should have permitted its house to take so mean and insensitive a shape as it has, whether it was conditioned by a Government Department or not."...

I am in agreement that this organization could hardly have failed to improve on the design had it been given a free hand, but it must be noted that the primary term of reference given to AIROH by the Ministry of Works was to make its construction into a temporary bungalow to "the standard of appearance and accommodation of the Portal steel house, and NOT TO IMPROVE ON IT." I feel that there is a ring of finality about this which your correspondent has failed to appreciate.

failed to appreciate. Furthermore, in contrast to the very latest in aircraft design after some forty years' de-



A suggestion by Hidalgo Moya of what might happen if the building industry took to aircraft production. See Astragal's note.

velopment, there has been placed the very first house design allowed by the Government in this system. The correct analogy. I suggest, would have been the Wright Biplane, on which Orville Wright made the first successful flight on a man-lifting aero-plane on December 17, 1903. AIROH has contributed a method of con-struction which will solve the housing

problems of a large number of homeless people as well as supplying urgently-needed employment in the aircraft and aluminium industries and making use of otherwise redundant factory space. The further development of the AIROH

design, I am confident, is only dependent upon the latitude allowed by Government Departments without interference in design and appearance, and the application of it to permanent two-storey domestic and other buildings

The fully-developed engineered house will have a form we are sure which will please your most severe critic, but let us have fair, reasoned and informed criticism from the ARCHITECTS' JOURNAL.

W. GREVILLE COLLINS Chairman, Technical Committee, Aircraft Industries Research Organization on Housing London

[We appreciate Mr. Collins' argument, and we are glad to see that the appearance of the original AIROH house prototype has already been improved upon-even within the imposed official restrictions-as can be seen in the revised prototype illustrated in

this issue. However, we disagree that the this issue. However, we disagree that the early biplane is in any way analogous to the first AIROH model, since what pro-duced the unpleasant appearance of the house was lack of imagination in planning, proportion and detail, and not lack of advanced structural technique. We have here designing houses for thousands of been designing houses for thousands of years, aeroplanes for only a few decades. The AIROH should surely be, then, at least as advanced both in design and technique as the Spitfire. Incidentally, Wright's de-sign, we believe, is as beautiful in its way as that of the Spitfire, perhaps because Wright's purpose was sincere and straight-forward, his mind was free from precon-ceptions, the proportions of his plane were not laid down by a Government depart-ment, and because he was as advanced as he could be within the limits of the knowledge and circumstances of his time.-ED. A.J.]

### House Production

-The editorial on the report of the SIR -RIBA House Production Committee was timely, and should be welcomed by most sec-tions of the building industry. As the writer is concerned with the question of aluminium and its alloys, the remarks in this connection are particularly appropriate, especially in of the note on the opposite page on the AIROH house, in which approximately 1.7 tons of aluminium is used per bungalow. About a year ago, the report of the Non-Fernous Metals Study Committee was pub-

lished giving a great deal of information about the properties and applications of aluminium in building, and this report surely indicated definite prospects, which should have been noted by the RIBA Committee.

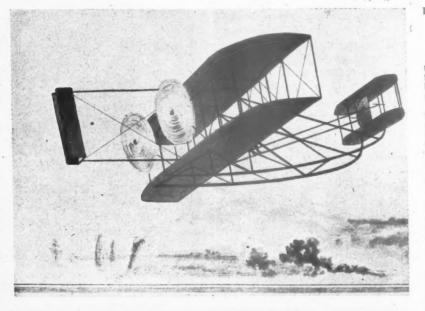
When we read the full report of the RIBA Committee, we noted that the industries concerned were stated to have been consulted, presumably in regard to supply and economic questions, in addition to technical approach been made by the Committee, the views of the technical experts of the industry would have been placed at their disposal, with, we venture to suggeresults in the eventual report. venture to suggest, important

E. G. WEST, PH.D., B.SC., Manager, Wrought Light Alloys Birmingham Development Association

SIR,—In your Journal the report of the RIBA Committee on Housing Production was given considerable prominence. One can only hope that the source of con-fidential information regarding other pro-ducts was more correct than the source from which the steel window probable correction which the steel window probable capacity was obtained.

The information collated by this Associa-tion shows that the RIBA figure of 100,000 houses is a considerable under-estimate. The industry is planning to meet a demand between two and three times the figure quoted. W. PRESCOTT.

Chairman, The British Metal Window Manufacturers' Association London





The Wright Biplane (top) and the Spitfire. See letter from W. Greville Collins.

### **Towards Full Employment**

SIR,-There seems to be a need for clear thinking regarding the way in which the foundation of full employment is to be laid by starting peace-time production in the most efficient way. The urgent need is the withdrawal from

the Forces at the earliest possible moment of both men and women with administra-tive and clerical qualifications and experience. On them rests the responsibility of planning and preparation, without which it will be impossible to re-employ the great body of operative workers and implement the Government's pledge of full employment.

C

In t Mind has d

vey,

cely, L. F.

cribe

tenta forw Chel

were

have and trict

AN

On

Plan

by P orga

polit and are r

are

impr

Une (Tre the (

bigge

and Borc

Per

The plain fact is that we cannot have it both ways. We cannot retain in uniform (often being used to much less than their full capacity) the people necessary to re-start the wheels of civil industry and pro-vide the vast volume and variety of goods that we need.

The recent statement by Mr. Bevin on con-ditions of employment does not affect the issue and if it be argued that the easing of the conditions under which administrative employment may be undertaking will solve industry's problem, the service men and women with such qualifications will have a legitimate grievance if their release is delayed until the best positions have gone to those who were not called upon for active service. It is to be hoped that both Service and Government Departments will realize their obligation to release every possible man and woman, even at some sacrifice, and carefully overhaul their requirements to this end.

G. J. ALLDAY, Governing Director, Weybridge Weybridge Automobiles

### CABLEGRAM

Alvar Aalto has sent us the following cablegram from Helsinki:-

Delighted Finland-England relations reopened.-Alvar Aalto.

### PHYSICAL PLANNING SUPPLEMENT



## CHELMSFORD survey

In the following article Mr. Anthony Minoprio, M.A., F.R.I.B.A., A.M.T.P.I., who has directed the Chelmsford planning survey, with the assistance of Mr. H. G. C. Spencely, B.Arch., F.R.IB.A., A.M.T.P.I., and Mr. L. F. Richards, A.R.I.B.A., A.M.T.P.I., describes the background to the survey and the tentative proposals which have been put forward as a result of the work. The Chelmsford Area Planning Group, who were responsible for the organization, have presented this unofficial Survey, Plan and Report to the Borough and Rural District as a gift.

ar he id he om

raof it eat

ent

oy.

e it

rm

re-

070

ods

on-

the of

tive

and ve a

de-

e to

tive

vice

alize

sible

fice.

ents

ctor.

biles

wing

re

### ANTHONY MINOPRIO

On Monday, May 14, an Exhibition of the Chelmsford Planning Survey was opened in the Shire Hall, Chelmsford, by Professor Sir Patrick Abercrombie. The survey has been organized by the Chelmsford Area Planning Group, a nonpolitical body formed in 1935 as a branch of the Town and Country Planning Association. Members of the Group are mainly residents in the Borough and Rural District, who are interested in planning generally and who wish to see improvements in their own town and district.

Under the Chairmanship of Mr. H. M. Cleminson (Treasurer of the Town and Country Planning Association) the Group were fortunate in obtaining funds from the three biggest industrial firms in Chelmsford, Hoffmanns, Marconis and Cromptons, for the organization of a survey of the Borough and Rural District.

Permission was obtained from both Councils to make use

of their maps and other relevant information, but the Councils were unable, with their reduced staffs, to take a more active part in the survey and undertake the research themselves. As a result it became necessary to organize much of the survey on a voluntary basis, and it is estimated that between two and three hundred residents in the area have assisted, either by providing maps, writing reports on subjects of which they had special knowledge, collecting information, undertaking specific pieces of research, or assisting with secretarial work and publicity.

The CAPG attach great importance to the active co-operation of the public in the survey, holding that the replanning of Chelmsford should be done by as well as for Chelmsford people. Many of the officials of the two Councils, and also of the County Council, have assisted the survey in their spare time, by preparing maps or giving expert advice; and valuable help has also been received from officers of the Ministries of Town and Country Planning, of Agriculture, Health and Transport.

Of the many local organizations which have co-operated, reference should be made to the Essex County Police, the War Agricultural Executive Committee, the National Farmers' Union, the Women's Voluntary Services, the Federation of Women's Institutes, the Wardens' Service, the Essex Rivers' Catchment Board, the Chamber of Commerce, the Rotary Club, the Trades Council, the Mid Essex Technical College, the County High School, King Edward VI Grammar School, the Public Utility Companies, the Youth Council, and many commercial and industrial firms.

The survey, which began in July last year, is in two parts: — 1. A Factual Survey—an examination of the physical

C

characteristics, life, and organization of the area.

2. A Public Opinion Survey—an attempt to ascertain the views of Chelmsford people on planning matters.

The survey has been carried as far as is practicable with the available resources, and it is considered that sufficient evidence has now been accumulated to provide a sound basis for re-development proposals. Arising out of the survey, some suggestions for improvements have been evolved, and these, together with the survey information, have just been exhibited to the Chelmsford public for consideration and criticism while still in the sketch stage.

In September a Final Improvement Plan for the area will be exhibited, based upon the survey and the views and suggestions of Chelmsford residents. With this plan will be shown a model map of the replanned town centre and a report describing the proposals will be on sale. The Survey and Plan are unofficial, and there is no

The Survey and Plan are unofficial, and there is no guarantee that any of the suggestions made will ultimately be adopted by the Planning Authorities. But the survey and plan, which have been prepared without cost to the public, should be of assistance to the responsible officials by providing useful data, by exploring possible solutions of some difficult planning problems, and by illustrating ideas which are known to appeal to a large number of Chelmsford people. Chelmsford Borough and Rural District are included in the plan prepared by Mr. F. Longstreth Thompson, P.P.T.P.I., in 1936 for the Mid Essex Joint Regional Planning Committee, but the implications of the Greater London Plan necessitate reconsideration of the planning of the whole region.

Since 1878, when Crompton's works were established there, Chelmsford has grown from a market town of some 8,000 population to an industrial centre with a population exceeding 33,500. The development of industry has not, however, been accompanied by corresponding improvements in street planning, and in the provision of amenities and social services sufficient to meet the needs of the town's growing population.

Roads which were adequate for the leisurely traffic of the market town are quite incapable of dealing with the motor transport of to-day. Bottlenecks and a bad road plan prevent the free movement of traffic; there is an acute housing shortage, a low standard of architecture, and a general dearth of amenities. It is clear that if Chelmsford is to acquire the dignity and character which should be associated with the county town of Essex, some replanning will be necessary.

The Survey has included maps dealing with History, Physical Characteristics, Population, Land Utilization, Housing, Industry, Agriculture, Communications, Open Spaces, Public Services, Education, Architecture and Health Services. A questionnaire delivered at every twentieth house by the WVS Houswives' Section has provided a sample of Public Opinion in the Borough on planning matters.

An industrial questionnaire circulated to the 69 works in the town has given valuable information about labour and the probable future development of industry.

Chelmsford itself is divided by the railway viaduct and also by the Rivers Can and Chelmer, which, being liable to flood, have served to preserve valuable open spaces in the heart of the town. But these rail and river barriers combined with an obsolete layout which in the central area is much the same as it was in 1591, have made traffic circulation a major problem. All through traffic has to go along the High Street between the Shire Hall and London Road, so that congestion and accidents in the centre are inevitable. An excellent analysis and map of accidents was done for the Survey by the Essex County Police, and this shows that in 1938 no less than ten injury accidents occurred near the narrow junction of London Road and the High Street. New roads are obviously needed to enable through traffic to avoid the centre, and it is suggested that the right places for such through roads are alongside the two rivers (serving the market If in addition Victoria Road could be and goods yard). extended southwards across the river to form a similar link with Moulsham area, this inner ring road would connect the principal radials with the station and the market. Finally the connection of the London Road (A.12) at Widford and Waterhouse Lane on the west of the town as suggested in the

### RESIDENTIAL AREAS

Since 1878 Chelmsford has grown from a market town of some 8,000 people to an industrial centre with a population exceeding 33,500. The plan below shows the main residential areas. Space for housing is not a severe problem; there is room for a further 20,000 people should the development of industry or decanting from London require it. The illustration on the previous page shows the centre of Chelmsford in 1762.



Mid Essex Regional Plan, would give access to two of the three industrial areas without passing through the centre.

pd a

ei

in

n

in

to

a

]

F

W

pl

se

to

th

Te

In the rural district the two biggest problems are Housing and Public Services. Over 76 per cent. of the houses have piped water, but main water, drainage and electricity are still greatly needed. If dairy farming is to increase extension of water mains will be essential.

Housing in the Borough does not present the same difficulty as roads. Chelmsford is not densely built up, and could easily accommodate a further 20,000 people should the development of industry or decanting from London require it.

