



## THE PUBLIC

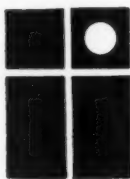
demands that Post War Housing shall provide the highest standard of living the Architect can plan.

## VENT-AXIA

will play its part in satisfying this demand by supplying a method of mechanical ventilation which by its easy installation, low running costs and high efficiency is ideally suitable for home use. Five years of War service in Factories, Hospitals, Shelters, Canteens and Service Vehicles have proved the reliability and effectiveness of VENT-AXIA Ventilating Units. Our technical advice and service is at your disposal.

Illustrated is a Kitchen-Living Room designed by the Gas Industry incorporating a VENT-AXIA Stale Air Extractor.

*For Better Air Conditions*



*in the Post-War Home*

VENT-AXIA LTD., 9, VICTORIA STREET, LONDON, S.W.1 & MANCHESTER & GLASGOW

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## PRISONERS OF WAR STUDY FOR EXAMINATIONS

### WILL YOU HELP THEM?

Two Pilot Officers in a German prison camp have recently passed the Intermediate Examination of the Royal Institute of British Architects. Hundreds of other prisoners are preparing for examinations, or have already taken them, in Architecture, Surveying, Town Planning, Engineering and many other subjects.

Far from home, deprived of physical freedom, often without quiet or privacy for study, these men are preparing now for the tasks of post-war reconstruction. The Educational Books Section of the Red Cross and St. John are doing everything possible to help them. But many of the books needed by the prisoner-students are difficult to obtain. So will you help as well? Please see if you have any of the books listed, or books of similar type. They should be in good condition to stand the journey and unmarked to meet censorship regulations.

#### BOOKS NEEDED BY PRISONERS OF WAR

**MITCHELL:** Building Construction. Vols. I and II.  
**FLETCHER:** History of Architecture.  
**ADAMS:** Elements of Concrete Design.  
**BLAKE:** Drainage and Sanitation.  
**OVERTON:** Heating and Ventilating.  
Books on Technical Drawing and Draughtsmanship.  
**PALMER:** Practical Upholstery.  
**PATHORE:** Modern Furnishing and Decoration.  
**IONIDES:** Colour in Everyday Rooms.  
**HOLMES:** Colour in Interior Decoration.  
**QUENNELL:** Everyday Things in England (any vols.).  
**FABER & BOWIE:** Reinforced Concrete Design. 2 vols.  
**JAGGARD & DRURY:** Architectural Building Construction. 3 vols.  
**FOWLER:** Architects' Builders' and Contractors' Pocket Book.

PLEASE SEND YOUR BOOKS TO

The Secretary, Educational Books Section, Prisoners of War, marking the parcel "FOR GENERAL USE."



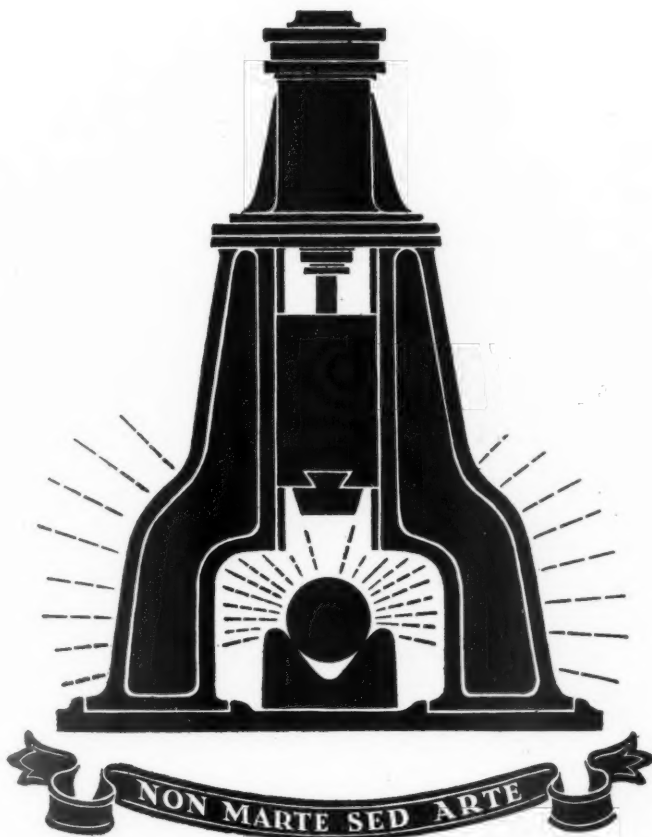
## RED CROSS & ST. JOHN WAR ORGANISATION

THE NEW BODLEIAN, OXFORD

(Red Cross & St. John Fund—Registered under the War Charities Act, 1940.)



This space has been given to the Red Cross by  
**THE CRITTALL MANUFACTURING CO. LTD.**



This was a trade device adopted by James Nasmyth, an engineering genius of the nineteenth century. He reversed the family motto—originally “Non arte sed marte” (“Not by art but by war”)—and adopted the steam hammer—“The most potent form of the mechanical art”—in place of the family arms, which consisted of a hand dexter with a dagger between two hammers with broken shafts. These arms and certain lands had been granted to an ancestor for services rendered to the King of Scotland when, as a fugitive disguised as a smith’s striker, he was discovered to be “nae smyth” but a valiant fighter. Light metals in Nasmyth’s day were still laboratory curiosities, but in modern times they are essential materials of construction with excellent mechanical properties, and—what is more—they can be supplied in any wrought or cast form. Light metal forgings and drop stampings are manufactured by Birmetals Limited in all the forging alloys of aluminium and magnesium (Elektron). The output is, at present, absorbed for war purposes, but let us hope that the United Nations will soon be able to follow James Nasmyth’s example of reversing the motto and return to the sanity of “Non marte sed arte”. Meanwhile, for your post-war requirements of light alloy forgings, please take note of Birmetals Limited.



**BIRMETALS LIMITED · QUINTON · BIRMINGHAM · 32**

# LEAD

## can now be used without restrictions



The National interest no longer requires you to "make-do" with temporary materials in place of Lead sheet or pipe—either for new work or repairs. Not only where it has always been recognised as indispensable, but in all cases where it is a more satisfactory material, Lead can now be used without restrictions. Remember, it is not only Lead itself, with its unique workability and protective properties, which is at your service, but all the information gained from past experience and all the expert knowledge necessary to assist in new applications.



**TIB** Most of the knowledge gained from past experience in the application of Lead sheet and pipe 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.

**h**  
LEAD

**LEAD INDUSTRIES DEVELOPMENT COUNCIL**  
EAGLE HOUSE, JERMYN STREET, LONDON, SW1



## ROOFS OF THE NATIONS



*Ann Hathaway's Cottage*

Stratford-on-Avon  
England

This charming little thatch-roofed cottage still stands in substantially the same condition as when Shakespeare came here to woo his future wife, and one wonders if it were here he wrote the following lines (which are attributed to him)

"To melt the sad, make blithe the gay,  
To charm all hearts, Anne hath-a-way;  
She hath-a-way,  
Anne Hathaway,  
To breathe delight, Anne hath-a-way."

Many famous British buildings are protected by BRIGGS ROOFING — in all instances our trained specialists co-operated closely in the construction of the roof. And, they will co-operate just as closely in the re-roofing of bomb-scoured Britain — using to advantage their war-time experience and research in the reconstruction of the peace.

# BRIGGS

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# BONDERIZING

*Bonds*

# PAINT TO STEEL

*prevents flaking, chipping  
and rust*



PARKERIZING is another Pyrene Metal Finishing Process which is widely accepted as a simple and economical rustproofing treatment for small parts and components that do not require painting.



THE PYRENE COMPANY LIMITED • METAL FINISHING DIVISION,  
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(Regd.)

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*for every purpose*



Experimental Prefabricated Plumbing Units have already been prepared by us in copper for Heating and Sanitary Engineers who appreciate the necessity for preparing and obtaining approval to their post-war specifications now. Our priority programme at the moment requires first consideration, but we shall be happy to discuss your post-war needs which may involve the use of manipulated pipes and standard or machined fittings.

**AERO PIPE & GLASS CO. LTD.**

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LARGE-SCALE APPARATUS FOR THE COOKING AND SERVING OF FOOD

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A corner of the Service side  
of an extensive Canteen.

An installation by

---

R. & A. MAIN LIMITED



---

LONDON AND FALKIRK

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May 6<sup>th</sup> 1935

What happy days—the Silver Jubilee of the Coronation of King George V. and Queen Mary. Streets beflagged everywhere and, at night, some of London's finest views were floodlit. A favourite night-spot for floodlight-watchers was St. James's Park Lake, where delightful effects were obtained.

At that time, we were building factories for Gillette, Hoover and Maclean on the Great West Road; Chesterfield House, Mayfair; a large block of L.C.C. flats at Southwark, and important extensions for the Alvis Motor Company at Coventry. We were re-building parts of Alexandra Palace in readiness for the television broadcasts, and were soon to start building the new Fire Brigade Headquarters on the Thames South Bank.

## HIGGS AND HILL LIMITED

BUILDING AND CIVIL ENGINEERING CONTRACTORS

COVENTRY  
WARWICK ROAD

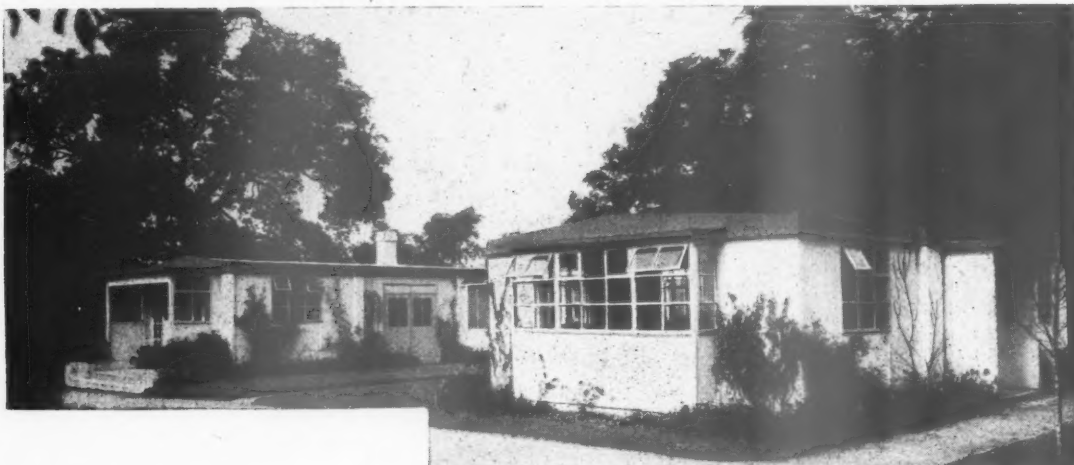
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# SECO

is a **system** of dry Unit Construction for  
**HOUSES, SCHOOLS, HOSPITALS** and **FACTORIES**,  
which gives utmost speed of erection on the site.



**SECO** is the **system** which has been most widely used during the past three years. It is based on a wall unit 7ft. 4½in. by 3ft. 2½in., of which 6,469,800 feet super of floor area have been made and erected into 283 different designs of buildings on 698 sites.



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*Stoneham & Kirk*



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LIFT AND ESCALATOR ENGINEERS

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London Office: 10, St. Swithin's Lane, E.C.4

Telephone: Mansion House 9811

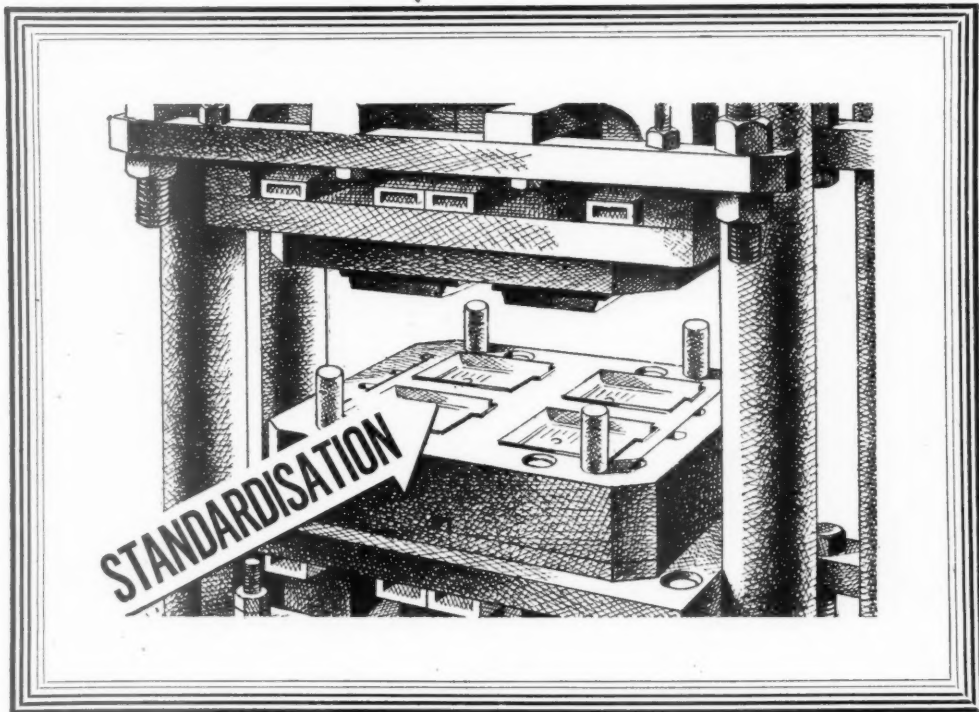


There is no shelter for a bridge. It must stand full square to the wind, rain and snow: to blistering tropical suns or the corroding bite of brine-laden air. For steel bridges paint is the first line of defence against the ruthless elements—but only paint of the finest quality is good enough for this purpose. That is why I.C.I. paints are so frequently specified in many parts of the world. Constant research and experiment have been applied to the production of all I.C.I. paints, whether for use on bridges or buildings. At the moment the nation's war needs take priority, but in peace I.C.I. paints—such as “Dulux”, “Du-Lite” and “Beldec”—will continue to fulfil the most exacting demands for the protection and decoration of houses, hospitals, schools, bridges and, in fact, of the thousand and one places on which good paint is essential.

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**PAINTS DIVISION • SLOUGH, BUCKS.**

*(successors to Nobel Chemical Finishes Ltd.)*





## ...at a high standard of quality

The term "standardisation" may stand for mere uniformity. At the M.E.M. factory, however, it means that all production is brought *up* to a high level of quality, design and finish.

The architect who specifies M.E.M. switch and fusegear and the electrician who selects M.E.M. know that a reliable installation is certain *and* at a reasonable cost. For although M.E.M. gear is good it is not expensive. Good design and modern factory practice have cut out all waste of both materials and man-hours. The M.E.M. factory is self-contained and self-sufficient. It produces good electrical gear from start to finish—good all through.



M.E.M. "Memroy" Switchfuse



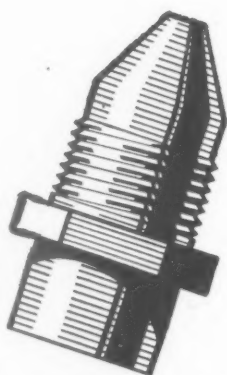
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Here is a remarkably simple, yet 100% efficient device for the prevention of bursts in water installations due to freezing.

ZeroSS is a metal valve so designed that when ice begins to form in a water system, the resulting increased pressure set up thereby is relieved by the automatic operation of the valve, which discharges the total excess volume of water due to expansion.

The valve reseats itself immediately this pressure has been relieved and before the thaw has taken place.

ZeroSS has undergone the most severe and rigid tests and may be specified with complete confidence.

ZeroSS technicians will gladly give advice and assistance on all your freezing problems.