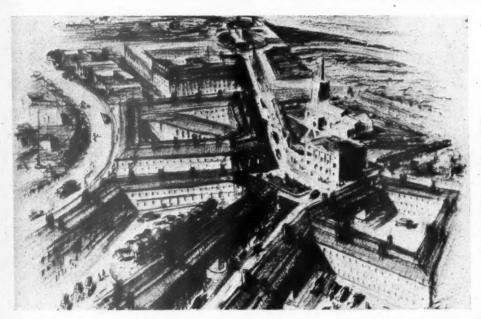
The Cattle Market is another of Chelmsford's major problems; at present the market causes congestion in the centre every Friday, and lies idle the other five days; it occupies valuable central land which could be more economically used for other purposes.

Chelmsford is no longer primarily a market town, and the time has surely come to move the market to a more suitable position, possibly on the ring road, thus freeing a fine site for much needed civic buildings. If in addition the houses which now close in the river. Can near the two bridges were demolished it would be possible to form at relatively slight cost a unique riverside park running right through the town from Admirals Park past the civic centre to Baddow Meads TOWN CENTRE

Right is an airview of the centre of Chelmsford as it exists today. The County Council is housed in the large building on the left, the old church is in the centre, with the Shire Hall to the right of it at one end of the High Street. The layout here is much the same as it was in 1591.

BEFORE





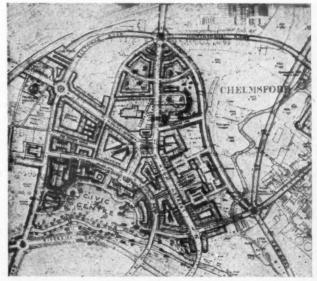
Left is a perspective showing the proposals for the area shown in the airview above. Below is a plan of the proposals for the whole of the central [area. A new civic centre is suggested with a town hall, public hall, concert hall, police and fire station on the site at present occupied by the Cattle Market, which it is proposed to move to a more suitable position further out.

AFTER 

Agriculture in the Rural District seems likely to continue on present lines, although an increase in milk production and developments in fruit farming and new industries allied to it are probable. Industry does not present any special problems either in the Borough or Rural District, and there is ample room for the expansion of light industries in suitable positions.

The Survey shows that shops and a number of other buildings, such as churches, public halls, nursery schools, are needed, but it is not intended to indicate more than the areas in which they are required. Details must necessarily be left to closer study by the local planning officers. The Group's final Improvement Plan cannot be more than a sketch design, and if the Survey is successful in persuading Chelmsford to abandon piecemeal development in favour of long-term planning, one of the main objects of the Chelmsford Area Planning Group will have been achieved.

From the technical point of view two points stand out. First is the importance of the basic Land Utilization Map, which takes a long time to prepare and for which air photography must surely be developed in the future. The second point is the need for an active Publicity Committee to explain the objects of the Survey to the public and obtain their active interest and co-operation, without which professional planning officers must surely plan in vain.



ome

eding reas. n for ustry n the

FORD

SURVEY

of the

lousing

s have

are still

sion of

ifficulty

i easily

opment

major

in the

lays; it

and the

suitable

site for

s which

s were

y slight

he town

Meads.

more

re.

#### A NATIONAL POLICY SOON ?

Two strong statements, relating to the former coalition Govern ment's failure to formulate a National planning policy, have recently been made by Professor Sir Patrick Abercrombie. The Meeting of the Town and Country Planning Association. Sir Patrick said he had just returned from a tour of the Middle East, where he had been lecturing to troops. His experience had been that the men and women in the Forces there, were extremely well-in-formed and their questions most searching—indeed, he had found them a little too searching at times, because he could not answer that the Government had any real planning policy ready to put into operation. He said the troops were not merely ask-ing for housing, but were familiar with the Uthwatt Report and the Government White Papers, and were anxious to know what had been done about these; the general knowledge displayed was often more exten-sive than that found among Planning Committees of Local Authorities at home. He added that it had been most embarrassing to show the audiences his Plans for London, Plymouth, Coventry, etc., and then have to admit that the Government had only accepted the 'principles' planning.

This Government is continually

trembling on the brink of doing the right thing, said Sir Patrick. They had done a certain amount of valuable work, but had said they would not advocate any over-riding national planning authority. At the same time they produced legislation which skirted all round the idea of a national policy. Criticizing the Government's fragmentary approach to Planning, Sir Patrick said that the White Papers made a brave show, but examination proved that the problems were being dealt with piecemeal.

Good motor-ways, for example were essential in replanning. All planners agreed about this. But recent pronouncements regarding Transport indicated that such motor-ways were to be provided only in places where they were considered necessary, in stretches of twenty or fifty miles to fit in with existing road systems. Another instance of this fragmentary approach by the Go vernment was the Requisitioned Land Bill. Here, either through ignorance or deliberate intent, all mention of the Ministry of Town and Country Planning had been omitted. Again, the Town and Country Planning Act, 1944, while giving consider-

Act, 1947, while giving consult able powers, did not go far enough. The Government never did go far enough. Sir Patrick said that although these Bills had been good in many respects, we must face the problem as a whole and realize that the underlying factor was the Land. We were all facing the same problems in the same way, but the very thing we needed in relation to the Re-location of Industry and the treatment of displaced people was carefully omitted. For instance, the boundaries question which was meant to help local authorities did not mention London—and it was the London Boroughs which most needed guidance.

He ended by likening the Government's policy to the building of an arch and said that at one time he had thought Lord Woolton's face was to be the key block to complete this arch. But it seemed the Prime Minister was still busy admiring the preliminary sketches and nothing yet appeared to have been finished off.

"We must get the Prime Minister to set up this National Planning Policy," said Sir Patrick. "It he is afraid of the word 'Planning,' he can call it anything else he likes. I maintain that the Government cannot avoid this action. They must come to it sooner or later and the sooner, the better."

The second statement relating specifically to Sir Patrick's plan for Greater, London, was made in a letter to The Times, published on May 15, in the first part of which he said, "It is now some months since my report on the town planning of Greater London was submitted to the Minister of Town and Country Planning and issued to the local authorities concerned. Although general publication has yet to come, because of supply difficulties (it is hoped that the report will be published in July), all those directly concerned are now able, and have been invited by the Minister, to consider the report and to submit to him their observations.

"Having presented my report to the Minister my official task is at an end; nevertheless, my deep interest in the satisfactory planning of this unique region and my many friendly contacts with the local authorities and others concerned inevitably keep me in touch with the lines along which the planning authorities are reacting to the report. All that I hear in this way is encouraging. Authorities are anxious for decisions about such major questions as the decentralization of population and industry; the need for action in the founding of new communities is widely recognized.

Now is the time when a clear lead from the Government is essential if an unequalled opportunity to recreate Greater Lon-don is not to be lost. The opportunity is here, but it is fleeting; isolated proposals for sporadic re-development are already beginning to reach the local autho-Within the next six rities. months, now that the war in Europe is over, if the unrelated proposals to meet the great need for new houses await attention, no considerations of planning will enable a local authority to hold back the flood of development, which will grow steadily as the flow of labour and materials increases. Once gone, the rials increases. Once gone, the opportunity to regroup popula-tion and industry in Greater London will be gone, not for a generation, but for ever."

These final words of warning are well worth remembering at the present time. For the government elected next month will be the government which will determine whether or no the use of our land and the face of our landscape are to be guided according the principles evolved over many years by those British planners of whom Sir Patrick Abercrombie is the outstanding It is not an representative. opportunity presented to every government, not even to every generation; it is quite unique, and it is we who will be held responsible by future generations if we fail to grasp it.



	AGRICULTURE	COMMERCE & SHOPS
	INDUSTRY	ARNED FORCES
6	TRANSPORT	PERSONAL SERVICE

### PLANNER'S QUIZ

9. On the left is part of a map from a guide to a rapid method of District Survey. All the information shown can be deduced from published sources, but these sources will not be given until the next Quiz, when the key to the symbols used on the map will also be given.

There are, therefore, two questions ; what do the symbols denote in the map on the left ? and from what published sources was the information taken ? Answer in the next Planner's Scrapbook.

THE ANSWER TO THE LAST PROBLEM

8. The symbols in this map of OCCUPATIONS AND INDUSTRIAL WORKS are shown below. Statistical information was taken from 1931 Census, Industry Tables, Table 3; and the information for the Locations of Industrial Works from Kelly's County Directories, H.M. Stationery Office Lists of Mines and of Quarries, Ordnance Survey Six Inches to One Mile Maps and Land Utilization Survey One Inch to One Mile Fifth Edition Maps.

5	ADMINISTRATIVE & PROFESSIONAL SERVICES		ENGINEERING	WORKS	0	GAS	 ELECTRICITY TRANSMISSION GRID	
	UNIT OF 100 MEM	0	FLOUR MILL		0	WATER	 R.D. BOUNDARY	
	UNIT OF 100 WOMEN .				0	ELECTRICITY	 H.S. BOUNDARY	



Above, Mr. Duncan Sandys, Minister of Works, opens the Aluminium House, now on view at Selfridge's as part of the Aluminium from War to Peace Exhibition. The house, which stands in Somerset Street, will be open to the public until the end of the month. 50,000 of these houses, are to go into production. Originated by the Aircraft Industries Research Organization on Housing, the Aluminium House is now being sponsored by the Ministry of Aircraft Production under the official approval of the Ministry of Works. Below, a diagram of one of the four sections which make up the house, the most highly prefabricated type yet evolved.

## THE PROTOTYPE OF THE ALUMINIUM TEMPORARY H O U S E



GENERAL—The Aluminium House was originally sponsored by the Aircraft Industries Research Organization on Housing, an organization formed to investigate housing pessibilities, and comprising a number of aircraft manufacturers and sub-contractors. The

AIROH delegated the design of the house to Hiduminium Applications, which was formed twelve months ago by High Duty Alloys, and Reynolds Tube Co., for development of aluminium alloy applications. Hiduminium Applications worked in close collaboration with the AIROH Technical Committee (Chairman : Mr. C. Greville Collins). The technical work undertaken by Hiduminium Applications was under the supervision of Mr. A. Goldberg, Mr. A. F. Hare being the architect. The house is now being sponsored by the Ministry of Aircraft Production, and is officially approved by the Ministry of Works, under the Housing (Temporary Accommodation) Act. Hiduminium Applications are retained as consultants to the Ministry of Aircraft Production on design and process development.

The first prototype was built by the Bristol Aeroplane Co., Westonsuper-Mare. It has been appointed the Parent Company of a group for the production of houses. The daughter firms of the group are : Vickers-Armstrong, Blackpool ; Vickers - Armstrong, Chester: Blackburn Aircraft, Dumbarton ; A. W. Hawksley, Gloucester. Bristol Aeroplane Co. is responsible for the production detailing work of the house. Large-scale production is to commence in the autumn of this year.

d th rs in ch e-I g e esof ng ly ar is 01n-01g; dic 10six in ted eed on, ing to op-lily tethe ılater r a ing ; at be ter-OUL ndling ver rick ling 80 very very que held era-Z vey. rces

p on.

e m rks

from rries, One

TY

GRID ARY

ARY

ustry

THE SYSTEM—The principle of construction is similar to that adopted for the emergency houses erected under the American TVA project. The design is based upon modern aircraft industry production line methods, equipment and experience of unit processes. Complete factory *prefabrication* enables full use to be made of the available equipment and machinerv in the aircraft factories.

The main material is Aluminium Alloy with a high strength-weight ratio which makes it possible to adopt a larger module, and to utilize the aircraft industry's equipment for the handling of large, light structures.

large, light structures. The house conforms approximately to the Ministry of Works Temporary House area. It is constructed as four box-shaped units, each 22 ft. 6in. by 7ft. 6 in. by 11 ft. high. Each unit is completed in the factory, including installation of fitments and services, and final decoration. The four units are joined together on site to form the complete house. The module taken is 7 ft. 6 in., one wall panel forming the end of a unit, four to the length of the house and three panels to the depth of the house.

Every item is produced on rigid dimensional fixtures, to facilitate ease of assembly and erection.

The house can be completely demounted without any of the materials used in its construction being destroyed.

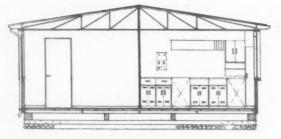
SITE ERECTION—The standard MOW Central Entry slab is used, each unit, in turn, being placed upon the foundations by means of a 5-ton crane. For adjustment of levels, the units are supported on hand-operated Hydraulic Jack Trolleys. The jack trolleys are also used for bringing the units together in order to make the site joints. These joints are made with male and female connectors, secured with drive pins. The connectors provide a lead in for accurate location and ensure perfect alignment.

One pipe joint must be made to each of the site services, *i.e.*, Soil Waste, Water, Electricity (or Gas). The house is then ready for occupation.