➔ **A CERTAIN AND AUTOMATIC SAFEGUARD AGAINST BURST PIPES DUE TO FROST.**

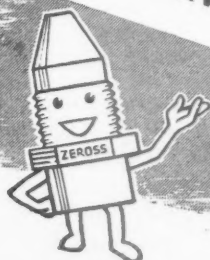
➔ **WHEN CORRECTLY INSTALLED GIVES 100% EFFICIENCY.**

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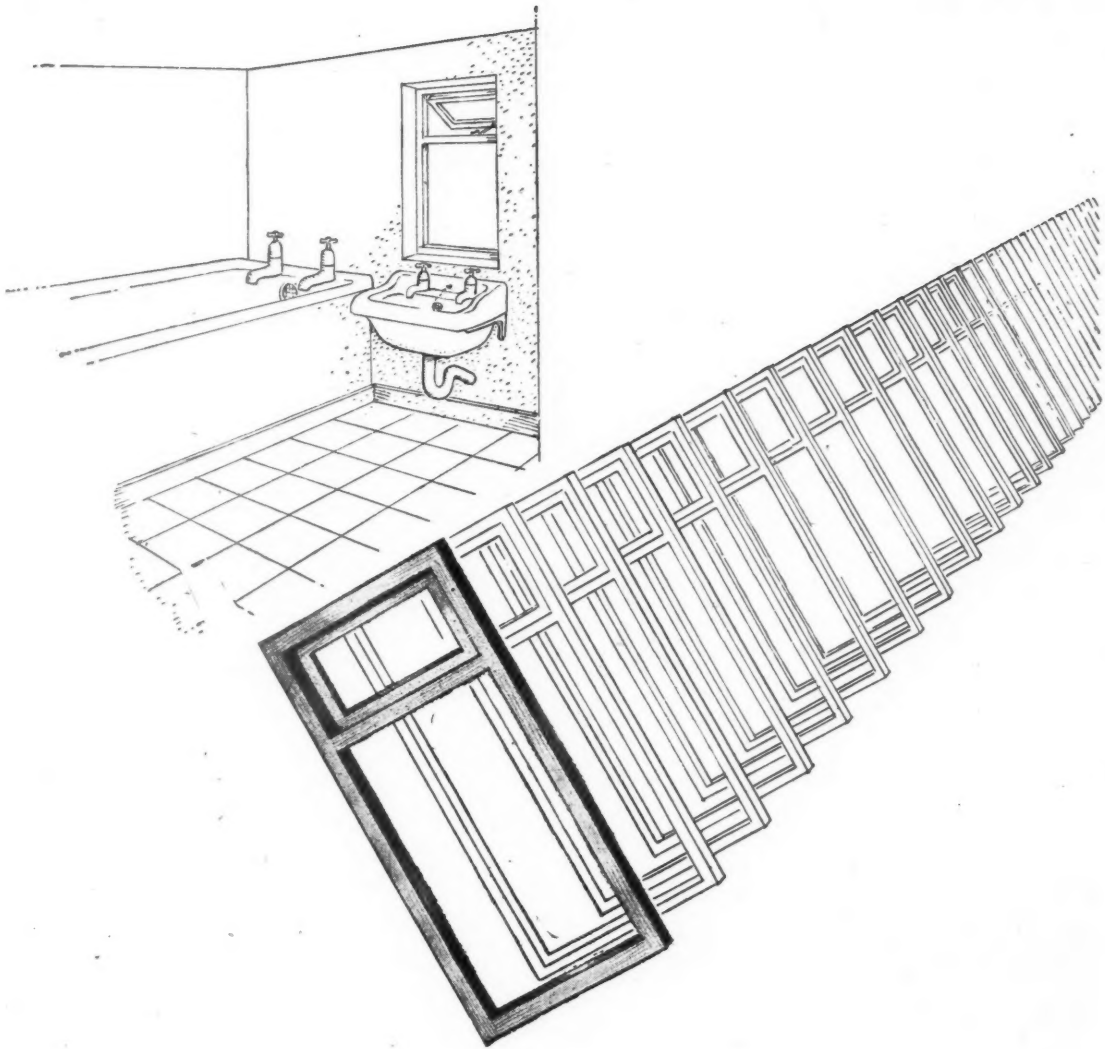
➔ **MADE IN A RANGE OF TYPES AND SIZES TO SUIT ALL DOMESTIC AND INDUSTRIAL WATER INSTALLATIONS.**

➔ **CAN BE FITTED INTO IRON, LEAD OR COPPER SYSTEMS WITH EQUAL EASE AND EFFICIENCY.**

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Tel: BURNHAM (BUCKS) 686







Single light windows for bathrooms, lavatories and larders are obtainable from the EJMA range of Standard Wood Casements in a number of combinations of fixed light or opening sash, with or without vent.

Wooden windows made quickly, made well and attractive to look at, that is the **EJMA** range. And that is why they have been adopted by Austins to be made by their method.

**AUSTINS**  
OF EAST HAM

LONDON, E.6

[LIMITED]

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Stoneham & Kirk

# There is no peace for the bricks in an industrial

No other type of structure imposes such severe and fluctuating loads upon the bricks. From footings to cap they must maintain a standard of performance far in excess of that which any other type of building demands . . . For many years the leading firms of Industrial Chimney specialists have preferred PHORPRES Bricks. One firm alone—Chimneys Limited—have built 259 industrial chimneys using PHORPRES bricks.

**The foundations of a house  
are child's play by comparison.**



## LONDON BRICK COMPANY LIMITED

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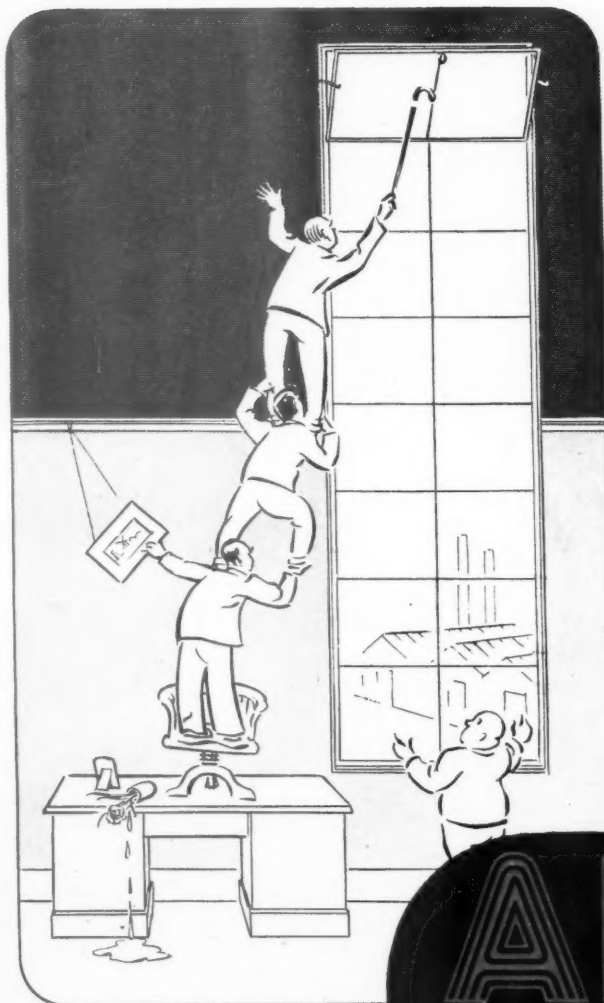
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BRISTOL DEPOT: ASHLEY HILL GOODS DEPOT (G.W.R.) ASHLEY HILL.

Telephone: KEMPSTON 3131

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It's OPEN  
to doubt  
whether  
this is  
better than

**ARENS**  
REGD. TRADE MARK  
**REMOTE CONTROLS**

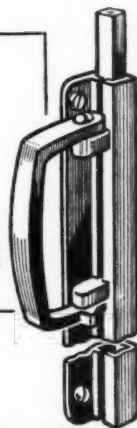
COVERED BY PATENTS

Arens have made far-reaching advances in the art of window opening without fuss or bother and with the minimum of effort—such patience-wrecking appendages as rods, levers and cords, are relics of a bygone age.

In the modern building, windows, roof-lights and top-hung ventilators are simply, neatly, and efficiently operated by the ARENS CONTROL.

For post-war planning you will want to know the application of our control to your particular problem, so write to us **now** for Information Sheet No. 441 which describes ARENS WINDOW CONTROLS in detail and indicates some of their many applications.

JUST  
SLIDE  
THE  
HANDLE!



**ARENS CONTROLS, LTD.**

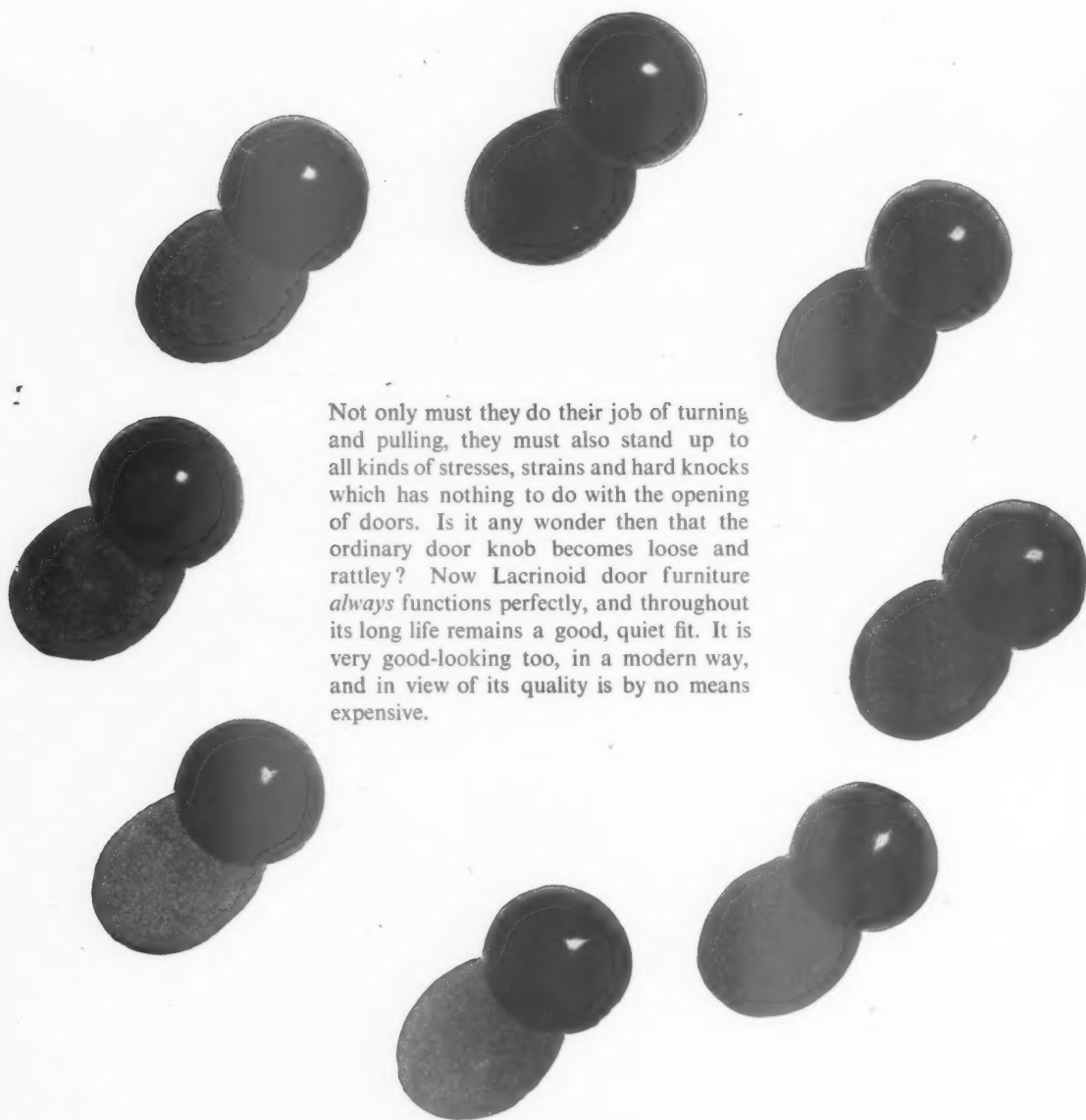
TUNSTALL ROAD  
EAST CROYDON, SURREY

Telephones: ADDiscombe 3051/4

Telegrams: Unicontrol, Phone, London

831/3 WARWICK ROAD, BIRMINGHAM, 11 Telephone: Acocks Green 0786.

# Take door knobs for example



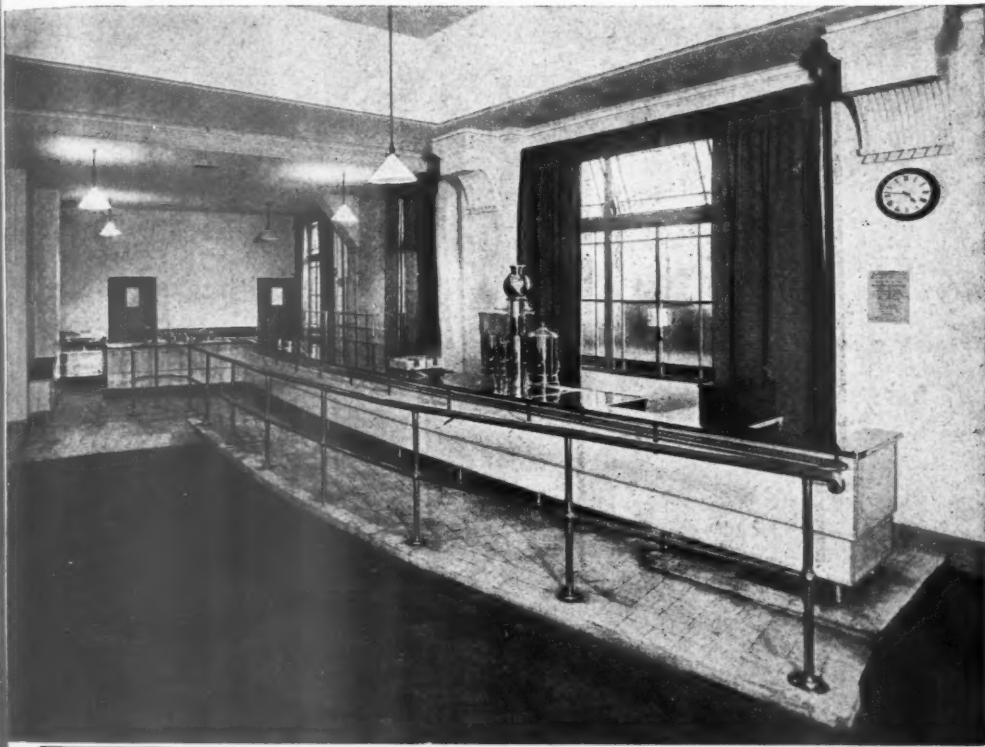
Not only must they do their job of turning and pulling, they must also stand up to all kinds of stresses, strains and hard knocks which has nothing to do with the opening of doors. Is it any wonder then that the ordinary door knob becomes loose and rattley? Now Lacrinoid door furniture *always* functions perfectly, and throughout its long life remains a good, quiet fit. It is very good-looking too, in a modern way, and in view of its quality is by no means expensive.

## **LACRINOID** *for plastics*

DOOR FURNITURE - CABINET HANDLES - KNOBS FOR ALL PURPOSES

LACRINOID PRODUCTS LTD • MOULDERS, MANIPULATORS & FABRICATORS OF ALL PLASTICS • GIDEA PARK • ESSEX  
Telephone Hornchurch 2981

# CATERING IN THE NEW ERA



Self-Service Counter installed  
in a well-known County Hall

Catering Equipment Installations by

# GARDINER & GULLAND LTD

formerly

ASH'S MANUFACTURING CO. (B'FRIARS) LIMITED

Though our production is at present largely confined to austerity kitchen equipment we are hoping to get back to high grade equipment with first-class finishes in the very near future. Meanwhile we are able to give expert attention to post-war kitchen and service installation proposals in the lay-out and preliminary scheme stages.