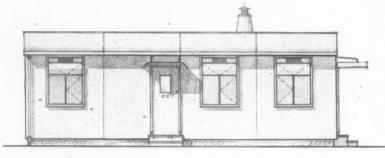
Complete site erection requires 30 to 40 man-hours, depending upon the experience of the crews. It is estimated that crews can be trained in two or three weeks.

MATERIALS—Aluminium Alloy —The principal material used is Aluminum Alloy, of which there

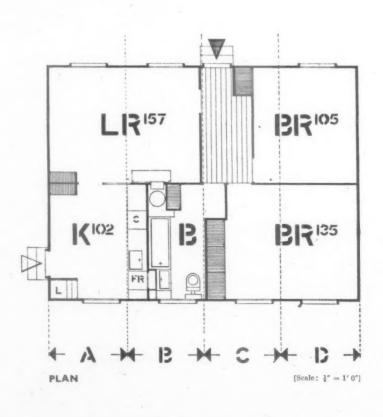
ALUMINIUM



TYPICAL CROSS SECTION

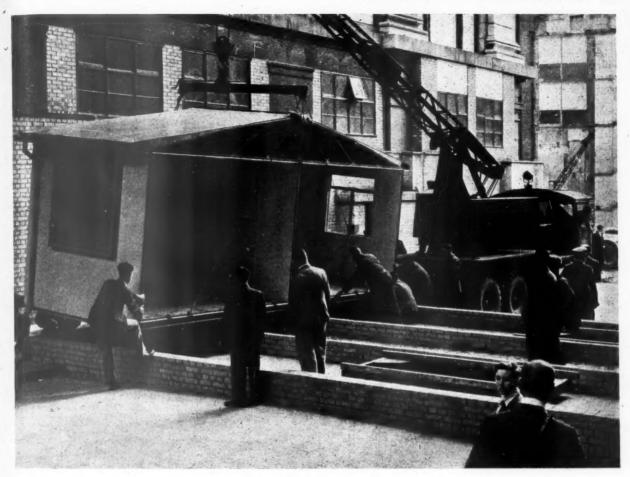


FRONT ELEVATION



TEMPORARY

HOUSE



are very large stocks available in the country. Three classes of alloys are used, according to the strength requirements.

- Class I.—Ultimate Strength: 24 tons/sq. in. 1 per cent. Proof Stress: 19 tons/sq. in. Elongation: 8 per cent.
- gation: 8 per cent. Class II.—Ultimate Strength: 17 tons/sq. in. '1 per cent. Proof Stress: 10 tons/sq. in. Elongation: 15 per cent.
- gation: 15 per cent. Class III.—Ultimate Strength: 11 tons/sq. in. 1 per cent. Proof Stress: 5 tons/sq. in. Elongation: 20 per cent.

E

Modulus of Elasticity-10,000,000 lbs./sq. in.

Coefficient of Expansion-24 by 10<sup>-6</sup>/°C.

Density-0.097 lbs./cu. in.

The sheet is clad with commercially pure aluminium to 5 per cent. of the total thickness, giving additional corrosion resistance.

The majority of structural sections are extruded. The cost of dies is low, and a great variety of shapes can be economically produced. Each section is, therefore, designed to the actual modulus required for structural economy, and also incorporates capillary grooves formed in the frame members to drain any water entering by capillary attraction.

by capillary attraction. Insulation—The wall panel filling is required as a thermal insulator and also to stabilise and strengthen the external sheet. A detailed investigation was made into the supply position of the various rigid insulation materials, which proved that none of the recognized materials was available in sufficient quantity to satisfy the production programme. It was, therefore, decided to de-





Top, the first section of the house being manoeuvred into position on the brick foundations. Below, from left to right, progress photographs showing the remaining three sections being moved into position.

velop further aerated concrete (foam concrete). This material normally requires 21 days' curing, which for a production programme calling for approximately 1 million square feet per week, would have required very large storage space. Some basic research work was carried out on the Christiani & Nielsen Aerated type of Concrete at the High Duty Alloys Laboratories, Slough, and a method of low-pressure steam curing to give full strength was perfected. The characteristics of the aerated concrete are as follows :--

Curing pe Crushing		48 hours. 260 lb
Weight		sq. in. 28 lb cu. ft.

Thermal conducti-

vity ... k = 0.6. Production plants are being designed and laid out by Hidumihium Applications for each of the aircraft manufacturers.

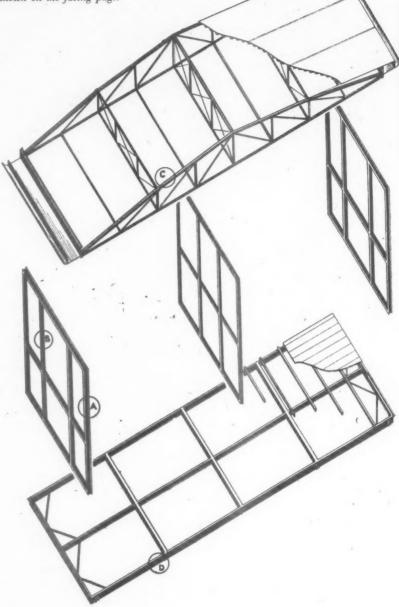
CONSTRUCTION — Each unit comprises five structural subassemblies—floor, wall panels, spinal partition and roof.

Floor-The floor frame is of aluminium alloy extruded sections with joists at 16-in. centres. The joists consist of an aluminium alloy rolled strip tophat section with a timber batten forming the compression flange. This also forms a nailing strip for the floor surfacing of T. & G. boards, and prevents direct metallic contact between floor and frame for sound insulation. Thermal insulation is provided by a blanket of fibreglass or similar material, fixed to the underside of the boards. Thermal conductivity : U = 0.2.

**Walls**—These consist of structural load bearing panels 7 ft. 6 in. wide, 8 ft. high and  $2\frac{3}{4}$  in. overall thickness. The panels are framed with aluminium alloy extruded sections and faced externally with 20 gauge aluminium alloy clad sheet, riveted to the framing.

The panel is filled with pre-cast aerated concrete slabs,  $2\frac{1}{2}$  in. thick. The slabs are sprayed with hot bitumen adhesive, giving a definite bond between sheet and filling. This also allows for any slight movement owing to the difference in thermal expansion of the two materials. A wood strip screwed to the frame members forms the internal flange to contain the filling, and also pro-vides a thermal break between outer and inner surfaces. The internal lining is 4-in. plasterboard, secured by bitumen adhesive to the filling.

Diagram of the structural subassemblies for one of the four units. Details marked, A, B, C, D, are shown on the facing page.

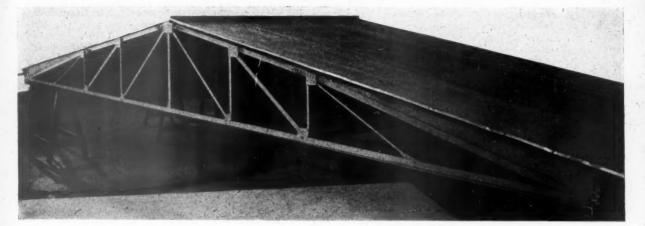


The external site joint between units is made by a spring alloy clip, formed with a double capillary groove. This clip is tapped into position and clips around the projecting edges of the wall frame vertical members.

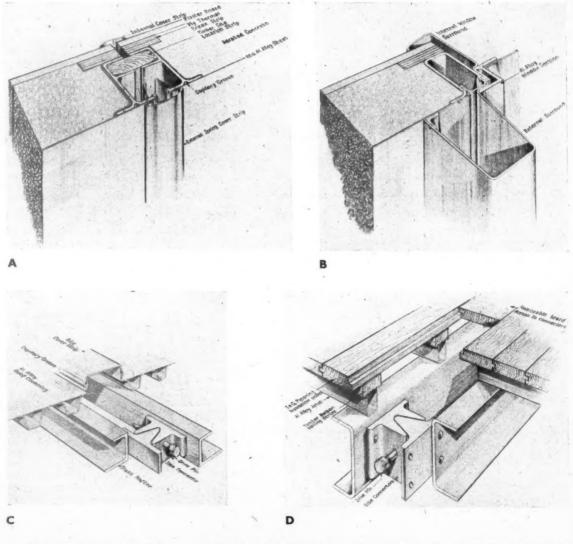
The panel is stressed as a whole. The external sheet provides lateral rigidity. The filling stabilizes both sheet and plasterboard, eliminating internal framing and cross bracing.

Roof—The roof of each unit comprises two trusses and two trussed purlins. The trusses and purlins are fabricated in aluminium alloy extruded and rolled strip sections. The largest section can be contained in a 2¼-in. diameter circle. The roof is covered with aluminium alloy panels 2 ft. 6 in. wide; these panels comprise a corrugated troughing section. This is covered with a layer of bitumen insulation material and faced externally with 20 G. aluminium alloy clad sheet.

These panels span from eaves to ridge, continuous over purlin. The outer sheet edges at site joints are formed with an upstand which is covered with a rolled strip cloak



Above, a roof sub-assembly in the factory. Joints of the truss are riveted. Below, structural details taken at positions marked A, B, C, D on the facing page. A is the site joint between two unit wall panels. B is the window surround. C is the site joint between two units at the roof. D is the site joint at the floor. The detail drawings are about one third of the actual size.



ALUMINIUM TEMPORARY HOUSE

formed with a capillary groove, and is screwed to upstand. The external sheet at eaves is dressed direct into gutter.

The ceiling is of  $\frac{1}{2}$ -in. fibreboard, supported by rolled strip channels. A layer of fibreglass on the upper side provides thermal insulation. Thermal conductivity: U = 0.155.

Spinal Partition—This is of similar construction to the wall panels, of 2-in. overall thickness, faced each side with  $\frac{1}{4}$ -in. plasterboard, filled with aerated concrete.

Transverse Partitions—These are constructed similarly to the spinal partition and are designed to give lateral rigidity to each box unit during transport and erection.

The House is designed to resist, with a considerable Factor of Safety, the loads as specified by the Burt Committee, and also the

ALUMINIUM

stresses imposed during transport and erection.

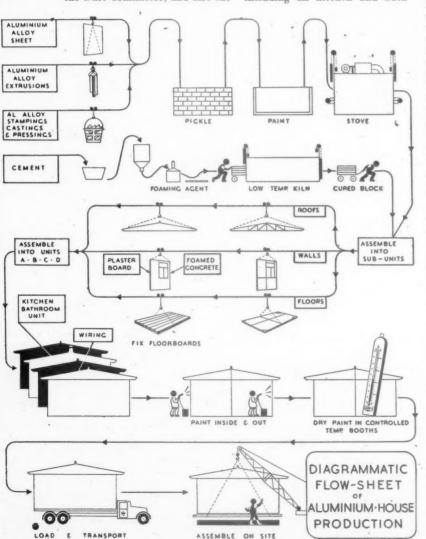
WINDOWS AND SURROUNDS —Windows are in aluminium alloy, either cast from Hiduminium 42, or fabricated from extrusions in Hiduminium 22.

The external window surround is designed to give depth to the openings, and is formed from aluminium alloy sheet. A selfadjusting ventilator is incorporated within the surround above the window.

RAINWATER GOODS—All rain water goods are in aluminium alloy. A quarter-round gutter is formed in with the eaves soffit giving a clean line to the edge and underside of the roof overhang without brackets or other projections.

EQUIPMENT—The service unit, including all kitchen and bath-

TEMPORARY



room fittings, is dimensionally interchangeable with the MOW standard unit. The chassis and built-in fittings are constructed of aluminium alloy. Vitreous enamelled sink and standard wash boiler are included. The cupboards, wardrobes, etc., in the house are constructed of aluminium alloy. The door construction eliminates drumming and provides considerable rigidity by the use of two sheets spaced apart by a narrow strip of a non-drumming material.

*Electrical Installation*—The house is fully wired in the factory, site connections between units being made with plug-and-bocket joints.

PROCESSES-The factory production of houses calls for many special processes owing to the necessity of keeping a steady flow through the factory. Such items as adhesion, painting, etc., must be speeded up to keep pace with the general production and to save the tremendous storage area required when units are kept waiting on a programme where each works produces one house, comprising 4 sections, every 12 mins. Production has been arranged by the various contractors, to be controlled by the conveyor assembly The Flowsheet, shown system. here, indicates the processes necessary for the production of the house.

FINISHES—Pure aluminium is naturally highly resistant to corrosion. On exposure to air, an extremely thin film of oxide isformed. This oxide is very resistant to acid or moisture and, therefore, completely protects the metal from any further oxidation. Sheet, therefore, clad with pure aluminium, requires no additional protection under normal conditions, and the roof of the house, which is left unpainted, weathers to a pale matt grey.

As the structural members are composed of a variety of alloys, including some copper bearing alloys which are not as corrosion resistant as the pure aluminium, the various sections are painted by dipping and then low temperature stoving in order to obtain a good protective paint cover.

The external wall sheets are finished with a rough-cast paint. The internal surfaces of plasterboard and fibre board are finished to standard MOW specification. The fireplace, in colour-anodized aluminium alloy, is designed with a shallow corrugated sheet back and a rolled strip surround.

HOUSE



THORESBY COLLEGE, KING'S LYNN. Built in 1510 as a residence for Secular Priors.

A<sup>S</sup> the donor had died before its completion, there was carved, in Latin, upon the entrance door, an injunction that the passer-by should 'Pray for the soul of Master Thomas Thoresby the founder of this place." The first part of the inscription was chiselled out, probably by order of the Earl of Manchester when, in 1643, the town capitulated to Cromwell's troops under his command. Portland cement never capitulates to rain, flood or frost when it is waterproofed with 'PUDLO' Brand waterproofing powder.



CEMENT WATERPROOFER

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

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

Sole Proprietors and Manufacturers

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

xxxiv] THE ARCHITECTS' JOURNAL for June 21, 1945



#### SNACK BARS RESTAURANTS



Vegetable Boiling Pans in a variety of sizes and types.

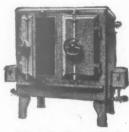


Hotcupboards and Carving Tables in a large variety of sizes with any combination of dishes to suit customers' requirements.

We offer expert advice and co-operation on any kitchen equipmen't problems, we are manufacturers of a very extensive range of Catering Equipment, suitable for Hotels, Restaurants, Cafes, Hospitals, Institu-Industrial tions and Canteens. The services of our Engineers and **Planning Department** are at your disposal, and illustrated literature is available on request.



Fish Frying Ranges fitted with automatic fuel control to pans with any number of pans to sult customers' requirements.



Quality Built

Automatic pattern Food and Vegetable Steamers in single or multi compartment.

CAFES · HOTELS · CANTEENS



== "Stotts" of Oldham ===

### IN The

all cu the w kind specie staff and ments

### PH

1993 ORCH Iones (Penc tion velop temp work The institu minist comm and o for sc The cinem entran betwee varyin They fronte of the The recrea door stage, from ing r docto Thre Centr the c centre play

S7

1994 AN W.L & Se tion

the :

ing

The

in a in 1 form 1943 been four

appe com theo Fell stah cohe Th

> Soil han vise lect. not exp

### INFORMATION

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

### PHYSICAL PLANNING

1993

USA Housing Project

ORCHARD HEIGHTS, WASHINGTON. Jones, Bouillon, Thiry and Sylliaasen. (Pencil Points, January, 1945.) Description of wartime housing project developed under FPHA. Self-contained, temporary community of 2,900 warworking families.

The lay-out shows four centres of social institutions: One the commercial and administrative centre, two others containing a community building and a nursery school, and one, well separated from traffic routes, for schools.

The management building, shops and cinema are grouped together at the main entrance to the scheme in the line of travel between home and work. The shops are of varying size, and include a covered market. They form three sides of a square, and are fronted by a covered footway. The centre of the area is given over to car-parking.

The two community buildings adjoin large recreational fields, and each contains two indoor games rooms, a community hall with stage, club room, where food is also served from a kitchen, and, on a second floor, meeting rooms. A separate entrance leads to doctors' offices and examination rooms.

Three nursery schools—or Child Service Centres—are included in the plan, two near the community buildings and one near the centre of the scheme. Each has room for play and rest and a kitchen for meals.

### STRUCTURE

#### 1994

Soil Mechanics

AN INTRODUCTION TO SOIL MECHANICS: W. L. Lowe-Brown. (Sir Isaac Pitman & Sons, 4s. 6d.) Elementary explanation of modern methods of investigating the stability of earth slopes and retaining walls.

The main part of this work was published in a series of three articles in *The Engineer* in 1943, and was reviewed in detail in Information Centre, No. 1,107 (A.J., April 1, 1943, pp. 225-6). The original articles have been largely rewritten and expanded, and four appendices have been added. These appendices are very useful; they show the comparison of various earth pressure theories and the practical application of Fellenius's method of calculating the stability of slopes when the soil depends on cohesion for its stability. The author closes on a note of caution.

The author closes on a note of caution. Soil mechanics is only a tool which, in the hands of an experienced engineer, when advised by a competent specialist on the subject, is a most valuable instrument, but it is not a substitute for engineering training and experience. In unskilled hands it might be a positive danger.

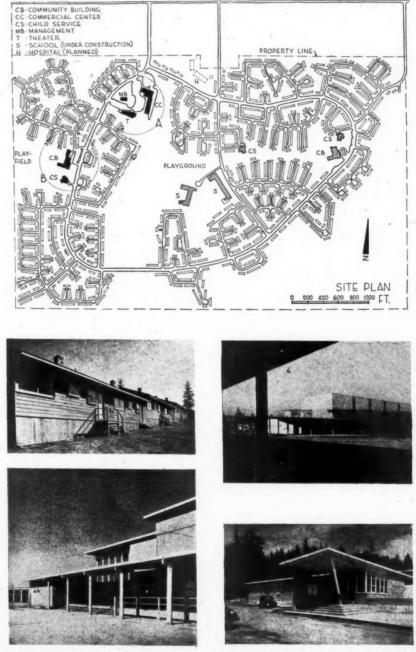
### CENTRE

1995

### **Reinforced** Concrete

REINFORCED CONCRETE DESIGN FOR ENGINEERING STUDENTS. J. S. Berry. (Hutchinson's Scientific and Technical Publications, 10s. 6d.) Introduction to theory and design of simple reinforced concrete structures. Working stress and ultimate strength theories.

This is the first book published in this country for students which does not consider the traditional standard method of design as gospel truth. "The standard theory of toddy is based on working stress, but as the ultimate strength theory gains support, as it is doing now, its adoption at some time in



Top, site plan of Orchard Heights, Washington. Left centre, site prefabricated terrace houses. Right centre, the theatre entrance from the Commercial Centre arcade. Below left, the Community Building. Below right, post office entrance and parking space. See No. 1993.

the enlightened future is inevitable, and the student should be aware of this fact, even if he tucks it in the back of his mind while the earns his living by the officially sanc-tioned methods of designing." It is a pity that the Author has not gone a little further into the ultimate strength methods by referinto the ultimate strength methods by refer-ring the students to tests. If the student is to adopt the Author's advice in the preface ("Don't accept any theory unless you are satisfied it represents the facts ") he has to acquaint himself with test results. The study of " detailed design of actual works," par-simulate reacommended by the Author, is no of " detailed design of actual works, pro-ticularly recommended by the Author, is no ticularly recommended. The doubt very useful, but not enough. The suggestion that the student should work out all his " own solutions, graphs and tables " may result in a great waste of time. Indeed, graphs drawn for various values of m congraphs drawn for various values of *m* con-tribute little, if anything, to the knowledge of the behaviour of reinforced concrete structures. The Author correctly explains the inconsistency of the standard method, and it is rather confusing for the student to read that the use of a variable modular ratio and design on the basis of ultimate stresses are alternative methods of remedying this inconsistency. The fact is that by varying the modular ratio the design becomes more the modular ratio the design becomes more complicated but hardly more correct. For this reason the LCC bye-laws, specifying m=15 for any mix and stress conditions, are preferable to the Code of Practice recom-mending a variable *m* between 11 and 18. In the description of Whitney's theory of design for ultimate strength *u* is explained as "ultimate cube strength of the concrete.

presents the cylinder strength of the concrete, which is smaller. With regard to the design of the portal

frame, a warning would have been desirable that the method used is only applicable to symmetrical frames with symmetrical loading. If either of these conditions is not ful-filled, side-sway may substantially alter the distribution of bending moments and has to be taken into account.

In general, the student should be warned that the study of this stimulating book will give him only an elementary knowledge of reinforced concrete design.

### HEATING and Ventilation

1006

Thermal Insulation

THE THERMAL INSULATION OF BUILD-INGS. N. S. Billington. (Journal of the Institute of Fuel, February, 1945, p. 62.) Review of theory and uses of thermal insulation for dwellings and industrial buildings.

The importance of adequate thermal insulation of buildings is growing in view of the higher standards of heating now being proposed, and in view of the increasing need for the conservation and right use of our coal resources. The calculation of the thermal transmittance of a simple structure is briefly discussed, and some properties of the various types of insulating material are reviewed. A valuable degree of insulation is obtained by the use of closed air-spaces. The use of insulation leads to economies in the size of heating plant and in the use of fuel, and in some cases may even reduce the total capital cost of a new building. There is, however, a limiting thickness of insula-There tion, beyond which the increased cost will exceed the estimated savings. This economic thickness needs to be evaluated for each building in the light of circumstance.

The insulation of the walls and roof of a building is shown to have an effect on the temperature of the surfaces of the building and hence on the feelings of warmth and comfort of the occupants. The exclusion solar heat is an important aspect of

insulation. thermal thermal insulation. For roof glazing, whitewash is recommended; this is also is also effective for thin roofing materials, although advantage may then be taken of the nonradiating properties of bright metallic surfaces. A white treatment, combined with an insulating layer, affords suitable protection in the case of concrete roof slabs.

In cases of intermittent heating, the inner surfaces of the building should preferably be of materials of low thermal capacity. The use of such linings also tends to reduce the nuisance of temporary condensation of moisture on interior surfaces; while adequate thermal insulation with good heating and ventilation can prevent permanent condensation.

Pattern-staining, such as occurs on lath and plaster ceilings, has been shown to be a thermal effect, and its appearance may be prevented or rendered less obtrusive by suitable insulation. This may prove especially important in non-homogeneous structures, such as are now being proposed. The increasing use of insulation will call for modifications in the design of heating appliances to enable fow outputs to be attained with high efficiency, and to allow of close control of the actual output.

Mist and Dust Collection

MIST AND DUST COLLECTION. C. E. Lapple. (Heating, Piping and Air Conditioning, October, 1944, p. 578.) De-scription of apparatus for sampling gases. Position of sampling 'tube discussed. End of long, straight duct preferred

### QUESTIONS

1997

and Answers

HE 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.

#### 1998 Taking up Former Trade

O I have recently been discharged from the Army, and wish to take up my old pro-fession of a wall and floor tiler. How should I set about this? Also what Government Regulations does one have to comply with?

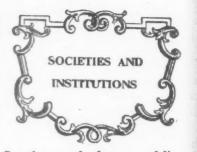
A You should write to: Ministry of Works, A.S. 67, Lambeth Bridge House, S.E.1, and apply for a certificate of registra-tion giving details as to the former name and address of your firm, the fact that you gave it up due to being conscripted, and also giv-ing the proposed new address. They will will then send you a questionnaire to be filled in.

#### Floor Hardener

Q Will you please recommend a chemical application which will at least give temporary hardness to an unsatisfactory stone slab floor, which is wearing and dusting badly?

1999

A We suggest you use a solution of silicate of soda grade p. 84, obtainable from the Imperial Chemical Industries. A mixture of one part of silicate of soda to four parts of water should be brushed over the floor thus filling in any holes or cracks with water-glass.



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 Except where inverted cover. commas are used, the reports are summaries, and not verbatim.

### TCPA

### Donald Barber

May 31, at 28, King Street, W.C.2 Lunch time meeting of the Town and Country Planning Association. Talk on SHOPPING CENTRES AND TOWN PLANNING, by Donald Barber, O.B.E. Chairman: F. C. Hooper.

**D.** Barber: Since it is bad for business to have isolated shops at street corners, and since they must be easily accessible to all customers, the retailers prefer to have shops bunched together. It is a mistake to make a shop so local that the economic scale of retailing becomes too small to do a good job. The Retail Distributors Association like to have Retail Distributors Association like to have shops on two sides of a street as these are They the most popular among consumers. did not want shops on arterial roads or round the sides of a big square. Neither do they want them facing a Town Hall. They do not want Department Stores to be in one group, with multiple shops in another and individual shops in a third—shops should all be mixed together. Similarly, the various trades should be intermingled. Conversely, they do not like to have banks and insurance offices mixed with shops—they can be grouped quite successfully. In other words the RDA does not want to zone commercial buildings all together - they should be divided into separate sub-zones for shops, banks, etc., wholesale warehouses, and so on. There is no objection to the carrying on of business or commercial activities in premises above shops, where these floors are not needed by the shops themselves. chummy atmosphere is perhaps the best way of describing what the shopkeepers want to aim at, although there are a few exceptions to this. For the same reason it is not desirable to mix gardens with shops. The lawns and shrubs and flower beds which town planners want to provide are very de-sirable assets, but not in a shopping centre. Probably this feeling arises because in the past there has been too little open space, so that when a small area in the middle of a





VESTIBULE

# A PLAN FOR TOMORROW-TODAY

The ability to visualise the future mends in design is vested in few. It may come from inspiration-but more often it is the result of hard work and long experience. If testimony be needed of our ability to assist you to plan for the future, it will be found in the many outstanding designs for the reconstruction of shops and commercial premises we have achieved in the past.