For 20 years we have been closely identified with the service side of catering equipment as is evidenced by our installations in many parts of the country.

We offer assistance gratis in the planning of catering installations for factories, hospitals, schools, department stores, hotels and restaurants, etc.

GARLAND WORKS · STAPLEHURST RD · LEWISHAM · LONDON SE13

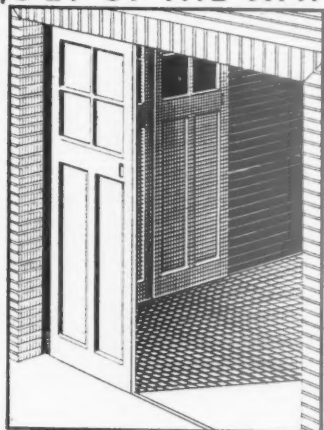
Tele: LEE GREEN 2277 (3 lines)



# THE VALUE OF SLIDING



## OUT OF THE WAY



In these days, to slide on a banana skin can be considered as something approaching a luxury. But that, of course, is only one way of sliding—and not very pleasant. The real pleasure of sliding comes from a sense of travelling swiftly and smoothly between one place and another with rare economy of time and effort. Now apply this perfect principle to doors and what do we find? Without a doubt we should be led to consider a door fitted with King Sliding Door Gear—and it is worth considering. A door that's hinged is a door that needs a lot of room; but with a sliding door it's different. If it's fitted with King Door Gear a touch of the hand takes it out of the way, gliding easily and quickly to nestle snugly against the wall, completely and unobtrusively out of the way.

It is true to say that in post-war building every inch of space will be of the utmost value; take advantage of every scrap of it—when you can and how you can. This is where King Door Gear comes in—or to be more precise, slides along. Doors that slide mean doorways that allow free passage all around them.

# KING SLIDING DOOR GEAR

For ante rooms, cloak rooms, garages, lifts, etc., and places where space is limited or traffic congestion is likely to occur, sliding doors are the perfect application.

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**GEO. W. KING LTD. HITCHIN. HERTS**

TELEPHONE HITCHIN 960 (10 LINES)

# DESIGN

NEVER has architectural expression owed so much to windows for the wide scope they now give in sweeping and satisfying design. No longer are they confined to mere apertures in wall areas or centre pieces for gables, but with the development of BEACON Metal Windows, they become elements in the line and form and mass of the structure.

JOHN THOMPSON BEACON WINDOWS LTD.  
BEACON WORKS · WOLVERHAMPTON

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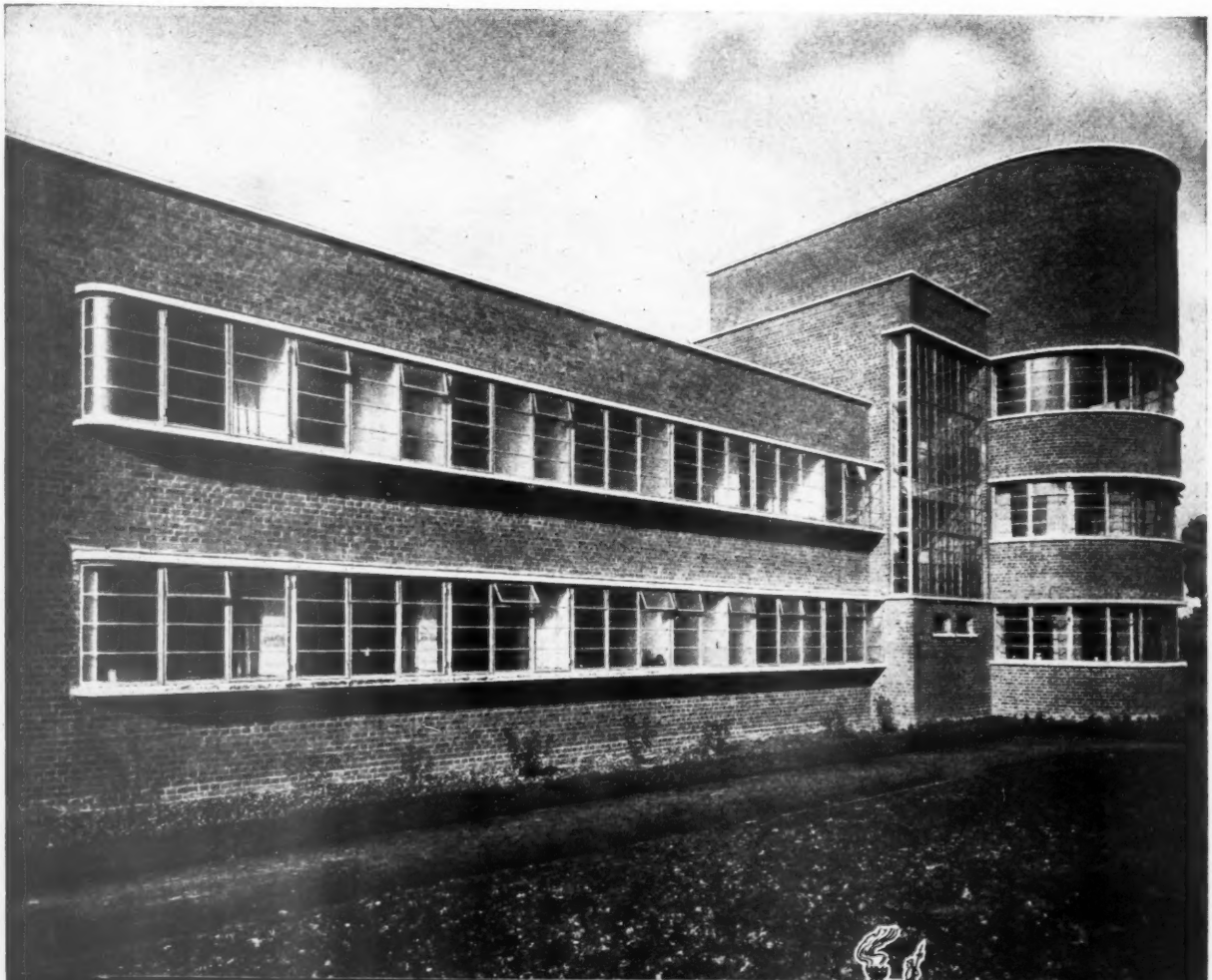
Bilston 41944/7 (4 lines)

Telegrams:

Windows, Wolverhampton

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

Telephones: Temple Bar 3216 (3 lines).



JOHN THOMPSON

**BEACON**

METAL WINDOWS

## "PORTCULLIS" GAS FIRES



Developed some years before the war to embody certain revolutionary advances in the radiation of heat, "PORTCULLIS" gas fires also won appreciation for their architectural qualities of design.

They have done much to enhance the prestige of the gas industry, and as a result of continuous research, can be expected to offer still greater progress when the war is won.

### BRATT COLBRAN LIMITED

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SPECIALISTS IN SOLID FUEL, GAS AND ELECTRICAL HEATING



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For  
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# **EJMA** windows

Certification Trade Mark



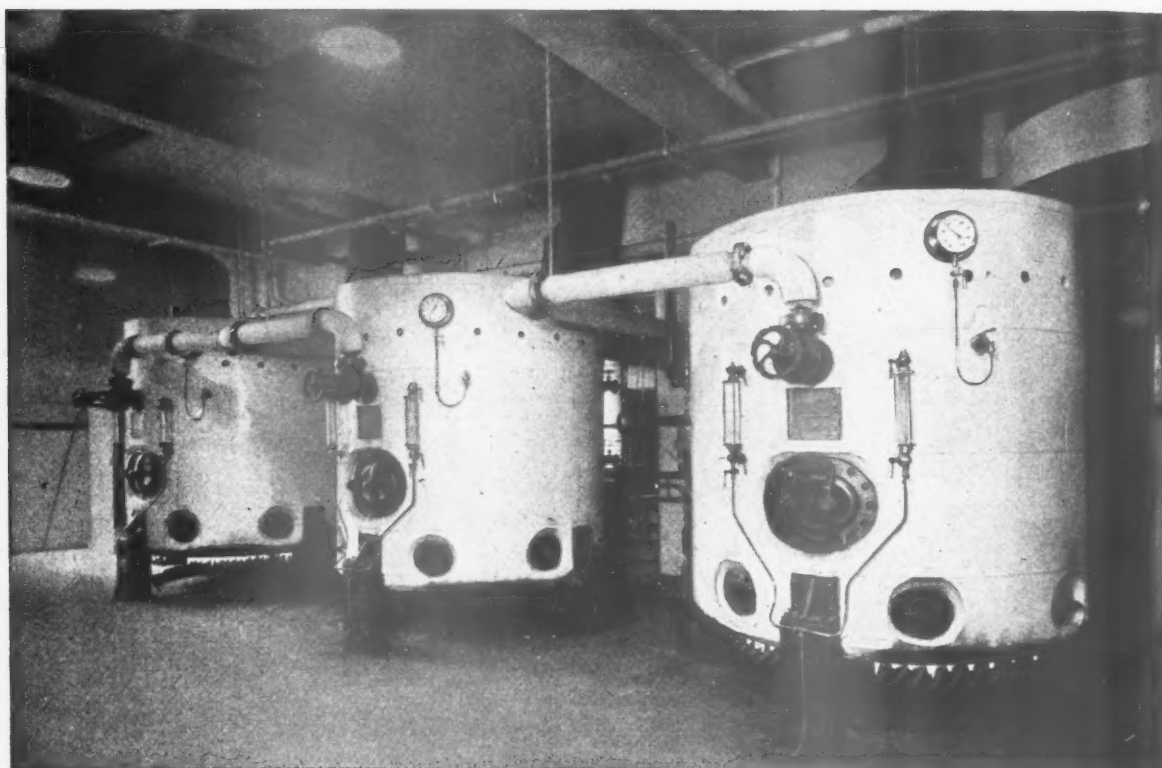
## *are pleasant windows*

Present day exteriors rely for a great deal of their effectiveness upon the use of well designed and beautifully proportioned windows, so the joinery trade of this country, when designing the new Standard Wood Casements, aimed at producing windows which would be as great a credit to post-war housing schemes as the Georgian wooden windows were to 18th century housing

*For particulars of the full range of EJMA Standard Wood Casement Windows and Doors apply:—*

**THE ENGLISH JOINERY MANUFACTURERS ASSOCIATION**  
SACKVILLE HOUSE, 40, PICCADILLY, W.1. REGENT 4448. [INCORPORATED]

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SYSTEMS FOR HEATING AND PROCESS WORK  
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AND GAS FILTRATION  
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FOR CLEANSING STATIONS  
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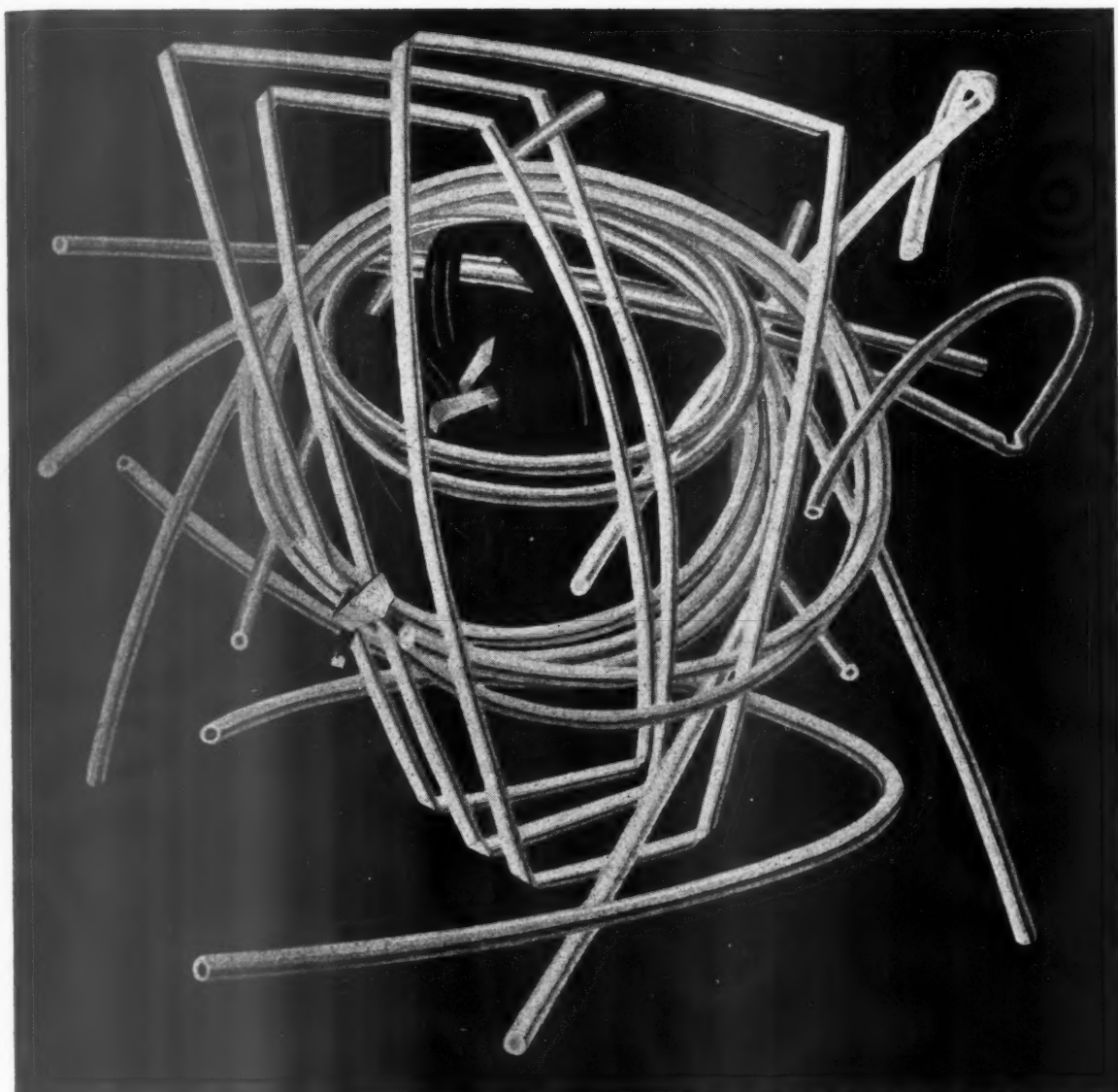
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Wires: Warmth, Westcent, London



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## Extruded tubing

*“‘Drawling, stretching and fainting in coils’ said the Mock Turtle. Here is the excitement of coils: coils of every colour; coils of black, coils of white; opalescent coils, neither solid nor transparent — colourless, with the quality of colour. Coils in design; ellipses, spirals. Contrasts of smooth curves and angular bends in easy natural shaping: coils enclosing spaces made dynamic and exciting. Coils pliable, coils unbreakable make an accidental by-product of visual delight. Coils uncoiled. The excitement is over. Straight lines of tubing — not a crack or a flaw — extruded tubing, ‘fainting in coils.’”*

E.W.