## GEORGE PARNALL & CS A BEDFORD SOUARE, LONDON, W.C. 1.

city is cleared there is always force in the suggestion that it should become a garden because of an overall shortage of gardens. But when 100 per cent. town planning is achieved gardens will be in places where people can conveniently linger in them and shopping centres are hardly the right place for that.

Shopping needs differ widely in various districts, so that it is difficult to say how many shops are needed in a given community. Certainly it would be madness to attempt to assess separate shopping needs for individual trades, but town planners obviously require to work to a total figure. In the case of developing an existing urban area this is a fairly simple matter, but in planning a new district one can only plan for a reasonable minimum number of shops. Later experience may show this to be insufficient; so that allowance must be made for expansion of shopping facilities. This is rather a difficult problem, but one which will lend itself to ingenious solutions. The worst sort of plan from this standpoint is one which surrounds the shopping zone with buildings of a kind which cannot conveniently be demolished later if more shops are needed. A popular idea among town planners today is to put shops into what is called a Precinct—a word now being used in rather a special, technical sense. The idea is to segregate road traffic from pedestrians. Certainly it is desirable to give reasonable free

A popular idea among town planners to-day is to put shops into what is called a Precinct—a word now being used in rather a special, technical sense. The idea is to segregate road traffic from pedestrians. Certainly it is desirable to give reasonable freedom for the pedestrian shopper to cross from side to side of the street, and one should plan so that through traffic does not enter shopping streets. But neither retailers nor the public will be very pleased if all road traffic is excluded from such streets. The general public needs local transport through shopping areas, and middle class shoppers like to drive their cars right to the shops.

Ways and means must be found of ensuring pedestrian safety without destroying the essential character of a shopping street.

### Trade Notes-

Fire resistance and spread of flame tests carried out by the Department of Scientific and Industrial Research on the oxylene treated doors, etc., of the Timber Fireproofing Company, Ltd., are believed to' be the most severe yet made of fireproofed wood. The tests were made at the Fire Testing Station of the Fire Offices Committee by officers of the Building Research Station. The two oxylene treated doors were of solid Canadian red pine, and were 7 ft. high, 3 ft. 3 in. wide, one 24 in. thick, the other, 14 in thick and the fire resistance test was con-

The two oxylene treated doors were of solid Canadian red pine, and were 7 ft. high, 3 ft. 3 in. wide, one 21 in. thick, the other, 14 in. thick, and the fire resistance test was conducted in accordance with British Standard Definitions No. 476—1932, for fire resistance, etc., of building materials and structures. The Definitions classify doors which are required to resist the passage of fire as follows:—

Grade A-6 hours. Grade B-4 hours. Grade C-2 hours. Grade D-1 hour. Grade E- $\frac{1}{2}$  hour, according to the length of time the following conditions are satisfied.

time the following conditions are satisfied. 1. "That the mean temperature of the unheated face shall not increase by more than 139 deg. C., nor the maximum temperature at any point by more than 167 deg. C., above the initial temperature." 2. "That cracks, fissures or other orifices

2. "That cracks, fissures or other orifices through which flame can pass shall not develop." -

develop." -3. "That the structure shall remain rigid and not collapse."

Both the oxylene treated timber doors satisfied these requirements for 1 hour, and can therefore be stated to offer Grade D fire resistance.

A first resistance. A first resistance test in accordance with the same British Standard Definitions was also carried out on a  $1\frac{2}{3}$  in. thick 10 ft. square oxylene impregnated timber bulkhead. The bulkhead also satisfied the conditions for one hour, and offered Grade D fire resistance. In the samples of oxylene treated Canadian red pine wood submitted to the spread of flame tests no flame spread occurred.

### ANNOUNCEMENTS

Mr. S. Yudkin F.F.S.(ENG.), now released from his duties as Senior Area Progress Engineer with the Emergency Works and Recovery Department of the MOW, has resumed his private practice as from 75, Chatsworth Road, N.W.2, Will. 1760, and would be pleased to receive up to date trade catalogues, information sheets, etc.

Mr. H. N. Stokes, L.R.LB.A., Chief Architect to George Ellison, Ltd., and Tufnol, Ltd., will be pleased to receive trade catalogues and communications with particular reference to industrial work at their works at Perry Barr, Birmingham, 22B.

Messrs. Northern Aluminium, Ltd., are opening a chain of sales and enquiry offices throughout the country. The first of these offices has been opened at 4, Chapel Walks, Manchester, 2. Plans are in hand to open others in London, South Wales, the North-Eastern area, and Scotland. Arrangements have already been made to deal with enquiries at the company's works at Middlemore Road, Birmingham.

Messrs. Milners Safe Co., Ltd., have changed their address to 58, Holborn Viaduct, London, E.C.1. Telephone: CENtral 0041/5. Telegrams: Holdfast, Cent, London.

Mr. Frank Bethell, L.R.I.B.A., and Mr. Chas. M. Swannel, F.R.I.B.A., lately of Victoria Heuse, Southampton Row, W.C.1, have by mutual consent dissolved their partnership. Mr. Chas. M. Swannell will continue to practice from No. 6, Raymond Buildings, Gray's Inn, W.C.1 (telephone: Holborn 1503).



Milners – The Safest Safe Investment!

NOTE NEW ADDRESS :---



Throughout the world the name of MILNERS' is a synonym for SECURITY. The same sound craftsmanship which has made MILNERS' SAFES and STRONG-ROOMS so universally respected is embodied

in MILNERS' STEEL EQUIPMENT, which is designed to promote office and factory efficiency. As soon as conditions permit MILNERS' organisation will resume

its world-wide service, using past experience to ensure

MILNERS SAFE CO. LTD., 58, HOLBORN VIADUCT, LONDON, E.C.1. Telephone: CENtral 0041/5 Telegrams: Holdfast, Cent, London

efficient designs for the future.

P/

Data

217

2' 8%

2 8

2 7:

2' 7

14-4

CR

### PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 21

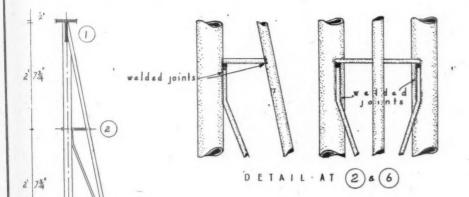
2' 812"

(4

2 82

3

5

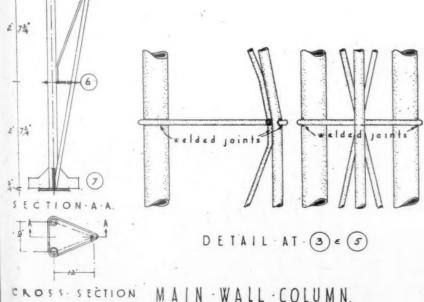


### MAIN WALL COLUMNS

The main wall columns are designed to carry the load from the roof trusses and to act as a beam to resist the horizontal forces on the external walls. The columns, triangular in cross section, have a double chord on the outer face to withstand compression due to bending and dead load, and a single inner chord to withstand tension.

The ease of connection and welded jointing at the node points greatly simplifies the design of tubular columns, enabling the lines of stress to be adhered to without elaborate transmission and resulting in a structural framework of exceptional lightness.

For the particular structural frame being detailed in this series of sheets (dimensions 80 ft. width by 150 ft. length by 15 ft. height to tie beam level) eight main wall columns were employed at 30 ft. centres.



NOTE.—These Data Sheets are appearing fortnightly in THE ARCHITECTS' JOURNAL the complete series is available in Folder Form and application for copies should be addressed to Scaffolding (Great Britain), Limited, Saunderton, Princes Risborough, Bucks.

ADVERTISER'S ANNOUNCEMENT

xxxviii] THE ARCHITECTS' JOURNAL for June 21, 1945



The SMITH TWO-WAY reinforced fireproof floor can be employed immediately for any flooring or roofing requirement. It is constructed with standardised pre-cast hollow concrete blocks.

The employment of patent telescopic centers permits the immediate use of the floor with the additional advantage of their removal in the minimum of time.

Limited quantities of TRIANCO TELESCOPIC CENTERS are now available for use in connection with suspended floors of all types. Write or phone without delay.



### THE FUTURE IS NOW

The Architect, Surveyor and Engineer of Municipal Councils are the pioneers of social progress.

Their specifications today for public buildings, housing and industrial undertakings will be the adopted standards of the community tomorrow.

INDESTRUCTO toughened glass is a major factor in the creation of new and better standards inasmuch as it constitutes a degree of safety hitherto unobtainable for general application.

While being crystal clear INDESTRUCTO toughened glass will withstand vibration, impact and pressure far beyond ordinary glass and even if subjected to extremes of violence only disintegrates into harmless crystals.

Telegrams : INDESTRUCTO, HARLES, LONDON.



'Phone : ELGar 7761-

M

BRITISH INDESTRUCTO GLASS LTD. PARK ROYAL ROAD LONDON, N.W.10.



of of ldngs

a ind ites ible TO

ion, ary mes less

NED S S





## Another wall that didn't have BRIGGS AQUALITE damp course

It always pays to specify ".Damp-course by Briggs." For the pure bitumen of an Aqualite dampcourse, moulded around a bitumen-saturated, sealed-in core of untearable canvas, presents a permanent barrier against damp and dry rot. A barrier which, though yielding to natural displacement, does not squeeze out under the weight of the superstructure.

WILLIAM BRIGGS AND SONS LIMITED, DUNDEE London – Vauxhall Grove, S.W.8. Also at Glasgow, Edinburgh, Liverpool, Bristol, Aberdeen, Norwich and Leicester.



Ensure quiet in the buildings you design by specifying

asbestos acoustical MATERIALS NEWALLS INSULATION CO., LTD. HEAD OFFICE AND WORKS: WASHINGTON, CO. DURHAM OFFICES & DEPOTS AT: BELFAST, BIRMINGHAM, CARDIFF, GLASGOW, LONDON, MANCHESTER, NEWCASTLE.

NEWALLS



SOFTWOODS · HARDWOODS · WALLBOARDS · PLYWOOD · PLASTERBOARD

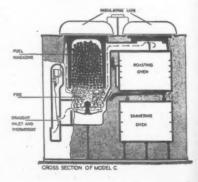
Facts about AGA

# Heat Storage Cooker

The AGA Cooker is a heat accumulator. The heat lost by radiation is so small that the kitchen temperature is hardly changed when the cooker is at full heat. This high efficiency is attained partly by the outer insulation and partly by the stark simplicity of the internal design, which enables the heat to be conveyed by the shortest route to every cooking point. Maximum heat is controlled by thermostat which feeds the various hot points to a known scale of temperatures — providing roasting heat, boiling heat and simmering heat at the several outlets. The fire units are made of special heat-resisting alloy. When the cooker has reached maximum heat, the fire is automatically damped down so that less heat is forthcoming. The result is that the fuel used seldom, if ever, burns to clinker - one of the reasons why fuel consumption is so low. The control also makes it possible to know in advance, and with measurable precision, how much fuel will be needed over any operating period.



p



You know where you are with an AGA Regd. AGA HEAT LIMITED (Proprs.: Allied Ironfounders Ltd.), Orchard House, 30 Orchard Street, Londor, W.T. Telephone: MAYFAIR 6131.



### Where Craftsmanship Counts

The manufacture of Paints and Varnishes is still largely governed by the availability of basic raw materials and by the limitations imposed by British Standard Specifications.

These conditions are common to all Manufacturers, but each has his own traditions and his own methods and it is here that craftsmanship comes into its own.

Nobles & Hoare, by reason of their 158 years' manufacturing experience, their highly skilled craftsmen and modern plant, providing for the finest grinding and processing, turn the available raw materials to the best possible advantage. Therefore,

P

GA

Regd.

ounders

### NOBLES & HOARE'S paints and varnishes

represent to-day's HIGHEST STANDARD. Supplies are limited because Nobles & Hoare never depart from their established practice of using only the finest raw materials available.

The manufacture of Nobles & Hoare's super quality Paints and Varnishes will be resumed at the earliest possible moment, and plans for meeting the post-war needs of the country are already in hand.

Nobles & Hoare

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

NEHNEHNEHNEHNEHNEHNEH

WE DON'T EXPECT

### ALL ABOUT

### FLOORS WALL SURFACES -THAT'S OUR JOB

WE'VE SPECIALISED FOR **OVER 18 YEARS-FLOORS** TO STAND UP TO ALMOST ANY TRAFFIC **CONDITION** — AT AN ECONOMIC COST

HEAD OFFICE : WEDNESBURY. Telephone: 0284 (4 lines) FILLODORILE LONDON OFFICE: ARTILLERY ROW, S.W.I Telephone: Abbey 1547-8

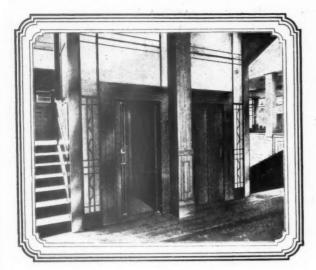


### BUILDING & CIVIL ENGINEERING CONTRACTORS -----



At the Service - for the Service of Architects

W.H.GAZE&SONS LTD., 40, CONDUIT STREET, LONDON.W.I.-KINGSTON-ON-THAMES-SURBITON-WALTON-BATH



R. le

01

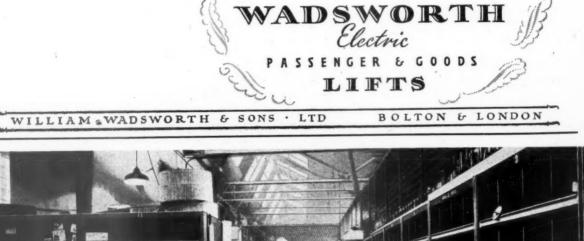
TD

feace of Mina

Peace of Mind-security-freedom from worry-these are the things in life worth paying for.

When you install a WADSWORTH LIFT you have made sure of these satisfying qualities. There is no short cut-no easy way. For us it means the result of 50 years' experience-of craftsmanship hidden out of sight but telling all the time. For you it means just the word WADSWORTH.

When you install a WADSWORTH LIFT you buy peace of mind!



- WALSALL ROAD - PERRY BARR



EVERTAUT

STEEL SHELVING . PARTITIONS BINS . CUPBOARDS . BENCHES ETC

IMITE

(Proprietors : J. B. Brooks

& Co. Ltd.)

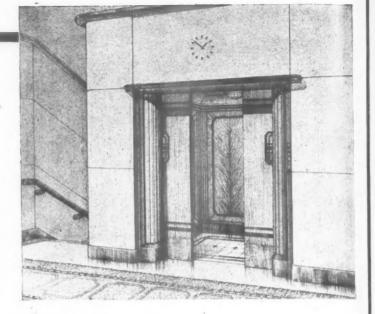
BIRMINGHAM

xliv] THE ARCHITECTS' JOURNAL for June 21, 1945

TYLER'S LTD.

9F STROUD

FOR ARCHITECTURAL DECORATION IN WOOD AND METAL.



Head Office and Works: London Road, STROUD. London Office : 49 Tottenham St., W.I



# PARAGON ROOF GLAZING

Paragon Glazing Co. Ltd. have pleasure in informing Architects, Builders and Contractors that they are now in a position to supply an entirely lead-clothed Steel Glazing Bar for new or existing buildings.

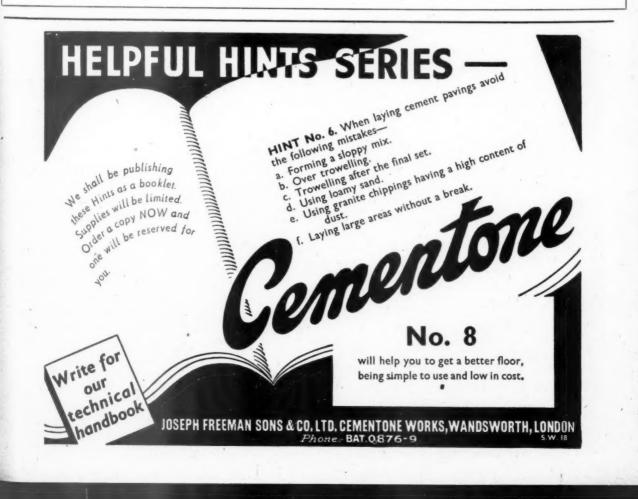
### PARAGON GLAZING CO. LTD.

Glass Roofing Manufacturers & Contractors 1 VICTORIA STREET, WESTMINSTER, S.W.1

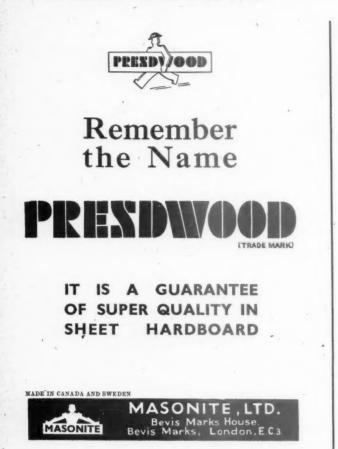
'Phone: ABBey 2348 (Private Br. Exchange.)

.1

'Grams : "Eclairage, Sowest, London."



xlvil THE ARCHITECTS' JOURNAL for June 21, 1945



## Information about LEAD sheet and pipe

and assistance with new applications

Most of the knowledge gained from past experience in the application of Lead to building problems is summarised in freely available Information Sheets and Technical Bulletins. The Technical Information

Bureau exists to supply information about new developments and to assist in new applications of this now unrestricted building material.

# LEAD

### TECHNICAL INFORMATION BUREAU

of the Lead Industries Development Council 34 EBURY STREET LONDON SW1



### The 22"B.J." ESSE HEATING STOVE

The pleasing exterior of this upto-date domestic heating stove was designed by Betty Joel. The stove is easily fixed, burns anthracite, coke or other smokeless solid fuel continuously yet with marked economy, and maintains an even, healthy temperature in the house. Other advantages are its labour saving, its cleanliness, and the elimination of daily lighting.

It's one of the ESSE series dependable, durable, economical

### SMITH & WELLSTOOD, LTD. Established 1854

Head Office :	BC	NN	YBRIDGE, SCOTLAND
LONDON		48 11	DAVIES STREET, W.1. LUDGATE CIRCUS, E.C.4.
LIVERPOOL		20	CANNING PLACE.
EDINBURGH		17	GREENSIDE PLACE.
GLASGOW		11	DIXON STREET, C.1.



Five years of war applied the extreme test to all fire-fighting measures... In fire-spread prevention the fire-services knew they had no greater ally than—



### FIRE RESISTING ROLLING SHUTTERS

GNOME HOUSE, BLACKHORSE LANE, WALTHAMSTOW LONDON, E.17 Telephone : LARkswood 2261

### SUPPLIES ARE AVAILABLE

(but only against orders supported by Government Contract Numbers) for all kinds of Masking and Protection and Identification of Pipe Lines.



#### CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal." War Address: 45 The Avenue, Cheam, Surrey, and should reach there by first post on Friday morning for inclusion

in the following Thursday's paper. Replies to Box Numbers should be addressed care of "The Architects' Journal," War Address: 45 The Avenue, Cheam, Surrev.

### **Public and Official Announcements**

Six lines or under, 8s.; each additional line, 1s. THE INCORPORATE ASSOCIATION OF ARCHITECTS AND BURWHORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: 75. Earon PLACE, LONDON, S.W.I. THL.: SLOANE 5015. 991

HEREFORDSHIRE COUNTY COUNCIL.

ADDITION OF THE COUNTY COUNCIL. Applications are invited for the following appointments on the Temporary Staff of the County Architect's Department. (a) One ASSISTANT ARCHITECT (Grade T.1). Salary 2400, by annual increments of 220 to 2460 per annum. Applicants must be Fellows or Associates of the R.I.B.A. Experience of School Design an advantage. (b) Four SENIOR ARCHITECTURAL ASSISTANTS (Grade T.2). Salary £300, by annual increments of 220 to 24600 per annum. Applicants must be Fellows or Associates of the R.I.B.A. (c) Six ARCHITECTURAL

 Applicants must be Fellows or Associates of the R.I.B.A.

 (c) Six
 ARCHITECTURAL
 ASSISTANTS

 (Grade T.J.)
 Salary £270, by annual increments of £15 to £360 per annum. Preference will be given to Associates of the R.I.B.A.
 (d) Two
 ARCHITECTURAL
 ASSISTANTS

 (d) Two
 ARCHITECTURAL
 ASSISTANTS
 (d) Two
 ARCHITECTURAL
 ASSISTANTS

 (e) Two
 ARCHITECTURAL
 ASSISTANTS
 (e) Two
 ARCHITECTURAL
 ASSISTANTS

 (e) Two
 ARCHITECTURAL
 ASSISTANTS
 (f) One ASSISTANT OUANTITY SURVEYOR
 (f) One ASSISTANT OUANTITY SURVEYOR

 (Grade T.2).
 Salary £150, by annual increments of £20 to £400 per annum.
 Applicants must be members of the Chartered Surveyor's Institution.

 (f) One QUANTITY SURVEYOR'S ASISTANT
 GRade T.3.).
 Salary £270, by annual increments of £15 to £360 per annum.
 Preference will be given to members of the Chartered Surveyor's Institution.

of £15 to £360 per annum. Preference will be given to members of the Chartered Surveyor's Institution. (h) One ASSISTANT BUILDING SURVEYOR (Grade T.3). Salary £270, by annual increments of £15 to £360 per annum. Applicants should have substantial experience of all Building Trades with some knowledge of Engineering and Elec-trical Services. Experience as Clerk of Works will be an advantage.

with some knowledge of Engineering and Elec-trical Services. Experience as Clerk of Works (i) One ASSISTANT BUILDING SURVEYOR (Grade T.4). Salary £200, by annual increments of £12 108. to £275 per annum. In accordance with the Council's regulations these appointments will be designated "temporary" for the duration of the war, and will thereafter be subject to one month's notice on either side, and will be subject to the County Council Regulations as to conditions of service of temporary staff. The assest and ite state salaries there will be as a medical examination. In addition to the stated salaries there will be paid a cost-of-living bonus, as applicable to Temporary Appointments (as present 14s, per week).

week). Forms of application may be obtained from the County Architect. W. Usher, A.R.I.B.A., County Offices, Bath Street, Hereford. Applicants are to state clearly for which appointment they are applying. Applications are to be received by the County Architect at the above address, not later than 10 a.m., Saturday, 30th June, 1945.

O CHIP CUTTERS MACHINERY . ETC

#### DEVON COUNTY COUNCIL.

### TEMPORARY SENIOR TOWN PLANNING ASSISTANT.

Assistant. Applications are invited for the above appoint-ment, at a salary of £500 per annum. Applicants should, by examination, be Cor-porate Members of the Town Planning Institute, and preference will be given to those who possess qualifications in architecture and/or engineering. Practical experience in the preparation and ad-ministration of planning schemes for Urban and Raral areas is essential. The appointment will be subject to one month'a applications, stating age, experience and quali-fications, present and past appointments, accom-panied by copiee of three recent testimonials, must be submitted to the undersigned by not later than 9h July. A. J. WITHYCOMBE, Clerk of the County Council. The Castle, Exeter.

The Castle, Exeter. 5th June, 1945. 835

### SOMERSET COUNTY COUNCIL.

### COUNTY ARCHITECT'S DEPARTMENT.

Applications are invited for the appointment of Temporary Class II (a) ARCHITECTURAL ASSISTANTS, at a salary within the scale £360 per annum by annual increments of £15 to £415 per annum, and Temporary Class II ARCHITECTURAL ASSISTANTS at a salary within the scale 510

per annum, and Temporary Class II ARCHITECTURAL ASSISTANTS, at a salary within the scale £310 per annum by annual increments of £10 to £350

Assistrants, at a salary within a set of 210 to 2300 per annum by annual increments of 210 to 2300 per annum. The commencing salaries will be determined by accordince 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, position in regard to Miltary Service and length of time required to take up new appointments, together with topies of three recent testimonials, should be sent to the undersfaced not mater than Monday, 2nd Juy, 1945. R. O. HARRIS, A.R.I.B.A., County Architect.

12th June, 1945.

### COUNTY BOROUGH OF WALSALL.

#### PUBLIC WORKS DEPARTMENT

Applications are invited for the following

Applications are invited for the following appointments:— (1) ARCHITECTURAL ASSISTANT (permanent) Grade F salary, £440 per annum, rising by £15 annual increments to £485 Candidates must be A.R.B.A. and experienced in School work. Although the successful applicant will ultimately be onggaed exclusively on School work, his duties at first will be on general work, including Housing. (2) ARCHITECTURAL ASSISTANT (per-manent), Grade E salary, £390 per annum, rising by £15 annual increments to £455. Candidates must be A.R.I.B.A. and experienced in Housing and general work. The above salaries are basic salaries, and are exclusive of cost of living bonus at present £99 166. 0d, per annum. The appointments will be subject to the Local Government Superannuation Act, 1937, and the successful candidates will be required to pass a medical examination. Applications and experience and accompanied by opies of three recent testimonials, must reach the undersigned not later than 30th June, 1945. *M. E. HABERSHON*. *Borough Engineer and Surveyor*. Council House, Walsall.

Borough Walsall. Council House, 8th June, 1945. 855

### COUNTY OF LINCOLN-PARTS OF KESTEVEN

### APPOINTMENT OF ARCHITECTURAL ASSISTANTS.

Applications are invited for the following two appointments of ARCHITECTURAL ASSISTANTS in the County Architect's Department. (a) SENIOR.—Salary £320 per annum, rising by annual increments of £15 and £5 to a maximum of £400 per annum, plus cost-of-living bonus on the Council's scale, at present 23s. per week. Ex-perience in Education and general County work is essential.