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BY APPOINTMENT  
TO THE LATE KING GEORGE V

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ARCHITECTURAL METALWORKERS

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FOR YOUR POST WAR RECONSTRUCTION

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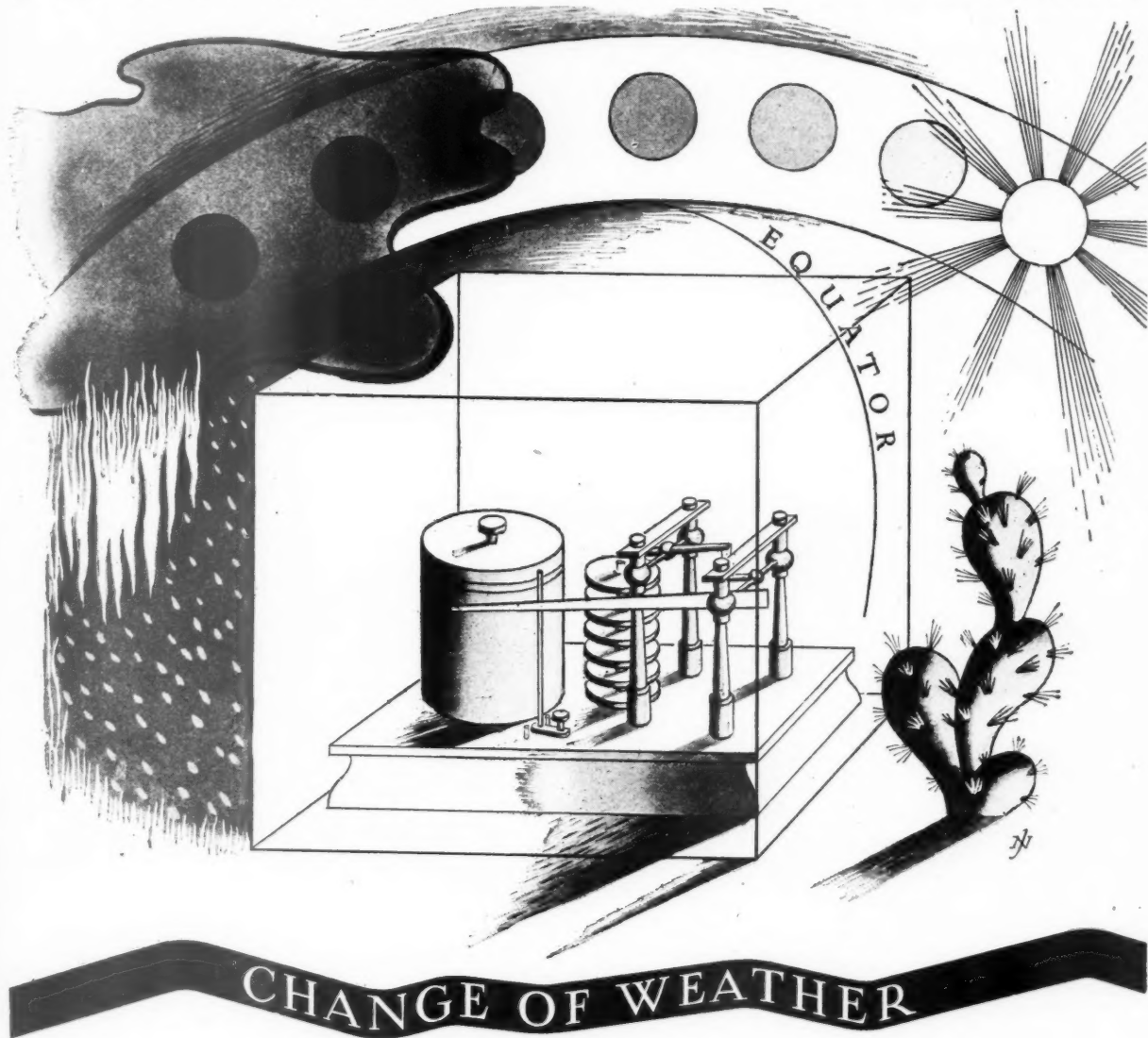
GT: HAMPTON STREET

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FLUSH DOORS OF ALL TYPES WILL AGAIN BE OUR SPECIALTY  
AS PRE-WAR

TEL.: NORTHERN 2252

## BIGWOOD UNICALOR COAL STOKER



### CHANGE OF WEATHER

This English weather of ours certainly shows infinite variety; though heat is never tropical nor cold arctic, our weather can be a constant source of anxiety as well as a topic of conversation.

To meet sudden changes of weather, heating equipment must be fired in a flexible manner; otherwise there will possibly be complaints and certainly waste of fuel.

The Bigwood "Unicalor" Coal Stoker meets all requirements—flexible, automatic, efficient, requiring only infrequent attendance and virtually without maintenance cost.

All considering heating equipment should bear the "Unicalor" Stoker in mind.

JOSHUA BIGWOOD & SON LIMITED : WOLVERHAMPTON





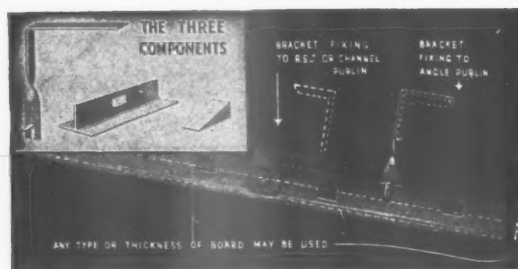
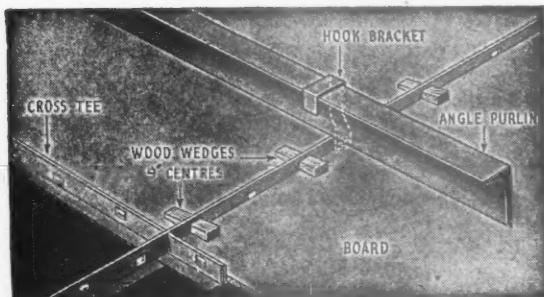
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## FOR APPLYING ANY TYPE OF BOARD TO CEILING & WALLS

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



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



### 8 POINTS TO BE NOTED

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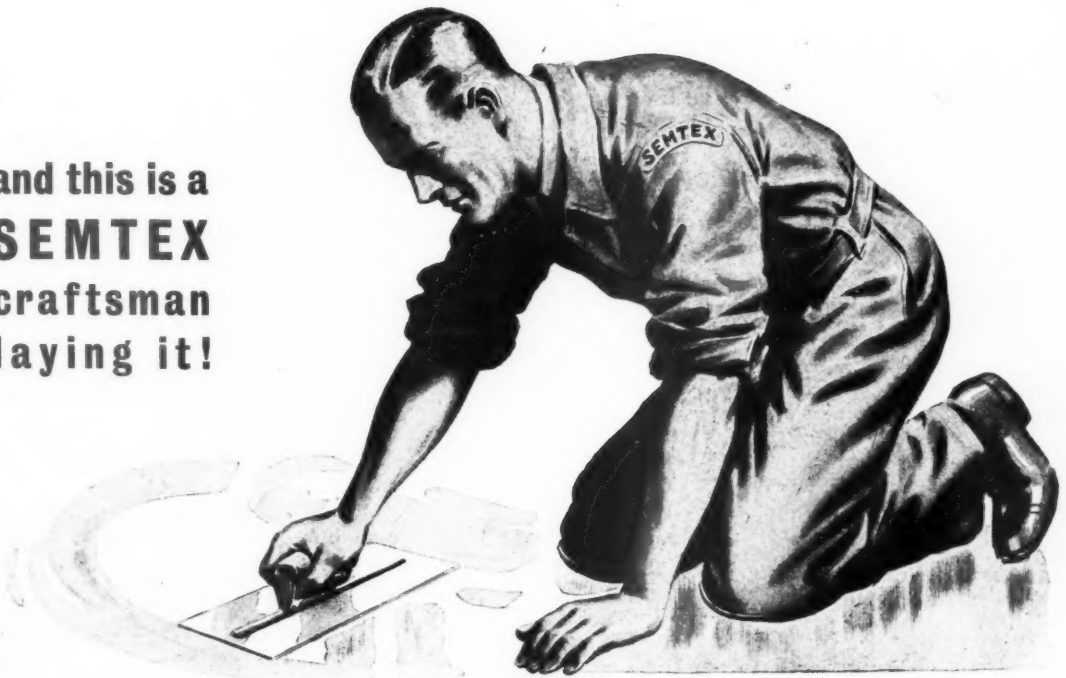
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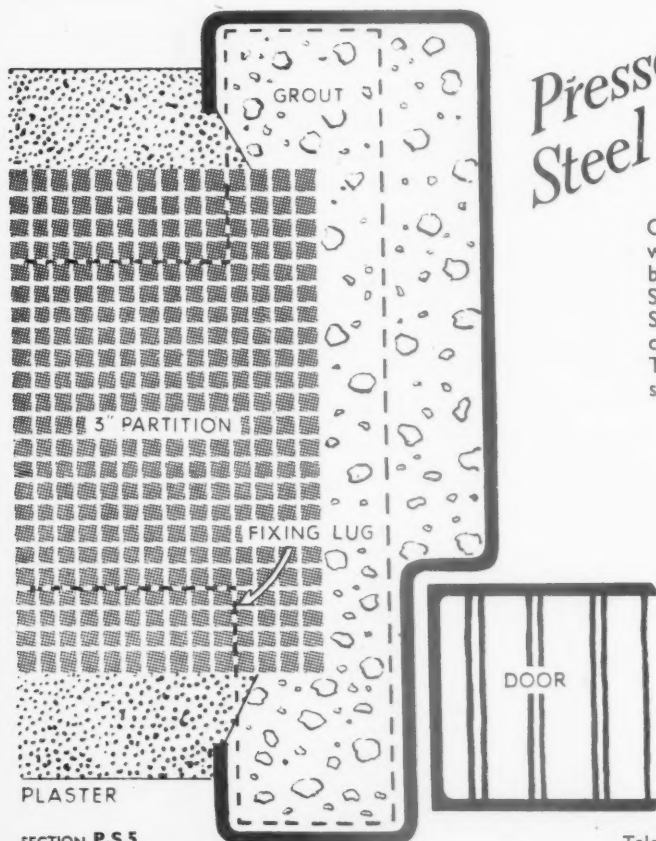
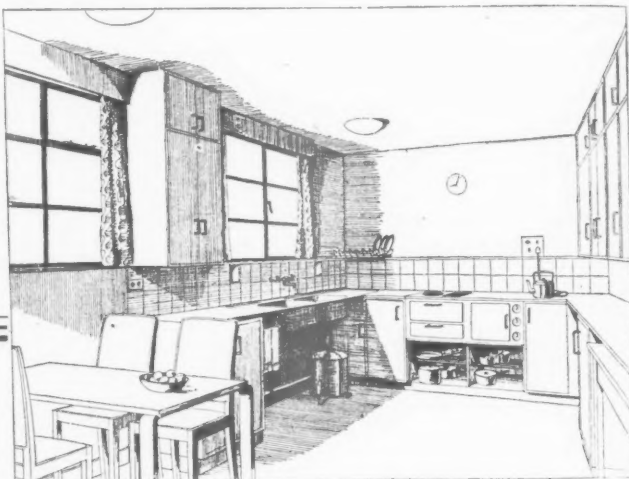
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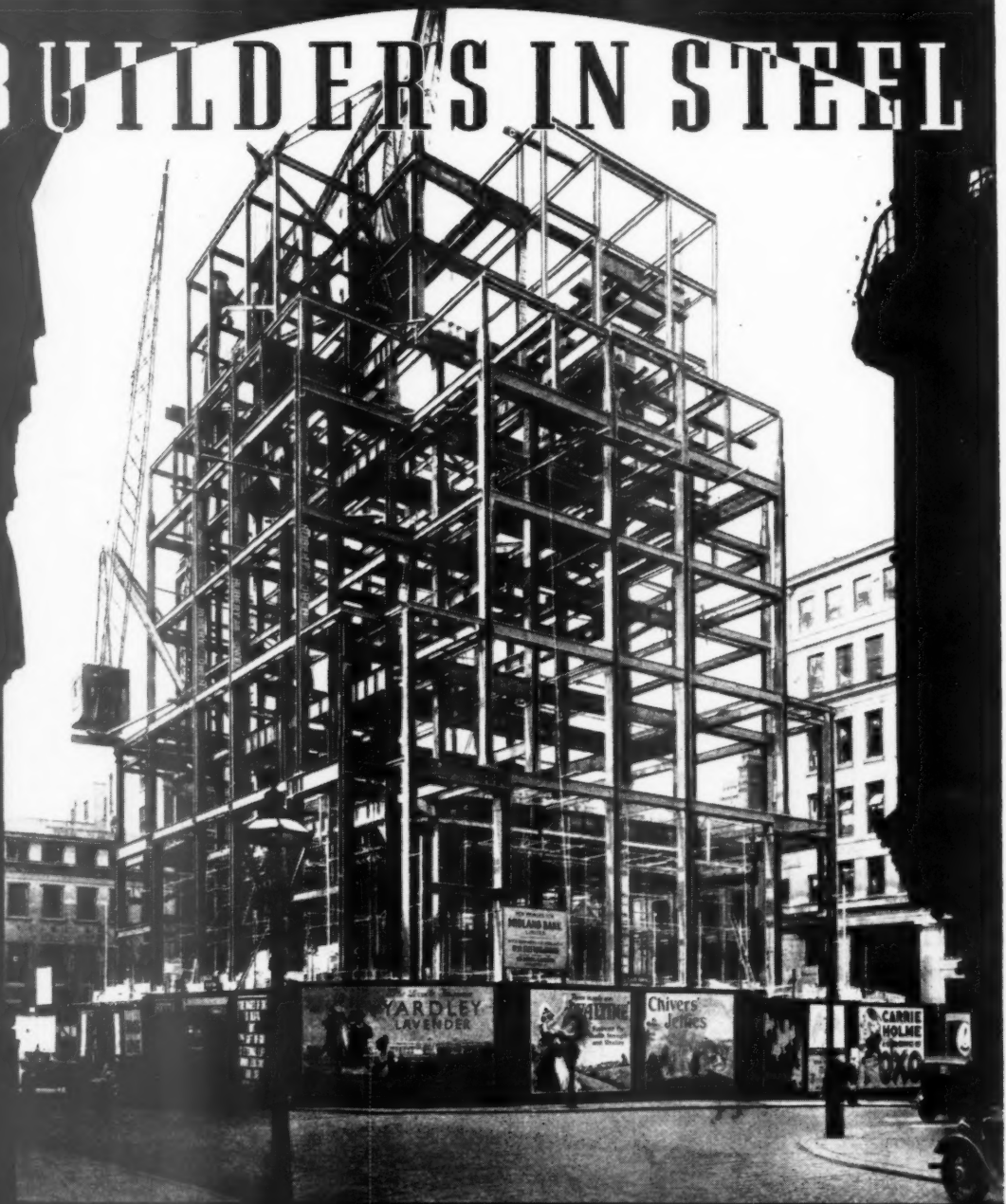


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# REMOVE RESTRICTIONS

*on Planning*

## The Churchill House

SIR.—In considering the Churchill house correspondence it would appear that there is a factor affecting the possible internal arrangement which requires emphasis. It is known that one of the reasons calling for modification of the original prototype was the necessity of overcoming poor circulation of the hot water system. Astragal's plan, brilliant as it is, seems to have retained, like at least one of the others, the original weakness of making a proper return pipe from the boiler to the cylinder difficult to the point of impracticability.

With proposed post-war housing generally it has been noted that several excellent plans impose similar difficulties. When a back boiler is to be utilized for the hot water supply, economy and efficiency can only be achieved by close grouping of WCs, but also sink, bath, wash basins and WCs, but also the water heating unit. The restrictions which this imposes on planning are very great, and in most cases can only be overcome by abandoning the back boiler principle and making use of an independent heating unit. A gas water heater is the only satisfactory solution to the problem in the majority of the published plans.