In Education and general County work is essential.
 (b) JUNOR.—Salary £260 per annum, rising by annual increments of £15 to a maximum of £320 per annum, plus cost-of-living bonus on the Council's scale, at present 235, per week. Experience in Education and general County work is desirable.
 These appointments are both subject to the provisions of the Local Government Superannuation Act, 1937, to a satisfactory medical certificate, and to the termination of the appointment de and the termination of the appointment de and the termination of the appointment.
 Applications, stating age, present appointment, experience and qualifications, and liability for National Service, together with copies of two recent last man the 7th July, 1948.
 Applications should state clearly for which of the appointment by are applying.
 The BLOW.
 Conney Offices,

County Offices, Sleaford, Lincs.

### BOROUGH OF ILFORD. APPOINTMENT OF ARCHITECTURAL ASSISTANT.

ASSISTANT. Applications are invited for the appointment of an Architectural Assistant in the Borough Engineer and Surveyor's Department. Applicants must have had previous experience of housing work, and should be Registered Archi-tects, and preference will be given to Associates of the Royal Institute of British Architects. The commencing salary will be between £320 and 2400 per annum depending upon the experi-ence and qualifications of the candidate, rising by annual increments of £20 to a maximum of £400 per annum. The salary is subject to the addition of a war bonus at present amounting to 23s. per week. The appointment is temporary, but is likely to

addition of a war bonus at present amountain 23s. per week. The appointment is temporary, but is likely to be for a minimum period of two years in the case of a suitable candidate, and will be sub-ject to the provisions of the Local Government Superannuation Act, 1937. Applications, stating age, present and previous positions and experience, must be delivered to the undersigned not later than first post on the 2nd July, 1945.

CHARLES N. ROBERTS. Town Clerk.

Town Hall, Ilford. 11th June, 1945.

858

#### GOVERNMENT OF NORTHERN IRELAND.

GOVERNMENT OF NORTHERN IRELAND. Vacancy for ASSISTANT ARCHITECT. Appli-cations are invited for the post of Assistant Archi-text in the Ministry of Health and Local Govern-ment in connection with planning and housing in Northern Ireland. The post is temporary for a minimum of two years. Candidates must be A.R.I.B.A. or equivalent, and possess a recognised qualification in Town Platining. Preference will be given to candidates with previous experience in planning and other things being equal, to those candidates who are ex-servicemen of the 1914-18 or the present war. Salary, 2560-2550 per annum according to qualifications and experience, plus War Bonus of 260 per annum. Write, quoting E.A.1412A, to Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for application form, which must be re-turned completed by 2nd July, 1945.



ACTON LANE . WILLESDEN . N W 10 . TELEPHONE: WILLESDEN 6363 (BUINES

ROTAPAN LOW PRESSURS STEAN COOKERS · FOOD CONSERVERS AND REVIVERS

ASSI require Salary, fication war bo war be Appo Local Medica Appli date o experie of pos Q.C.I., Labour Sardini 4.6.A.

C Appli an Ass the Ci £600 p Cand qualify

and m of age. and er The a medi poratio within Appli perienc monials O.B.E.,

854

uildha th J Assist

Guildha

ELI API

Appli appoint the En salary Yorksh Admini cal Serv cost of

Appli A.R.I.E

BRI

PH

#### BOROUGH OF BARKING.

ASSISTANT ABCHITECT, preferably A.B.I.B.A., required for the Borough Architect's Department. Salary, 2350-4405 per annum, according to quali-fications and experience, plus £59 16s. per annum

Appointment is subject to provisions of the Local Government Superannuation Act, 1537. Medical examination required. Applications, which must be in writing, stating date of birth, full details of qualifications and experience (including a list in chronological order f posts held), and quoting Reference Number Q.C.I., should be addressed to the Ministry of Labour and National Service, Appointment Office, Sardinia Street, Kingsway, W.C.2. 4.6.A.16. 845 Sardinia 4.6.A.16.

#### CITY OF NOTTINGHAM.

#### CITY ENGINEER'S DEPARTMENT.

CITY ENGINEER'S DEPARTMENT. Applications are invited for the appointment of an Assistant Architect on the permanent staff of the City Engineer's Department at a salary of 2600 per annum, plus war bonus. Candidates must have passed the examination qualifying for Associate Membership R.I.B.A., and must be registered Architects under 45 years of age, with considerable experience in the design and erection of large Public Buildings. The successful candidate will be required to pass a medical examination, to contribute to the Cor-poration's Superannuation Fund, and to reside within the City boundary. Applications, stating age and full details of ex-monials, are to be submitted to R.M. Finch, O.B.E., M.Inst.C.E., City Engineer and Surveyor, Guidhall. Nottingham, not later than Wednesday, "Assistant Architect." J. E. RICHARDS.

J. E. RICHARDS Town own Clerk.

Guildhall, Nottingham.

EAN

### ELLAND URBAN DISTRICT COUNCIL. APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the temporary appointment of Architectural Assistant, in the Engineer and Surveyor's Department, at a salary under Grades D and E of the scale of the Yorkshire Provincial Council for Local Authorities Administrative, Professional, Technical and Cleri-cal Services, according to age and experience, plus cost of living boons at present £59 16s, 0d. Applicaturs must be registered Architects and A.R.I.B.A., or equivalent, and have had consider-

able experience of Local Authorities' Housing Schemes and in the design of Municipal Buildings Schemes

generally. Applications, endorsed "Architectural Assistant," stating, age, qualifications, details of experience, and position regarding National Service, together with copies of three recent testimonials, to be sent so as to reach the undersigned not later than the 7th July, 1945: Applicants should state whether, to their know-ledge, they are related to any member or Senicr Officer of the Council. Canvassing will be a disqualification. A W HOWARTH.

A. W. HOWARTH, Clerk of the Council. The Council Offices, Southgate, Elland, Yorkshire. 860

### STAFFORDSHIRE EDUCATION COMMITTEE. ARCHITECTURAL ASSISTANTS.

Applications are invited from Architectural Assistants as under :-Senior Assistants --Salary, £400 to £450. Junior Assistants --Salary, £200 to £300. Junior Assistants --Salary, £200 to £300. War Bonus in addition (at present £59 16s. 0d.). Appointments subject to provisions of Local Government Superannuation Act, 1937, subject to medical examination. Applications from men in H.M. Forces will be considered.

con Applicants

considered. Applicants should apply by letter giving full particulars of qualifications and experience, to-gether with copies of three recent testimonials. Experience of school buildings desirable. Applications should be submitted by the 10th July, 1945, to the Architect, County Education Offices Stafford

Offices, Stafford. F. A. HUGHES, Director of Education. 861

E.M.

244

#### BOROUGH OF CHELMSFORD. TECHNICAL ASSISTANTS.

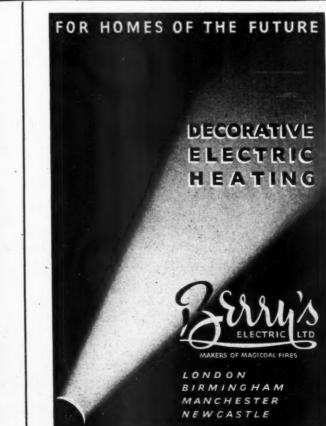
Applications are invited for the following tem-porary appointments in the office of the Borough Engineer and Surveyor:— (a) Planning Assistant. Salary, £420 per annum, rising by annual increments of £20 per annum to £460 per annum, plus cost of living award, at present 23s, 0d. per week for adults. Preference will be given to persons who have passed the Final Examination of the Town Plan-ning Joint Examination Board or who hold equivalent qualifications. (b) Architectural Assistants (two appointments).

Salary, £365 per annum, rising by annual incre-ments of £15 per annum to £410 per annum, plus cost of living award, at present 25a. 0d. per week. Preference will be given to persons who have passed the Final Examination of the Royal Insti-tute of British Architects or who hold equivalent sousing lay-outs, etc. The appointments will be terminable by one month's notice on either side. Applications, stat-ing age, qualifications and experience, accom-panied by coopies of three recent testimonials and endorsed "Planning Assistant" or "Architectural Assistant" respectively, should reach the under-signed not later than noon on Wednesday, th July, 1945. WINCENT J. WILLIS, Minst. & Cy.E., Reg. Arch., Borugh Engineer, Surveyor and Planning Officer. Municipal Offices, Rainsford House, Duke Street, Chelmsford. 13th June, 1945.

SOMERSET COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT APPOINTMENT OF BUILDING SURVEYOR.

The person appointed will be required to deal with works of a character, which will include contracts. improvements and maintenance of County Buildings, reporting clearly on structural matters and preparing specifications, sketch plans and estimates relating to the above; also dealing with all correspondence connected therewith. The successful applicant will be required to provide himself with a car for which an allowance in accordance with the scale adopted by the County Council will be made. Applicants must not be more than 45 years of age.

County Council will be made. Applicants must not be more than 45 years of age. The salary attached to the appointment is £250 per annum, rising annually by £12 10s. 6d. to £350 per annum, from which a deduction will be made in respect of superannuation. The commencing salary will be determined by experience and qualifications. War bonus in accordance with the Council's scale to be paid in addition to the above salary. The appointment is subject to the provisions of the Local Government Fuperannuation Act, 1937, and the successful applicant will be required to pass a medical examination. Applications, stating age, particulars of experi-ence, position in regard to Military Service, and when able to commence duties and enclosing copies of three recent testimonials, must reach me not later than Monday, the 2nd July, 1945. County Architect. Text Street, Taunton, Somerset. 12th June, 1945. Beta





#### Architectural Appointments Vacant

Four lines or under, 4s ; each additional line, 1s. A RCHITECTURAL ASSISTANT required im-mediately, in private practice; permanent position; must be capable of war damage schedules, surveys, and general post-war develop-ment. Clark, 44, Great Russell Street, W.C.1.

A RCHITECTURAL ASSISTANT required in 804 A RCHITECTURAL ASSISTANT required in housing and small commercial buildings; man with experience in private practice and quanti-ties preferred; salary by arrangement, according to qualifications; car owner/driver. Box 827. A RCHITECTURAL DRAUGHTSMEN re-quired in West Norfolk; preferably Juniors studying for R.I.B.A. examinations; must be good surveyors and car driver; salary by arrange-ment. Box 828

ment. Box 828 A RCHITECTURAL ASSISTANT required in small Office; good designer, with knowledge of specifications and detail essential. Particulars with age and salary to Box 819. N ORTH WALES. - Architectural Assistant to Jones, Bwthyn Hedd, Llanfyllin, Mont. Phone : Llanfyllin 46. 857

Lianfyllin 46. 857 ACHITECTURAL ASSISTANT required, mostly for domestic work, repairs and estate development, Enfield and District. Apply, giving fall particulars to Box 859. WANTED, immediately, Senior and Junior Architectural Assistants, South-West area. State experience and salary required. Gallan-maugh & Nicholls, L/A.R.I.B.A., Chartered Archi-tects, 30, High Street, Bridgwater.

tects. 30, High Street, Bridgwater. QUALIFIED Architectural Assistant, preferably with experience in the preparation of work-ing drawings and details for houses, hospitals, fac-tories, required for established office in the North of England. Afply, with full details, salary required, when available, etc., to Box 846. RCHITECTURAL ASSISTANT required, hav-to make surveys, take levels, and prepare working drawings from sketches. Write, stating age, ex-perience and salary required. Welch & Lander, R.I.B.A., 38, Gloucester Place, Portman Square, W.I.

**R** EQUIRED immediately, experienced Archite-tural Assistants. Must be first-class draughts-men and well trained, for important large scale work. Apply, stating age. salary and experience. Hertert J. Rowse, P.R.I.B.A., Martins Bank Building, Liverpool 2. 848

#### Architectural Appointments Wanted

Architectural Appointments Wanted DESIGNER (light welded construction); interested in post-war appointment with pro-gressive firm; has practical experience and valu-able contacts. Box 8. Archittectr's ASSISTANT, had 12 years' industrial and housing experience, requires progressive position in London or West Riding Vorkshire office. Box 29. Time STUDY and Production Engineer, having had 5 years pre-war Architectural experience or building and allied trades) with view to post-var position. Box 30. Archita, offices, schools, and general architec-tural practice is able to undertake additional work. Bredistered Architectural schools and REISTERED ARCHITECT (35). ARIAS

Box 28.
 Registrere and the connectance manufacture is able to many track and the experience, including Schools, Public Buildings and Housing Schemes, desiring progressive appointment London or 100 miles, wishes to arrange personal interviews while in London June 25th to July 12th. Box 31.
 Richtfer And Schemes, Description and the progressive company, varied experience. Brewery work a speciality, or Managing of any Building Maintenance Department; at present employed as Architect and Manager to arge Midlands Public Works Contractor. Salary by artangement. (Midlands area preferred). Box 32.