G. GODDARD WATTS

London

(THE ARCHITECTS' JOURNAL)

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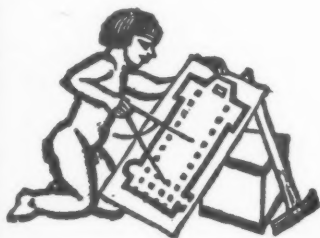
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In common with every other periodical this JOURNAL is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee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

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## DIARY FOR FEBRUARY MARCH AND APRIL

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

**C**HESHUNT. *When We Build Again.* Exhibition. (Sponsor, TCPA).

FEB. 28-MAR. 10

**H**ASLINGDEN. *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 24. Speakers, R. L. Reiss and W. Dobson Chapman, Vice-President TCPA.

MAR. 22-APR. 7

**L**ONDON. *Devastation and Reconstruction.* Exhibition of French prefabricated houses. At the RIBA, 66, Portland Place, W.1. The exhibition has been brought over from France under the auspices of the French Ministry of Information and is the first exhibition to be produced since the liberation of Paris. It was prepared in France during the German occupation under enormous difficulties and in spite of political direction on the policy of reconstruction which tended to ignore all but effete and obsolete methods of construction. Open daily (Sundays excepted) from 10 a.m.-6 p.m.

FEB. 22-MAR. 15

*Conference on Atmospheric Pollution.* Joint conference of the Institute of Fuel and the National Smoke Abatement Society. At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, London, W.C.2. Chairman, morning session, Sir Lawrence Chubb, Hon. Treasurer, National Smoke Abatement Society. Opening of Conference by Major Gwilym Lloyd George, M.P., Minister of Fuel and Power. Chairman, afternoon session, Dr. E. W. Smith, President of the Institute of Fuel.

FEB. 23

F. N. Sparkes and A. F. Smith. *The Concrete Road; a Review of Present-day Knowledge and Practice.* At the Institution of Civil Engineers, Great George Street, Westminster, S.W.1. (Sponsor, Institution of Civil Engineers). 5.30 p.m.

FEB. 27

Federation of Master Builders. *Luncheon Meeting preceding Fourth Annual General Meeting.* At the Connaught Rooms, Great Queen Street, W.C.2. Guest of honour, Sir Malcolm Trustram Eve, K.C. 1.15 p.m.

FEB. 27

National Federation of Building Trades Employers. *Adjourned Annual Meeting.* At the RIBA, 66, Portland Place, W.1. Election of a new Honorary Treasurer following the resignation on account of ill-health of Mr. F. G. Hodges, who has held the position for the past fifteen years, and the presentation to the Immediate Past-President,

Mr. J. G. Gray, of an antique table for his house at Coombe Abbey. After the adjourned annual meeting a conference will be held to consider the various aspects of Housing of special interest to the Federation. 10.30 a.m.

FEB. 27

Bernard H. Cox. *An Architectural Tour in the Balkans.* Illustrated by 100 Agfacolor slides. At the Westminster Medical School Lecture Hall, Horseferry Road, S.W.1. Tickets, members 6d., non-members 1s., from Branch Secretary, Association of Building Technicians (Westminster Branch), c/o 5, Ashley Place, S.W.1. 6.30 p.m.

FEB. 28

Professor E. P. Stebbing. *Erosion and Water Supplies.* At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m.

FEB. 28

F. Longstreth Thompson. *An Outline Plan for a Region.* At Caxton Hall, Caxton Street, S.W.1. (Sponsor, TPI). 6 p.m.

MAR. 1

*National Housing and Town Planning Conference.* At the Central Hall, Westminster, London, S.W.1. The Conference will consider some of the more important problems confronting local authorities in post-war reconstruction in England and Wales, and will be similar in character to the conference held in Westminster in October, 1943. Ladies are specially invited. The Minister of Health (Mr. H. U. Willink) will address the Conference on March 2, and it is hoped that the Minister of Town and Country Planning (Mr. W. S. Morrison) will find it possible to address the conference on March 1. Following is the preliminary programme:—March 1: Chairman, Alderman P. J. M. Turner, J.P. (Sheffield), Chairman of the National Housing and Town Planning Council. General Subject: *Planning for Post-War Reconstruction.* March 2: Chairman, M. Lindsay Taylor, Town Clerk of Southall, Middlesex, and Vice-Chairman of the National Housing and Town Planning Council. General Subject: *Housing the Nation.*

MAR. 1-2

Lord Westwood. *Industrial Relations.* (Amulree Memorial Lecture). At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA). 1.45 p.m. MAR. 14

**M**ALVERN. *When We Build Again.* Exhibition and Film. (Sponsor, TCPA, in collaboration with Messrs. Cadbury Bros.). *The English Town: Its Continuity and Development.* Exhibition. (Sponsor, TCPA). Town and Country Planning Association Conference, Mar. 17. MAR. 10-19

## N E W S

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

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

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

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

### As the war nears its climax the need for WASTE PAPER increases.

Each week, thousands of tons of waste paper leave this country as component parts of supplies for the Western and Eastern Fronts. This paper cannot be salvaged. Paper and cardboard used at home can, and must, be recovered for re-use; 15,000 tons of paper is urgently needed for the manufacture of wallboard to repair houses damaged by enemy action. This paper must be found in offices, factories, shops and other possible sources of large reserves of paper, as well as in the day-to-day collections from domestic premises.

### The General Secretary of the Amalgamated Union of Building Trades Workers: We are PROFOUNDLY DISCONTENTED

Referring to the building and repair position in the *The Struggle for Homes*, a booklet issued by the Amalgamated Union of Building Trades Workers, Mr. Luke Fawcett, the general secretary, says: We are not satisfied; we are profoundly discontented. We want to get on with the job of clearing the sites; demolishing the slums, doing away with the unfit dwellings and repairing those that are fit, and building houses in an intelligent organized manner, to the maximum extent and power of the building industry. At every turn we find ourselves hampered and frustrated. There is no centrally directed plan, no well-thought-out long-term programmes. The Government, which alone can centrally direct and obtain the resources, and mobilize the forces for such a programme, fails to do what is fundamentally required. Mr. Fawcett suggests that half a million new houses a year is a reasonable target if housing is given the highest priority.





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## From AN ARCHITECT'S Commonplace Book

**WORKMEN GRADUATE FOR TVA.** [From TVA: Democracy on the March, by David E. Lilienthal, Chairman of the Tennessee Valley Authority (Penguin Books).] The way the workers were selected had something to do with the result. In 1933 the TVA held written examinations in 179 counties in seven States as a method of finding the few thousand recruits needed to build Norris Dam, the first of the chain. For the man whose mental processes were inclined to freeze when he had pencil and paper before him, a part of the examination was in pictures—for we were seeking mechanical aptitude and general intelligence. Thus, on a given day, some 38,000 of the original 60,000 applicants for jobs went to the school or courthouse of their county seat and did business with the TVA for the first time. It was an act of faith. No one had ever done such a thing before in selecting construction workers. But to thousands of men grimly eager to work after years of the depression, and accustomed to seeking a Government job only through political obeisance or influence, the Workmen's Examination apparently seemed worth a try; maybe it meant a fair break on their merits. TVA kept faith with them. And so well did the system work (as the carefully kept figures of statistical correlation between the examination results and subsequent job performance show) that the TVA Workmen's Examination was repeated in modified form every few years. It became a repetitive symbol of TVA as an "efficient job" and no need for "pull" to get on.

**Nottinghamshire miners have GIVEN THE NATIONAL TRUST A THOUSAND POUNDS towards the cost of the Clumber Estate.**

The National Trust has received £1,000 from the Nottinghamshire miners workmen's allocation fund towards the £45,000 required to buy the Clumber Estate, the home of the Duke of Newcastle. The trustees say: If we can raise a further £7,000 from the public appeal before the end of March we can be reasonably confident of carrying the scheme through successfully.

**Wandsworth Borough Council has been allocated a thousand temporary houses but has NOWHERE TO PUT THEM.**

Wandsworth Borough Council is to have an allocation of 1,000 emergency factory-made houses to rehouse homeless families—but does not know where to put them. The Committee suggested to the Minister of Health the temporary use of parks and open spaces, but the Minister replied that it was undesirable. Now the Committee is doubtful if 1,000 sites can be found.

**Mr. J. S. Galbraith has been elected PRESIDENT OF THE LONDON MASTER BUILDERS' ASSOCIATION in succession to Mr. H. C. Harland, who has held the position for the last two years.**

The other office bearers for the year are as follows:—Senior Vice-President, E. W. Garrett, chairman and joint managing director of J. Garrett & Son, Ltd.; Junior Vice-President, Philip Smallwood, managing director of Fredk. Smith & Co. (Builders), Ltd., who was last year's Honorary Treasurer; Honorary Treasurer, D. C. Burgess, managing director of E. H. Burgess, Ltd. Mr. J. S. Galbraith is chairman and managing director of Galbraith Bros., Ltd., the family firm founded in 1884 by his grandfather. As in the case of so many other firms in the building industry, the family association dates back to earlier

generations, but records are not available. The firm, originally J. Galbraith & Sons, had its first headquarters in Upper Holloway, but later the business was transferred to Camberwell Green, finally becoming a limited liability company under its present title in 1908. During its 60 years' life the firm has carried out many important building contracts in and round London, among them being the new Geological Museum and the Science Museum in Kensington, the Letter Office of the GPO at Mount Pleasant, the Public Trustee's Office in Kingsway, Wimbledon Town Hall, the reconstruction of Camberwell Town Hall. Mr. Galbraith, educated partly in New Zealand and later at Alleyn's School, Dulwich, has spent his entire adult life with his own firm. For the past 15 years he has been a member of the Council of the London Master Builders' Association, and has acted in turn as its Honorary Treasurer, Junior and Senior Vice-President. Last year, after serving for a year as Senior Vice-President, he would normally have been elected President. With the agreement of his colleagues he stood aside and invited Mr. Harland to occupy the chair for a second year.



Mr. J. S. Galbraith, President of the London Master Builders' Association. See news item on this page.

★ **The Urban Councils' Association demands the appointment of a MINISTER OF HOUSING.**

The Urban Councils' Association of England and Wales, in conference in London, demanded that there should be a Minister of Housing, with power to act for all Government departments on housing. The resolution came from Councillor J. Cochrane, of Uxbridge. He put six others urging priority for housing—all were passed—and said: We want three to four million houses as quickly as we can, not in ten years.

★ **Speaking in Edinburgh Lord Crawford said that a NEW TYPE OF WAR MEMORIAL is needed.**

Lord Crawford was speaking at a meeting held to establish a Scottish War Memorial Advisory Council. He said: The only true memorial to those who have fallen will be a continuance of the spirit which has dominated the country during times of crisis, the spirit of sacrifice, unity, and goodwill, but the great majority of people want something more tangible. A new type of memorial is needed, perhaps utilitarian or perhaps a garden.

**Over three hundred and fifty thousand bomb-damaged London houses have been made TOLERABLY COMFORTABLE.**

A report issued by the London Repairs Executive states that no fewer than 368,230 of the bomb-damaged houses in the London Civil Defence Region had been repaired and made tolerably comfortable by January 12. These represent 51 per cent. of the target of 719,300 set by the executive to be carried out during the winter. The number of men at work on local authority schemes for war damage repair to houses and for emergency accommodation is 128,700, of whom 45,300 have come to London from the provinces since June. In addition to the men from the provinces the Services contribute 4,700 men. There are also 225 American soldiers on house repair work and a further 1,115 on emergency hutting.



## The Open-air Room

"A balcony is to a flat what a garden is to a house: an extension of leisure to the open air, a release from indoor conditions, and a contact with nature . . . a proper open-air room, which should now become an essential item of every flat dwelling, a provision enforceable by law as is the small garden." So writes Maxwell Fry in his *Fine Building*.

Above is a typical Stockholm example of the open-air room of painted iron backed by orange canvas, which is enhanced by careful relation to a fine pine. Other examples of Stockholm balconies, so typical of the city's modern flats, are illustrated in this issue. Most of the photographs, like the one above, are by G. E. Kidder-Smith.

### In the aggregate BRITAIN HAS SUSTAINED GREATER ARTISTIC LOSSES than either Italy or France.

Mr. Francis Henry Taylor, director of New York's Metropolitan Museum, who visited France and Britain in the summer, makes this declaration in an article in the *Atlantic Monthly*. According to the New York correspondent of the *Daily Telegraph*, Mr. Taylor, reviewing the pillage and destruction of European art by the Nazis, says that the great surprise is the extent of British casualties from enemy action. Partly because of the Briton's phlegmatic reticence and partly because of security reasons, the American reader has been totally unaware of the dimensions of these losses. While, he says, the Vatican authorities were quick to tell us about the slightest loss of ecclesiastical property as the Germans were hurled back to the Gothic Line, the English, with characteristic stoicism, have remained silent concerning the 4,000 churches, most of them Protestant, which have been damaged in the

British Isles. London, with the possible exception of Berlin and Warsaw, has withstood more constant battering than any other European capital. Repeatedly during the last three years hallowed spots of London which were always haunted by American tourists have been picked off one by one. That any part of the historic London that we know and admire is standing is due to guts alone. Fire wardens and watchers, men and women who loved their city as apparently the Florentines did not love theirs, by acts of heroism unparalleled in history, saved for the Empire—and, lest we forget, for America, too—the heart of the English-speaking world. Curiously enough, despite scars and wounds, the city's face remains unchanged. It is a determined and resolute face, quite ready to meet the future on its own terms and without flinching. Mr. Taylor notes that one of the dramatic incidents of the artistic history of the war was the discovery by Allied troops of Botticelli's *Primavera* and most other paintings from the Uffizi in the cellars and outbuildings of Sir Osbert Sitwell's Tuscan villa, where they had been placed for safe keeping.

### The location of BRITAIN'S OILFIELD which has supplied the home-based bomber fleet with much of its fuel is near Eakring, a quiet Nottinghamshire village seven miles from Newark.

In revealing this information the special correspondent of the *Daily Telegraph* says: It is being operated by the Anglo-Iranian Oil Co. on former farm land where high-grade crude oil is being produced at the rate of over 100,000 gallons a day. Most of it is sent through a two-mile long pipe line to a special depot from which a tank train leaves every night for large refineries in South Wales. I also learned that: Nearly 400 wells of varying depth have been completed and 250 of these are producing gushes of oil. The oil is of similar high grade to that found in only one other oilfield in the world—in Pennsylvania—now on short-supply production. I understand that the Anglo-Iranian Oil Co. are conducting further oilfield tests in the Formby, Lancs., district.

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★ **Architects eligible for inclusion in the BUSINESS PREMISES REGISTER must make formal application not later than Feb. 28.**

Persons qualified and desirous of taking advantage of the Business Premises Register in connection with the new Parliamentary Register, to be published on May 7, must send in their applications to the local Electoral Registration Officer not later than February 28. A form on which application must be made can be obtained from the local Electoral Registration Officer in the constituency in which the business premises are situated—usually from the local Town Hall. The qualifying date is January 31 and the qualification depends on occupation of business premises of the yearly value of not less than ten pounds in the constituency on that date. The husband or wife of a person so qualified is no longer entitled to be registered. Application may be made on behalf of a person in the Forces, or seaman or a war worker abroad, by the spouse or, if there be no spouse, or in certain other circumstances, by the manager of a business. In such cases the application must show that it is made by a person so entitled and that the person on whose behalf it is made is, on the date of the application, a member of the Forces, a seaman or a war worker abroad. A spouse or manager of business premises, making an application on behalf of a person so entitled, will require to inform him of the need to supply the Electoral Registration Officer with his service, etc., address to which a ballot paper should be sent, and to make application to appoint a proxy if he so desires.

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**The RIBA has issued the following notice concerning the COMPETITION FOR DESIGN OF FARM BUILDINGS organized by the "Farmer & Stock-Breeder."**

The attention of the RIBA Competitions Committee has been called to the particulars of this competition published in the *Farmer and Stock-Breeder* of January 9. Some time previous to the publication of these particulars the Officers of the Competitions Committee had discussed with the promoters the possibility of framing conditions for the competition which would conform to the RIBA Regulations. Unfortunately the promoters have not been able to adopt these suggestions, but as the competition is not confined to architects, the Competitions Committee do not think it necessary to issue the formal notice warning members not to take part. Members will decide for themselves whether it is worth while for them to enter for the competition, but, if they do, they should realize that many of the conditions which normally form part of architectural competitions are not included. For instance, the names of the jury of assessors are not stated and the usual safeguards prohibiting members of the staff of the promoters or of the assessors from competing are not included.

**A people's cathedral, and a hall with cinema, stage, and dressing rooms, will form part of THE NEW CITY TEMPLE.**

There will also be club rooms, clinics for the care of the sick, a restaurant, buffet, and rest room; organist's library, minister's library and a caretaker's flat. The architect is Mr. Frederic Lawrence, F.R.I.B.A., of Bournemouth.

## COMMUNITY CENTRES

**H**OW to use leisure time to the best advantage, would seem for most people today, a fairly impractical question. Busy with the problems of the sixth winter of war, few of us can believe that soon again a more normal way of life will take the place of the busy wartime routine. Before the war, however, the real increase of leisure time for all sections of the population was one of the most remarkable changes in community life which had occurred during the past century. For that small part of the general public who enjoyed the benefits of higher education, cultivated tastes, and the money to indulge them, leisure time did not present a problem. For the great mass of people, particularly in the towns, there were few alternatives to the cinema, the dance hall, and being mere spectators at sports events.

During the war it has become evident that if opportunity is given, large numbers of young people and adults are anxious to do something more with their free time. The enthusiasm with which the words of the Council for the Encouragement of Music and the Arts, of the Regional Councils for Education in the Forces, and of Ministry of Labour Social Centres has been received proves the point. In many other ways community life has become richer, more unified under the stress of war, and it would be a sad thing if we are not able to benefit by such an experience.

The Ministry of Education Report on Community Centres (HMSO, 9d.), recognizes the need for such buildings and for generous financial aid from central and local government to the communities and neighbourhoods which may wish to build centres for social, recreational, and educational activities. The report discusses the works and aims of such centres, their organization, staffing, maintenance, management, and physical planning. It also recognizes and pays tribute to the pioneer works of the YMCA, the YWCA, the Miners' Welfare Institutes, Women's Institutes, University and other settlements. Particular credit is given to the National Council of Social Service for their encouragement and help to community centres. The type of centres which the report visualizes for the future has been evolved from a sound basis of information gathered from witnesses who are familiar with the works of these pioneers. Existing centres seem to fall into two groups. The first consists of a number of buildings which provide meeting places for unrelated societies and organizations; the second stresses the need for an association to run the centre which, in practice, tends to be used chiefly as a club. In the opinion of the report, both needs should be provided for, that is, the sectional interests as well as the general social life of the neighbourhood.

The majority of community or social centres which exist today have been organized to help bad social conditions, sometimes in old, densely populated areas, often on new, sprawling housing estates. This report, however, is based on the conclusion that "a community centre should be regarded

as an essential amenity of a normal community living in normal circumstances." Young people in particular will have had more experience of community life in the armed forces, in civil defence work, and in war workers' hostels than has ever before been known. Their desire to continue with the organized use of, and training for, leisure time will make the provision of community centres an urgent necessity.

Finally, the report includes an appendix of information gathered from the bodies mainly responsible for the pre-war provision of Community Centres and also a set of typical plans. These plans illustrate the recommendations for a Community and Youth Centre, the Hall and Dining Room for a Community Centre and School, and general village hall types. Although they include all the vital requirements arranged in the correct relation to one another, they could be more enterprising and imaginative. In this new expression of 20th century life which may become as familiar to every community as the local library or town hall, it would be a pity to cling rigidly to an architectural idiom of the last century. Here is a unique opportunity to build for a new need in a new way of living.



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

## N O T E S & T O P I C S

### THE NEW FOCUS

Victory will doubtless soon follow the Yalta meeting, and be celebrated riotously with a yard of bunting and a couple of drinks. Nevertheless there is in the air a melancholy feeling that the war has so far settled nothing.

Yet there are a few signs of the times that should brighten the eye of the most war-weary sceptic. Take, for instance, one of the fundamental ideas in modern planning theory—that of the Neighbourhood Unit and with it the Community Centre. As expressions

of a new attitude of mind towards the business of living, they are obviously enormously important—symbols of the belief in the rebirth of some kind of healthy and coherent social pattern.

It is the more encouraging to see that the Community Centre idea has received official recognition and publicity in the form of a Ministry of Education report. This isn't a very impressive or inspired document for so important a subject, and the few plans and elevations are dull and archaic. But the authors of the report can be forgiven much in that they have refused to regard the Community Centre as a sort of puritanical missionary post where the heathen of the new housing estates can be uplifted.

"Englishmen never will be slaves; they are free to do whatever the Government and the public opinion allow them to do," says Bernard Shaw. But who knows? Perhaps, as the new report hints, adults may before long be treated a little less like morons by officialdom. The happy day may come when pleasure will be free of taboo, and we shall be allowed to drink an aperitif with our neighbours on the sun-bathed terrace of our local Centre at any time we like.

### THREE WAYS OF LAYING BOGIES

Those who are interested in the public relations aspect of Planning will already have noticed the different methods of three authors who have tackled the overthrow of some of the planning bogies of popular imagination.\* The first is Major E. S. Watkins, who takes on one of the most difficult of them all—Land Ownership.

His method is that of the lawyer; and consists of simple exposition, by which he lays bare the very bones of his adversary. A bogey, dissected, explained and labelled so very efficiently, loses all its mystery and much of its effectiveness. Moreover the labelling is done with some picturesque detail; as where a right of way by agreement is illustrated by the hypothetical case of an individual agreeing with the Governors of the Bank of England to walk through their main premises as often as he likes. Yet the public needs no agreement to walk over the right of way in Piccadilly Circus Underground Station.

The second method is that of the economist. Mr. Schumacher tackles the question of what planning will mean in terms of money; and he fights his dragon by logic. Starting with the assumption that it is for the planners to make out a case why this or that decision should not be left entirely to the individuals directly concerned, he ends by proving that though planning may look expensive, it does so merely because the expense of not planning evades the net of private cost accounting. I suspect that Mr. Schumacher has missed the heart of the financial juggernaut, but he has at least chopped off its tail by refusing to accept that fantastic, yet still widely current, piece of mysticism—the belief that money is in itself real wealth.

Lastly, on contrasting the largest and vaguest of the bogies—loss of Freedom—Professor Harold Laski brings into the field both the rapier and the bludgeon of political argument. He contends that ours is a social

\* *The Planning Bogies*: three pamphlets published by the Architectural Press, 1944. 6d. each.



service state; it is not yet a planned society. If planning is not to mean bureaucracy, followed by regimentation, we must all take a hand in the planning.

Professor Laski is right; Mr. Schumacher is very nearly right. But if I were called on to act as esquire to one of the three St. Georges, I think I should have more fun with Major Watkins.

#### JEWELLERY QUARTER

A two-hour wait between trains in Birmingham recently gave me an opportunity to renew acquaintance with the Jewellery Quarter. Despite certain things that the Hun has done to Birmingham, this part of the city looks very much as it did before the war—drab, dull, dirty and depressing; so ugly that it has a certain macabre fascination for the visitor who knows its byeways and back alleys. That things of beauty can be designed and made in such surroundings is incredible—but true.

It would be only a slight exaggeration to call the Birmingham Jewellery Quarter an industrial slum. Centred about an undersized and over-ornate memorial, the Chamberlain Clock, its mean streets are linked with what, at first glance, seem to be rather neglected dwelling-houses—some in rows, some in the suburban dignity of semi-detachment. If, however, you look closely at one of these houses, you will find its front door festooned by anything up to half-a-dozen nameplates proclaiming that within its

narrow limits are the headquarters of an equal number of manufacturing jewellers or silversmiths.

If curiosity lures you in and you attempt to call on any of these firms, you will find, nine times out of ten, that you climb one or more flights of bare wooden stairs only to be confronted on the landing by a closed door, in which is a trapdoor, also closed. You ring a bell and nothing happens. You wait several minutes and then ring again. There is a shuffling of feet, the trapdoor slides back a few inches, and you are greeted by a face on which is marked a deep distrust of all strangers. Unless you pass yourself off as a buyer, you will need a lot of personality to get you any further.

All honour is due to the minority who, amidst this squalor and suspicion, retain a spirit of enterprise and sometimes even a sense of beauty. Although a minority, such people do exist, and in the years just before this war they were actually making their influence felt. The Birmingham art schools and the industry were getting together; even the local trade association showed itself design-minded, and organized a yearly industrial art competition.

Some of the results of this competition were encouraging—particularly among the mass-produced plated wares, and proved that inexpensive stampings could have freshness and beauty of design and, at the same time, an essentially English character.

ASTRAGAL



In the Birmingham Jewellery Quarter. See Astragal's note.



## LETTERS

Jaqueline Tyrwhitt

Edwin A. Taber, A.R.I.B.A.,  
Dip.Arch. (Leeds)

### Planning for the West Indies

SIR,—I enclose a letter I have just received from Leo de Syllas, who is now working with Gardner Medwin on the official planning projects for the West Indies. I feel sure the scope and manner of their work will interest readers of the JOURNAL.

JAQUELINE TYRWHITT

Association for Planning and  
Regional Reconstruction,  
London

c/o The Comptroller for  
Development and Welfare,  
Bridgetown, Barbados, BWI

DEAR MISS TYRWHITT,—It has been a great pleasure to us to continue receiving the Bulletins and Broadsheets of the Association, and though most of the material is for us a good way ahead of the potentialities, materials or personnel of the British Caribbean as it exists at present, nevertheless a time will come, if not under our régime as planners, at least not so far distant when the difference, apart from geography and climate, will have been appreciably reduced. Meanwhile any and every link with our work in England helps to reduce the feeling of almost complete cut-off-ness that everyone suffers from. The set-up here is now fairly complete, though we are still waiting for at least two new recruits from England; on the planning and architectural staff there are three of us from England under Medwin; we have as well three fairly well qualified assistants in the drawing office. We work in close collaboration with an Engineering Adviser and a specialist Adviser on drainage, water and electrical engineering. We have a vast programme in our charge, so diverse that to outline it alone would make any pre-war architect green with envy. Our task is twofold; the laying down of a long-term planning policy covering all aspects of planning organization; that means starting from the legislative end and preparing

## SOVIET GRAPHIC ART



Three examples from the exhibition of Soviet graphic art at the Royal Academy, collected by VOKS (the USSR Society for Cultural Relations with Foreign Countries), and shown under the auspices of the USSR Embassy, assisted by the Society for Cultural Relations between the Peoples of the British Commonwealth and the USSR. Top, Dismantling Wooden Houses in the Okhta District of Leningrad, etching by Nikolai Pavlov. Above, Moscow Salutes, wood engraving in colour by Viktor Bibikov. Left, Uzbek Women at a Parachute Factory, drypoint and gouache by Sarra Shor. The exhibition closes on March 18.

model planning laws, with detailed proposals for the setting up of Central Planning Authorities in each island or region. We started off at the West Indian Conference, where we worked out and got accepted our basic programme. By now we have managed to complete all the draft documents of the detailed and general legislation; most of it is, of course, based on English precedent plus all that we could add of Barlow, Uthwatt, and Scott wherever we felt it had a chance of getting through. The procedure is, that it goes before the separate legislatures or Houses of Assembly of each of the islands; you begin to appreciate the difficulties of getting any sort of uniformity throughout what is geographically, and should be politically, a single federated area. We have also just submitted to the CO for approval a draft of our basic housing programme with its financial planning. Housing is, of course, the core of the whole programme and will present the greatest difficulty in a solution which will be acceptable to the Treasury and to the local West Indian Governments. Architecturally the most interesting work has been the preparation of a variety of standardized school types; Cullen, of perspective and sketching fame, has been responsible for this work: I could go on with a list of our projects till you ceased to believe that any office could have such a variety of work; before I finish the list, however, I should mention that we have been able to undertake several small-scale rehousing layouts and that the first house-to-house survey was finished last week here in Bridgetown as a test of our methods; we have put under way some six of these surveys in the various larger towns of the islands; I have just returned from Georgetown, British Guiana, where Medwin and I organized the material for a complete Town Planning and Housing Survey. All this is the preparatory work. Getting the actual job done is going to be a very different matter. Some of the immediate building schemes, particularly the Health Centre and Clinic programme, looks as if it will start construction in the next five or six weeks, but the fundamental stuff is going to be a long uphill fight with a watered-down solution as its most probable ending. So far as we are personally concerned, the chances of this sort of experience are terrific; it is like an AA course in actuality, with pretty difficult clients thrown in to make good measure. During our term here we are hoping to train a few of our West Indian assistants, at least in the ground work of theory and practice.

LEO DE SYLLAS

## The New Humanism

SIR.—With those upholding spiritual values I like to be associated, but is Mr. Scott-Moncrieff really right in his inference that the self-propelled machine inevitably removes those qualities. Indeed, as he says—“circumspice!”

If aims are to be that more and more of us shall partake of spiritual quality, must not the artist be prepared to come to us rather than the opposite?

Let us welcome, therefore, many of the designs evolved for mass-production as a potential for aesthetic appreciation. Along with this I would like to advocate a reduction of the individual's hours in the factory with a complimentary adjustment in the educational system leading to a more creative use of leisure.

From such a basis, would it not be a natural outcome that many more of our 45,000,000 would find themselves becoming designer-craftsmen for the sheer love of it, with more “works having a spiritual quality” as a result?

London

EDWIN A. TABER



# BALCONIES IN STOCKHOLM



Top, a balcony of the well-known Kollektivhuset, by Sven Markelius. Above, the street elevation.

The hall mark of the Stockholm flat building is the balcony, and no block is now built without these outdoor rooms. The few typical examples illustrated here, show how varied is their treatment and how they are designed to add character to the buildings.

A difficulty in balcony design is the avoidance of light reduction in the rooms below. This has not always been overcome in some of the cases here; in others the problem has been skilfully solved. Most of the examples are perhaps too small, like many of the Stockholm flats themselves, though this is no doubt, less a fault of design than of economics. Too often, also, the balconies have solid fronts and sides, so that

those sitting on them are unable to see the view as they would through grills or railings. This is not always desirable, of course, and privacy may be the first need.

Flower boxes are common features of the Stockholm balconies. When well cultivated, they form perfect foils to the geometric lines of the buildings. The example on this page is particularly good, and is almost Baroque in its effect.

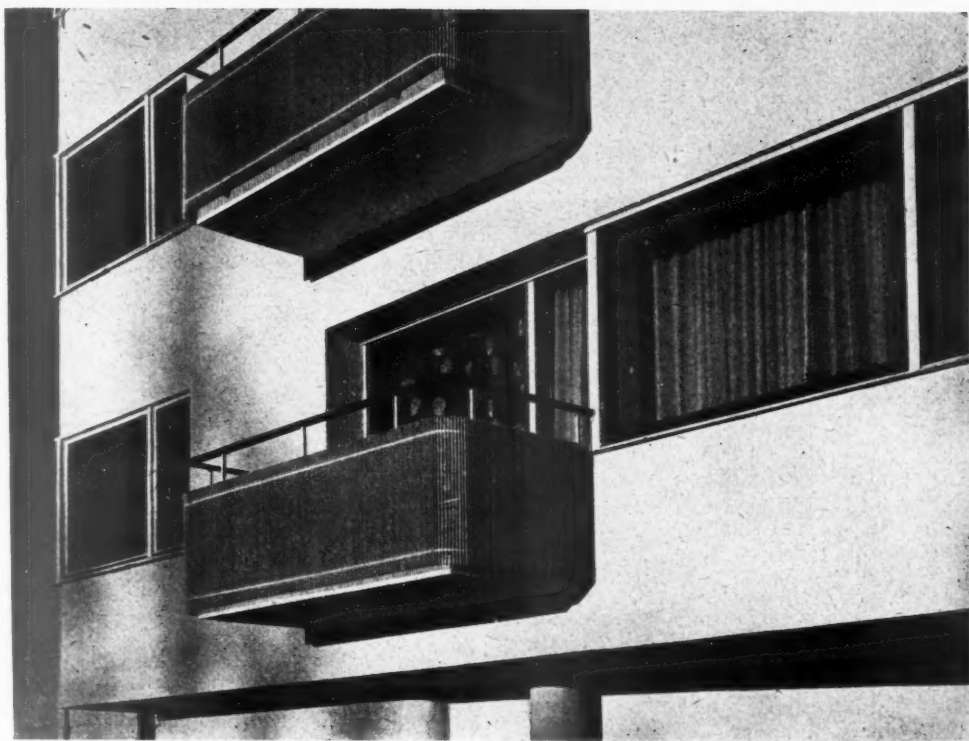
A gay, generous and flower-filled balcony should be considered an essential part of a modern flat, and it is to be hoped that the examples shown here will do something towards stimulating their more frequent incorporation in flats in this country after the war.