#### **Other Appointments Vacant**

Four lines or under, 4s.; each additional line, 1s. REPRESENTATIVES required with established connections in London and Provinces. Write full particulars Box 852.

full particulars Box 852. **PRIVATE** SECRETARY (Shorthand-Typing Architects working on high priority housing. Interesting work. Telephone: Abbey 331. 847 **Agging and Argentian State S** 

#### Planning

Planning As originators of the Auto-Recorder System of Machine Milking, we have had extensive experi-ence of planning layouts to accommodate the new technique. The Ministry of Agriculture's Clean Milk Bill, when passed, will mean a large increase in the number of new or modified farm buildings required. The position will be affected also by the findings of the English and Scottish Commissions on this important subject. The service of our Technical Depart-ment is available to any Architect who may be consulted in these matters. Write in confidence to : Gascoignes (Reading), Ltd., Berkeley Avenue, Reading.

Partnership Siz lines or under, 8s.; each additional line, 1s. A. R.I.A.S., Reg. Arch. (35), 18 years' experi-and Survey of Industrial, Commercial and Domes-tic Buildings, seeks partnership or practice in England or Scotland. Box 863.

#### For Sale

Four lines or under, 4s.; each additional line, 1s. DUMPY LEVEL FOURPIN, complete with case and tripod; maker, Lennie, Edinburgh. Perfect condition. Apply Box 608, or phone Edinburgh 32000. 855

Terret condition. Apply Box 608, of phone Edinburgh 32000. 855 SET of Architect's Plated Drawing Instruments in leastner case with additional waterproof case. Brand new. Ten guineas. Write to Witnesham Hall, Ipswich, Suffolk. A beautiful set and good bargan. TIPPLED PANELS, 6 ft. by 2 ft., 6 ft. by 3/16 in. thick; in pastel shades of grey, pink, primrose, brown and white, st 6s. 9d. per sq. yd.; free delivefy in London area on orders of 350 sq. yds. or more. Stamford Trading Co., Ltd., King William Street House, Arthur Street, London, E.C.4. 836

#### Miscellaneous

Four lines or under, 4s.; each additional line, 1s. Four lines or under, 4a; each additional line, 1a. A. J. BINNS, LTD., specialists in the supply support of the supply of the supply of the supply guard rail, factory partitions and gates. 53, Gt. Marthorough 84, W.I. Gerrard 4223-4224-4225. F. J. BAYNES, LTD., established over 100 Engineers. 99/101, 8t. Paul's Road, N.I. Cannonbury 2552. Description of the supply of the supply of the supplementation of the super-supplementation of the supplementation of the super-supplementation of the supplementation of the super-supplementation of the super-

Cannonbury 2552. OFFICE required by Architect; W.1 or W.C.1 district; two rooms or one large. Box 818. MONOMARK Service. Permanent London address. Letters redirected immediately. Confidential, 5s. p.a. Royal Patronage. Key tags 3 for 1s. 3d. Write BM/MONOSR, W.C.1. 44 FISNCING AND GATES of every type, supplied and erected. Specialists in chain link Boultan & Paul. Limited. Norwich. 662 WANTED.-One set of "Arts El Matiers Canton Price CaTALOGUES and Price Lists (refer-

TRADE CATALOGUES and Price Lists (refer-ring to housing, commercial and industrial work) will be gratefully received by Mrs. Marianne Walter, A.R.I.B.A., 8, Newbould Lane, Sheffield, 10.

Sheffield, 10. 2010 CENTRAL HEATING OIL BURNERS.-Insist on the British-made Parwinac-no stoking, clean, trouble free; no waiting for coal or coke deliveries; available now if oil permit obtainable. Parker, Winder & Achurch, Ltd., Makers, 80, Broad Street, Birmingham, 1. 992 An Exhibition of Modern Bullding Methods applied to Houses to suit individual needs. Hat's, 196, Tottenham Court Road, W.1. 744

#### **Educational Announcements**

Four lines or under, 4s.; each additional line, 1s. Four lines or under, 4s.; each additional line, 1s.
 B.I.B.A. QUALIFYING EXAMINATIONS. Mr. C. W. Box, F.E.I.B.A., M.R.San.I.
 Courses by Correspondence and Personal in Studio. 115, Gower St., London, W.C.I.
 TRUEFFORM: RUMFOR 3305 and 3906
 R.I.B.A. and T.P. INST. EXAMS. Private Courses of Tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, 161, West Heath Road, N.W. 3. Tel.: SPE 5319.



### INSTRUCT by Postal Method

is offered by the world's largest and greatest correspondence school in the following subjects : Surveying and Mapping Municipal Engineering Plan and Map Draughtsmanship Structural Engineering Concrete Engineering Structural Drawing

Architecture Architectural Drawing

Architectural Drawing and Designing Building Construction and Interior Work Building Construction Building Specifications Building Specifications and Quantities Quantity Surveying Structural Steelwork Civil Engineering

Construction Draughts-manship Sanitary Engineering hip Air Conditioning Heating and Ventilation

Special Courses for the Diplomag

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

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

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





R.C.CUTTING & CO.LTD

LIGHTNING PROTECTION DEPT. VICTORIA STREET, S.W.J. TEL.: ABBET BOAS MAGEMENTER AND MARKED TAPPENDITH

H

NO

Part

A. 1



Alphabetical	Index	to	Advertisers
--------------	-------	----	-------------

	PAGE		PAGE		PAGI
Accrington Brick Co		Forrest, George, & Son, Ltd		Nobles & Hoare, Ltd.	xJ
Adams, Robt. (Victor), Ltd		Franki Compressed Pile Co., Ltd		North British Rubber Co., Ltd	
Aga Heat, Ltd.	xl	Freeman, Joseph, Sons & Co., Ltd	xlv	Northern Aluminium Co., Ltd.	-
Aidas Electric, Ltd		Froy, W. N., & Sons, Ltd.		Oliver, Wm., & Sons, Ltd.	
Air Conditioning & Engineering, Ltd	xlii	Gaze, W. H., & Co., Ltd	xlii	Paragon Glazing Co., Ltd.	xly
Airscrew Co., Ltd., The	xxviii	Gray, J. W., & Son, Ltd.		Parnall, George & Co., Ltd.,	TIT
Allied Ironfounders, Ltd.	AAVIII	Greenwoods & Airvac Ventilating Co		Pilkington Bros., Ltd.	
Allied Paints & Chemicals, Ltd.		Griffiths Bros. & Co. (London), Ltd		P.I.M. Board Co., Ltd., and Sundeala	
					i
Aluminium Union, Ltd.	11	Haden, G. N., & Sons, Ltd		Board Co., Ltd.	L
Architects' Benevolent Society	11	Hall, J. & E., Ltd.		Poles, Ltd.	
Ardor Insulation Co., Ltd		Harris & Sheldon, Ltd.		Pressed Steel Co., Ltd.	
Banister, Walton & Co., Ltd.		Harvey, G. A., & Co. (London), Ltd	iii	Prior Stokers, Ltd.	1
Bartlett, G. F. E., & Son, Ltd.	vii	Hardtmuth, L. & C., Ltd.	11	Prodorite, Ltd	X
Bath Cabinet Makers & Arteraft, Ltd	11	Haskins	xlvii	Pyrene Co., Ltd.	. 1
Benham & Sons, Ltd		Henderson, P. C., Ltd.	ii	Radiation, Ltd.	X
Berry's Electric, Ltd.	xlix	Henleys Telegraph Works Co., Ltd., The		Restall, Fredk., Ltd.	
Bigwood, Joshua, & Son, Ltd		Hiduminium Applications, Ltd		Roberts, J. W., Ltd.	li
Birmingham Guild, Ltd., The	v	Hills, F., & Sons, Ltd		Robinson & Kershaw, Ltd	
Blackburn, Thomas, & Sons, Ltd		Hilton, James, & Son (Leigh), Ltd		Rownson, Drew & Clydesdale, Ltd	
Booth, John, & Sons (Bolton), Ltd	-	Hope, Henry, & Sons, Ltd.	xxxii	Ruberoid Co., Ltd.	
Braithwaite & Co., Engineers, Ltd.		Horseley Bridge & Thomas Piggott, Ltd.	44411	Rustproof Metal Window Co., Ltd.	
Briggs, William, & Sons, Ltd.	xxxix	Ideal Boilers & Radiators, Ltd.		Sadd. John. & Sons. Ltd.	XXV
British Artid Plastics, Ltd.	xlix		Acres and a second	Sanders, Wm., & Co. (Wednesbury), Ltd.	
British Artia Plastics, Ltu.	XIIX	Industrial Engineering, Ltd	1		XXV
British Electrical Development Assoc		International Correspondence Schools	1	Sankey, J. H., & Son, Ltd	
British Industructo Glass, Ltd	xxxviii	Isteg Steel Products, Ltd		Sankey, Joseph, & Sons, Ltd	X
British Steelwork Assoc., The		Jenkins, Robert, & Co., Ltd.	11	Scaffolding (Gt. Britain), Ltd.	20.044
British Trane Co., Ltd.	xliv	Jiewood, Ltd.		Semtex, Ltd.	XX
Broadcast Relay Service, Ltd		Jones, Samuel, & Co., Ltd.	xlvii	Sharman & Sons	
Brown, Donald (Brownall), Ltd		Kautex Plastics, Ltd.	xii	Siegwart Fireproof Floor Co., Ltd	
Brush Electrical Engineering Co., Ltd		Kerner-Greenwood & Co., Ltd.	xxxiii	Smiths' Fireproof Floors, Ltd.	XXXV
Bryce White & Co., Ltd.	liii	Kerr, John, & Co. (M/r.), Ltd		Smith. Henry (Constructional Engineers)	-
Carlisle Electrical Manufacturing Co.,		Ketton Portland Cement Works	XXXVIII	Smith & Rodger, Ltd	
Ltd	xviii	King, J. A., & Co., Ltd		Smith & Wellstood, Ltd	xl
Carrier Engineering Co., Ltd	li	Lacrinoid Products, Ltd.		Spiral Tube & Components Co., Ltd	xl
Celotex Ltd.	xi	Laing, John, & Co.		Steel & Co., Pressings, Ltd.	1
Cellon, Ltd.	xiii	Lancashire Dynamo & Crypto, Ltd	xlviii	Stelcon (Industrial Floors), Ltd.	3
Jement Marketing Co., Ltd.	ix			Stott, James & Co. (Engineers), Ltd.	TTT
Jarke & Vigilant Sprinklers. Ltd.	1.8.	Lead Industries Development Council	xlvi		XXX
	3222	Limmer & Trinidad Lake Asphalte Co		Sutcliffe Speakman & Co., Ltd	-
Colt Ventilation, Ltd.	liii	Lockerbie & Wilkinson (Tipton), Ltd		Tarmac, Ltd.	3
rittall Manufacturing Co., Ltd		London Brick Co., Ltd.	xxii	Telephone Rentals, Ltd	x
rittall, Richard, & Co., Ltd		Mallinson, William, & Sons, Ltd		Tentest Fibre Board Co., Ltd.	X
Cutting, R. C., & Co., Ltd.	1	Masonite, Ltd.	xlvi	Thompson Beacon Windows, Ltd., John	
Davidson, C., & Sons, Ltd		McArd, Robert, & Co. Ltd		Tretol, Ltd.	
Docker Brothers		McCall & Co. (Sheffield), Ltd		Trussed Concrete Steel Co., Ltd	
Durasteel Roofs, Ltd		McKechnie Brothers, Ltd		Tylers, Ltd.	x
Duresco Products, Ltd		McNeill, F., & Co., Ltd.		Underfeed Stoker Makers' Assoc	XX
Cagle Pencil Co		Metropolitan-Vickers Electrical Co		Uni-Seco Structures, Ltd.	xly
Casiclene-Porcelain Enamel (1938). Ltd.		Midland Electric Mfrg. Co., Ltd.	· · xavi	United Ebonite & Lorival. Ltd	
Edgar, Wm., & Son, Ltd.	xxiii	Midland Woodworking Co., Ltd	XXX	Universal Asbestos Mnfg. Co., Ltd.	
Illison, George, Ltd.	aam	Mint, Birmingham, Ltd., The	AAA	Wadsworth, Wm., & Sons, Ltd.	X
English Electric Co., Ltd.	x	Mills Scaffolding Co., Ltd.	liv	Walker, Crosweller & Co., Ltd.	A
English Joinery Manufacturers' Assoc	A	Millis Scallolulug Co., Ltd.		Walterisation Co., Ltd.	3
In Tout Cas Co Ltd		Milners Safe Co., Ltd.	xxxvi		2
En-Tout-Cas Co., Ltd		National Federation of Demolition Con-		Wardle Engineering Co., Ltd	
Esavian, Ltd.	1	tractors	xviii	Ware, W. C., & Sons, Ltd.	
Etchells, Congdon & Muir, Ltd		Newalls Insulation Co., Ltd.	XXXIX	Warerite, Ltd.	1
Evertaut, Ltd.	xliii	Newsum, H., Sons, & Co., Ltd	xxi	Wimpey, George, & Co., Ltd	
			-		
For Appoint	monta (TIT.	anted or Vecent) Competitions Onen Deser			
		anted or Vacant), Competitions Open, Draw Miscellaneous Property and Land Sales—se			