*Above, concrete balconies with sides of painted metal sheeting in the Traneberg district. Left, balconies on the back elevation of the Kollektivhuset, with their flower boxes and grided sides which allow a view of the garden to those sitting in them.*

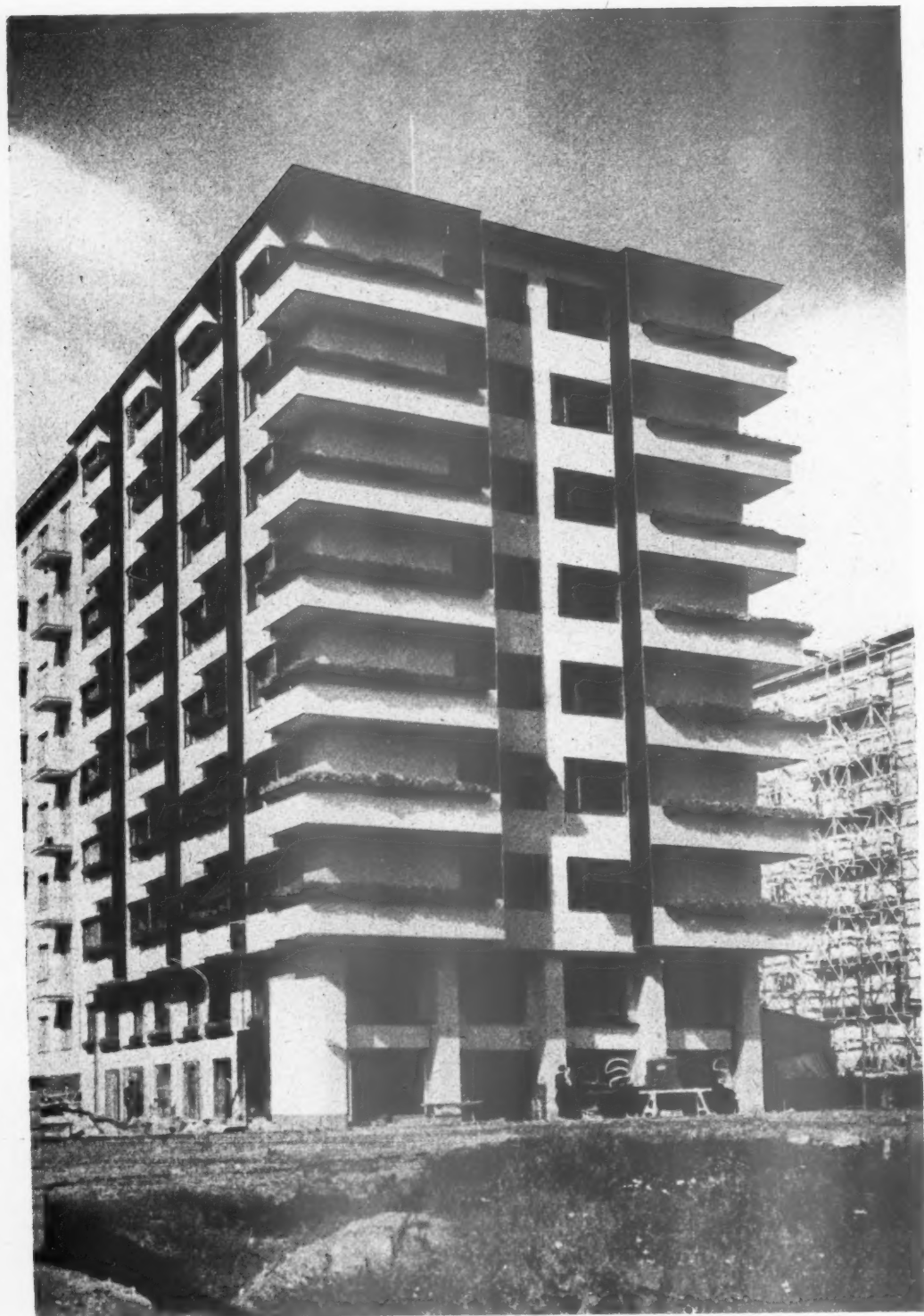
## BALCONIES IN STOCKHOLM





Top, a block at Kristineberg, built by HSB, the largest Swedish building co-operative. The balconies are of painted iron railings, backed by coloured canvas. Above, an example on a block of flats combined with a cinema in the Gardet district, designed by Sture Frölen (fully illustrated in the JOURNAL for May 4 of last year). The construction is of thin strips of wood fixed to steel tubing and topped by a wood railing.





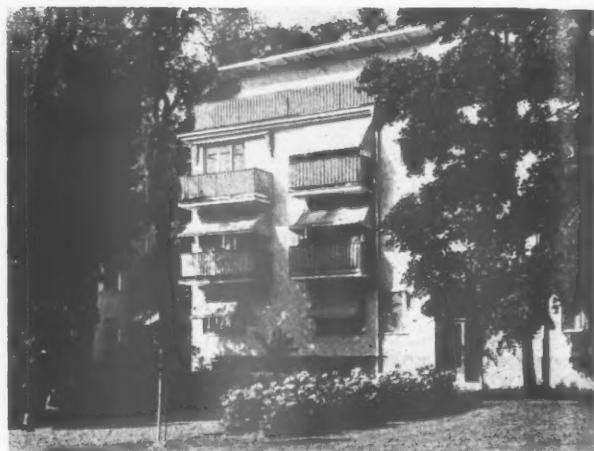
*A block at Ladugårdsgården, by Sture Frölen. There are no windows below the balconies, so that the common disadvantage of the darkening of the rooms below is here avoided. Brightly coloured canvas screens on metal frames run the full height past the sides of the balconies, thus providing privacy.*

## BALCONIES IN STOCKHOLM



*Above, at the back of a Gärdet district block. The fronts of the balconies are of painted sheet metal. Below, left, a side view of the block also shown on the facing page. Below, centre, flats designed by Lennart Bergvall (illustrated more fully in the JOURNAL for March 23, 1944). Balcony fronts are of painted steel sheets, with sides of wire mesh fixed to steel tubes. Below, right, gallery entrance type of balconies in the Hammarby district. The fronts are of corrugated sheets.*

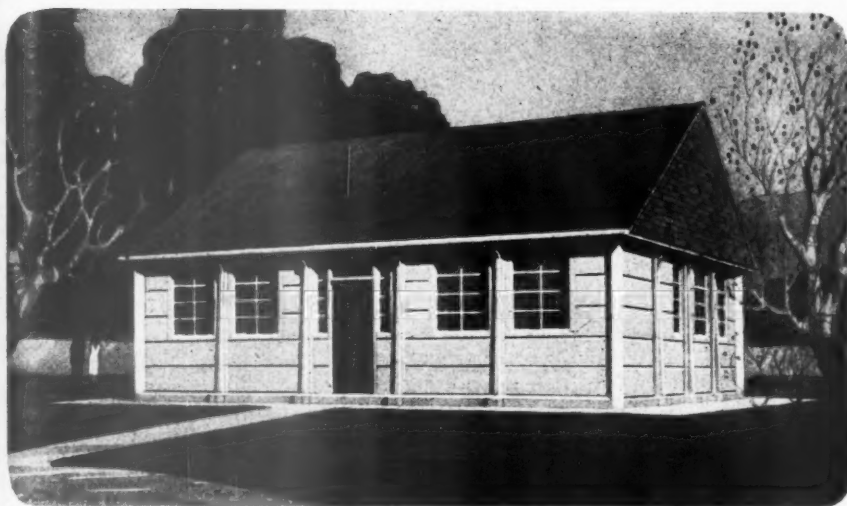




*Above, left, a brick block in the Abrahamsberg district, with balconies having fronts and sides of white painted corrugated sheeting. Gaily coloured canvas sun blinds can be let down to cover them. Above, right, flats in the Ekshagen district with balconies of iron rods backed by canvas. Below, new flats in the Hammarby district in Southern Stockholm, all for the lower-income groups. The balconies in the near block are of horizontal bands of painted steel on steel framing. By placing the balconies to one side of the main windows the reduction of light through these windows has been avoided, while giving an interesting syncopated rhythm to the elevation.*



## BALCONIES IN STOCKHOLM



Left, a sketch by Cyril Farey. Below, plan to a scale of  $\frac{1}{8}$  in. to 1 ft. Key—1, Larder, 2, Crockery Cupboard, 3, Flap Table, 4, Draining Board with Refrigerator under, 5, Sink, 6, Draining Board with Copper under, 7, Cooker, 8, Preparation Table, 9, Half Glazed Door and Screen, 10, Plumbing Unit, 11, Stove, 12, Airing Cupboard, 13, Wardrobe, 14, Linen Cupboard, 15, Shelving, 16, Pram.

**GENERAL**—The British Cast Concrete Federation has produced a system of construction of precast concrete units which can be used for the Emergency Factory-Made Housing Programme and also adapted for permanent post-war construction. It has been submitted to the Ministry of Works as a contribution towards the temporary housing scheme, and further proposals for permanent housing have recently been submitted to the Burt Committee.

**CONSTRUCTION**—The structure is of the post and panel type and is demountable. Any size or arrangement of bungalow can be erected within the limits of the panel sizes which are 5 ft. 6 in. and 6 ft. between centres of columns. Windows are of standard metal section cast in special concrete panels. The walls consist of precast concrete panels spanning from column to column with a weathered horizontal joint. These panels are bedded and set against the post in mastic, and held tight by a special wedge-action pin which keeps them in position but at the same time allows for easy dismantling. The reinforced concrete posts are bolted to the foundation slab.

**ROOF**—Precast concrete eaves pieces supported by the posts which carry the precast concrete rafters at 3 ft. centres covered with roofing felt, timber battens and concrete inter-locking tiles. Alternatively, precast concrete rafters at a lower pitch at 6 ft. centres with 3 in. by 2 in. timber purlins covered with asbestos sheeting.

**CEILING**—Prefabricated panels 4 ft. by 2 ft. constructed of sheets of plasterboard and fibreboard pressed one on either side of a

## BCCF TEMPORARY BUNGALOW

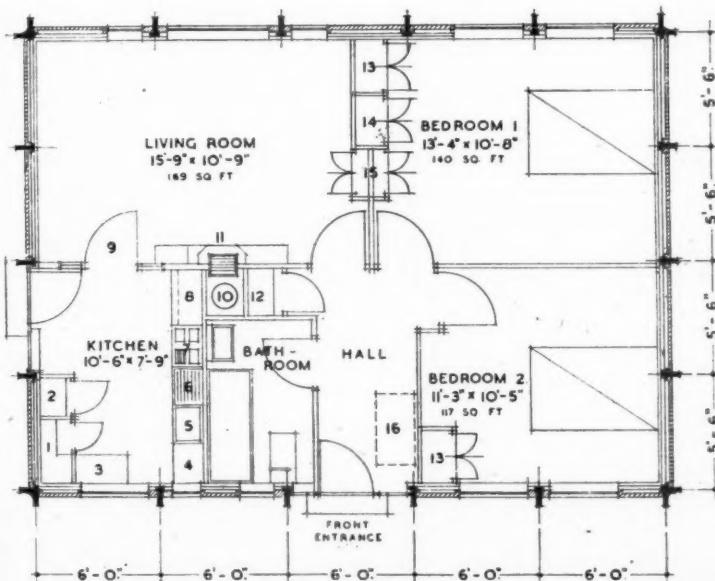
light timber framework. These panels are held together by timber battens at 4 ft. centres supported by the metal tie bars.

**WALL LININGS**—Prefabricated panels 3 ft. wide by the full height of the room, made of the same materials as the ceiling panels, and fixed to wood plugs cast into the concrete units. The thermal insulation value is claimed to be better than that required by the Burt Committee. (U 0.027 as compared with 0.300 for

an unventilated 11 in. brick wall.)

**PARTITIONS**—Panels similar to the wall linings except that the timber framework is faced on both sides with plasterboards.

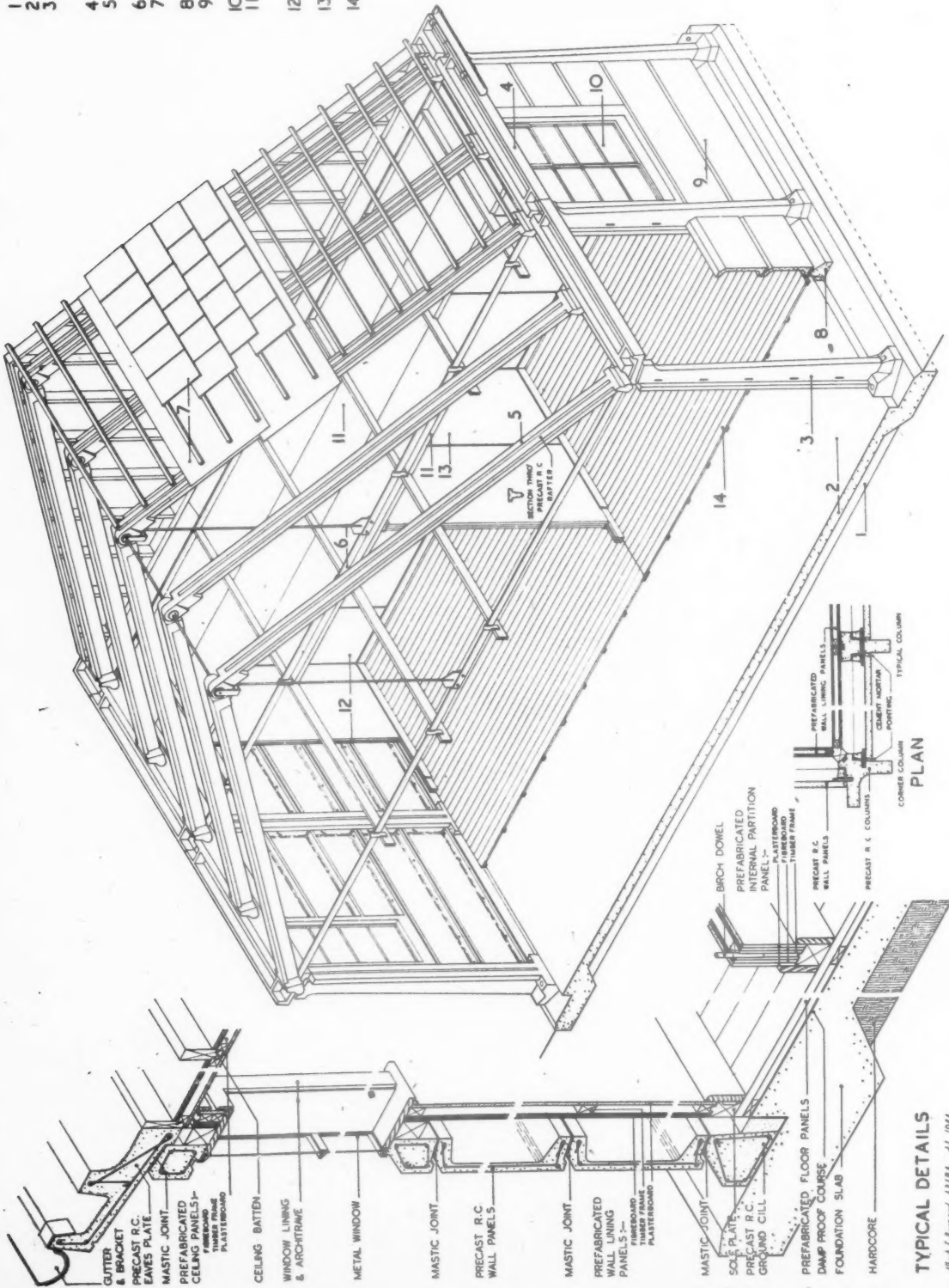
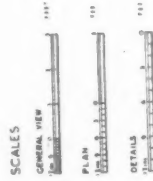
**FLOORS**—Can be constructed of the MOW sheet steel joists to which wood flooring is directly screwed, or prefabricated timber panels, or of Parlok continuous flooring—a jointless floor with a pitch-mastic base giving a high thermal insulation value and costing less than timber.





# REFERENCE

- 1 HARDCORE
- 2 FOUNDATION SLAB
- 3 PRECAST REINFORCED CONCRETE COLUMN BOLTED TO FOUNDATION SLAB
- 4 PRECAST R.C. EAVES PLATE
- 5 PRECAST R.C. RAFTERS AT 3'0" CENTRES
- 6 STEEL TIE BARS & HANGER
- 7 ROOF TILING ON TILING BATTENS & ROOFING FELT
- 8 PRECAST R.C. GROUND CILL
- 9 PRECAST R.C. WALL PANELS BEDDED & SET IN MASTIC
- 10 METAL WINDOW
- 11 PREFABRICATED CEILING PANELS & BATTENS SUSPENDED FROM TIE BARS
- 12 PREFABRICATED WALL LINING PANELS
- 13 PREFABRICATED INTERNAL PARTITION PANELS
- 14 JOINTLESS FLOORING, WOOD BLOCKS SET IN SCREED OR PREFABRICATED TIMBER PANELS



TYPICAL DETAILS

Arch. & Engr. 11/11/44

## BCCF · TEMPORARY BUNGALOW : TYPICAL DETAILS

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# INFORMATION CENTRE

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

## PHYSICAL PLANNING

1801

Australian Publication

**THE SLUMS ARE STILL WITH US.** (An Opportunity Club's Publication, Melbourne, July, 1944, 2s. 6d.) Main defects of Greater Melbourne. Speedier methods of slum demolition and reconstruction. Work of Victoria Housing Commission.

This book contains some of the material collected by the late Dr. Ramsay Mailler, the founder of the Victorian Slum Abolition League. It reveals the main urban defects of Greater Melbourne, and advocates more speedy methods of their abolition, especially with regard to the slums.

The development of Melbourne has been allowed to go on without any restrictions and without any evidence of planning. Melbourne covers an area three times greater than overseas cities of approximately the same population, and most of its areas carry a population density "so low as to be classed as grossly extravagant." This relates also to the vast blighted areas and slums mainly located in the inner municipalities.

In 1942 statistics showed that a drop in municipal revenue of approximately 200,000 pounds had taken place over the last year. This development will undoubtedly continue as urban blight becomes more obvious.

After a great deal of investigation the Government of Victoria appointed a Housing Commission, which in the five years of its existence has built something over 1,000 houses. The building activity has been interrupted by the war and "although the slums are still with us, their abolition has been started at least."

1802

Planning in Australia

**WE MUST GO ON.** A study of planned reconstruction and housing. F. Oswald Barnett, W. O. Burt, F. Heath (The Book Depot, Melbourne, 1944, 6s.). Planning fundamentals and their meaning for Australia. Method of fact-finding survey. Ways and means to realize balanced development. Activities of Victoria Housing Commission in zoning and housing.

The first chapters of this book deal with the fundamentals of planning and their meaning for Australia.

Planning is understood as the organization of resources, human and material, of the country for the benefit of the whole community. In order to achieve this a fact-finding survey, a collection of the necessary data, facts and conditions has to be undertaken.

Such suggested survey is illustrated in this book by various drawings and diagrams, such as:

*Distribution and Density of Population in Victoria:* Over 1,000,000 people live in Melbourne within an area of 170 square miles,

while the remaining 800,000 people are scattered throughout 87,714 square miles. That means a population density of 6,000 people to each square mile of the Metropolis, and one of 10 people to the square mile for the rest of the State.

*Distribution and Volume of Secondary Industry:* There is more secondary industry in Melbourne than in all the rest of the State. This concentration of industry has brought with it squalor and ill-development. The location of industry based upon a County-wide plan, is a necessity.

*The Regional Sub-Division of Victoria:* The sub-division of the State into Natural Regions should facilitate the effective planning of the country and its resources.

*Water Supply and Irrigation Areas:* Australia has only four rivers, and water is one of the main limiting factors in the development of this country. At present there are more than 600,000 acres of land under irrigation.

*Railway System and Main Roads:* The centralization of trade, industry and population in Melbourne is the result of a policy to use the railways to control, in the interest of Melbourne, the flow of traffic, the location of industry, and the distribution of population. Melbourne has become the only well equipped port in the whole State.

*Outward Spread of Metropolis of Melbourne, 1914 to 1938:* The uneven spread of Melbourne is a typical sign of the overgrown city, so characteristic of old-world towns. Another five million people can be housed within the ten miles radius from G.P.O.

The remainder of the book is devoted to the explanation of ways and means to realize the balanced development of the State and of Melbourne, and further to the description of the activities of the Housing Commission of Victoria with regard to Zoning and Housing the Population.

## STRUCTURE

1803

Housing Sites

**ADVANCE PREPARATION OF HOUSING SITES. MODEL SPECIFICATIONS FOR CONCRETE ROADS. NO. 1—USING MECHANICAL METHODS OF COMPACTING THE CONCRETE. NO. 2—USING MANUAL COMPACTION OF CONCRETE (April, 1944, 2s. 6d.) NO. 3—USING PITCHED OR HARDCORE FOUNDATIONS AND SINGLE COURSE TARMACADAM SURFACING (October, 1944, 2s. 6d.)** (Prepared in consultation with the Government Departments concerned, by a Committee of the Institution of Municipal and County Engineers.) Purpose is to arrive at reasonable standardization among local Authori-

ties, amended to suit local conditions as necessary; materials, workmanship, drainage.

At the request of MOH the Institution of Municipal and County Engineers prepared model specifications for concrete roads, and for roads with pitched or hardcore foundations and single course tarmacadam surfacing. The purpose was to arrive at some reasonable standardization amongst the various Local Authorities comprised in each Group, so as to enable the building of houses to start without delay as soon as circumstances permit.

The model specifications are intended as models and not as standards to assist the various technical members of a Group to decide on their own specification. They have to be amended to suit local conditions where necessary.

Specification No. 1 is based on the method of measuring the aggregates and cement by weight of dry materials, because this is the only accurate way of ensuring that the specified proportions of aggregates and cement are kept uniform. It specifies the water-cement ratio as a maximum. This is a great advance on previous Codes of Practice in this country, which were based on proportioning the mix by volume. However, there is scope for further improvement, since a constant ratio of coarse: fine = 2:1 does not necessarily give the best results. The introduction of the fineness modulus, as adopted in USA, and of some simple charts for the design of concrete mixes (see Inf. Centre 1590 in A.J. for September 7, 1944) would go a step further towards a more economical use of cement and aggregates.

Another step forward is the use of a soil-cement mixture at a sub-base instead of lean concrete, if certain conditions are complied with. This is an economical method, which has proved very satisfactory both in USA and Germany.

The Specifications contain many references to British Standards, and it is regrettable that such reference has been omitted in connection with clinker (BS 1,165/1944) which, if unsound, is definitely dangerous.

One may disagree with the statement in the introduction, common to all three Specifications, that the use of steel reinforcement is not considered necessary if certain clauses are adopted. It is true that there are concrete roads without reinforcement which behave satisfactorily; but in many cases the additional expenditure of reinforcement may be well justified. If cracks, which cannot be safely avoided, occur a concrete road without reinforcement is without control, whereas a comparatively small quantity of steel, properly arranged near the top surface, will guarantee that the cracks remain fine. In spite of the statement that reinforcement is not considered necessary, the quality of steel used in the reinforcement is specified. In this respect there is a discrepancy between Specifications 1 and 2 on the one hand and 3 on the other. According to Specifications 1 and 2 (Clause 17), the steel "shall be capable of passing the tests and conditions of the latest British Standard Specification" (no number is given), whereas according to Specification 3 (Clause 21) the steel "shall comply in all respects with BS No. 785/1938." The "latest British Standard Specification" on reinforcing steel is BS No. 1,144/1943 (Cold Twisted Steel Bars for Concrete Reinforcement, see Inf. Centre, No. 1,445, A.J. for April 13, 1944). There is no reason for this distinction; both BS No. 785 and 1,144 ought to be included in all three Specifications as alternatives.

1804

Brick Panels

**SIMPLIFIED BRICK CONSTRUCTION.** Frank Gollins (Architectural Design and Construction, January, 1945, pp. 9-15). Houses built of large pre-

fabricated double-skin panels. Outer leaf  $4\frac{1}{2}$  in. brickwork, inner leaf 4 in. lightweight concrete, connected by ties. Erection by cranes.

The basic idea is to use bricks and mortar without bricklayers. Large wall units composed of an outer leaf of  $4\frac{1}{2}$  in. brick and of an inner leaf of 4 in. reinforced lightweight concrete, are manufactured in continuous production. The production line consists of a roller runway carrying a series of pallets into which are placed the materials necessary for the manufacture of each individual section. The bricks are placed on a cast-iron grid and reinforcing rods, wall ties and sides of pallet being placed in position. Then grout is run over the surface of bricks and the whole panel is vibrated. Thus all the joints are tightly filled with grout. The inner leaf is cast on a steel shuttering placed above the brick panel in such way that a cavity is formed, and the mould can easily be dismantled after 24 hours. The units are lifted from the pallet and placed into a position for final maturing.

While the manufacture of the units for the outer walls is in progress, a second manufacturing line is operating to produce units to form the chimney breasts, chimneys, party walls and partitions; these are made of lightweight concrete. The party wall consists of two 4 in. skins, the load bearing partitions are 4 in., the others 3 or 2 in. thick, all in lightweight concrete.

The cranes used for the erection are preferably of the caterpillar type. It is usual to have two cranes working parallel to each other on opposite sides.

Both the manufacture and erection are based on a 24-hour cycle. It is claimed that with one unit plant in full production two houses can be manufactured and erected in one day, with 24 men employed; of these only 5 need be skilled or semi-skilled workmen.

Approximately 800 houses have already been erected by this method, which allows flexibility of design, and is suitable for any type of brick building.

1805

Welding

**WELDING BEAM CONNECTIONS FOR CONTINUITY.** C. M. Siquot. (*New Pencil Points*, July, 1944, pp. 79-82.) Examples of welded joints. Advantages of continuity and welding.

## MATERIALS

1806

Clay Products

**CLAY PRODUCTS AND THE NEW BUILDING.** Tom Wathey. (*Architectural Design and Construction*, October and December, 1944, pp. 231-232 and 283-285. New uses of brick. New types of brick. Hollow clay blocks. Combination of hollow block and concrete. Clay as plasticizer. Reinforced brickwork. Clay products prefabricated.

Clay is the oldest building material, yet with clay products, as with other materials, perfection has not yet been reached. The article suggests a number of improvements by which brick can be made a material more suitable to the requirements of post-war building.

The insulating properties can be increased by the presence of voids or cells. The manufacture of cellular bricks is one step in this direction. Another one is given by the modern methods of Wirecuts with over a hundred tiny perforations; when the brick



A welded design for a church in the USA having a  $45^\circ$  roof pitch with no lateral bracing. See No. 1805.

is laid each perforation becomes a Sealed Cell which improves the insulation and reduces the weight of the brick.

A more widespread adoption of electrical and mechanical methods in certain processes of manufacture will result in the greater precision of brick sizes. The application of the lift truck will make it possible to handle bricks by the hundred and not by twos and threes.

Increased speed of erection—which will be the foremost requirement of post-war building—will also necessitate the production of new types of brick: bricks with V-shaped sinkings for the anchorage of wall ties; bricks with grooves to make easy the cutting of closers and bats; bricks recessed in various ways for the housing of steel rods for horizontal and vertical reinforcement.

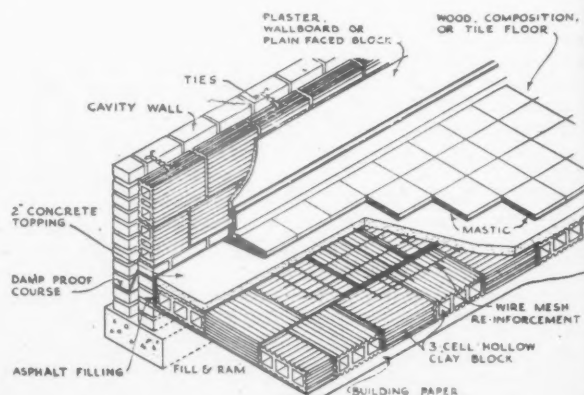
Hollow clay blocks possess most of the advantages of bricks, and for an equivalent mass are lighter and cheaper. As regards its insulating value, hollow block 9 in. thick equals solid brick 12 in. thick, or stone or concrete 3 ft. 3 in. thick. The fire resisting property of hollow block was well illustrated in a fire which occurred in the lift shaft of a building in a Northern town and burnt off the roof. In one room a poster was pinned to a  $2\frac{1}{2}$  in. partition wall of hollow block. The poster was not even charred, although at the other side of the partition the heat burnt off the plaster and melted the iron work of the lift.

In America there is an almost country-wide production of 3-, 4- and 6-cell units, ranging from 2 in.  $\times$  12 in.  $\times$  12 in. to a heavy type known as Basement Tile, which runs as large as 12 in.  $\times$  12 in.  $\times$  16 in. Such is the versatility of hollow block that an American firm advertises a yearly production of nearly 10,000 tons of block and Flat-Arch beam block (the latter for use in floors and roofs) in no fewer than 150 shapes.

The combination of hollow-block and concrete would appear to open up a new field for the designer. (See Inf. Centre, No. 1027, in A.J. 28.1.43.)

The economy of brick and block in combination is exemplified on a large housing scheme in Georgia, USA. It is claimed that the construction cost per four-room and bath type bungalow is £40 to £80 cheaper than building with prefabricated wall and floor panels. The main economy lies in the use of a hollow block-cum-concrete slab on the ground floor (see drawing). The construction is effective against rising moisture and assures a dry floor.

The properties of a cement mortar can be improved by the addition of a plasticizer. A plasticizer commonly recommended is lime. However, a clay product has been found to be better than lime. Mortar mix added to cement mortar improves its workability, and raises the average bond strength of mortar by 50 per cent. compared with lime.



Bricks and blocks used in combination.

See No. 1806.

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The efficiency of reinforced brickwork under air-raids is sufficient recommendation for its employment in other types of building. Wood lintels in brick houses should be replaced by reinforced brickwork to avoid cracks resulting from the shrinkage of badly seasoned timber.

The HRB brick allows for the first time the application of three dimensional reinforcement in brickwork. Maximum reduction in the cross section of columns can be obtained, thus making possible the building of framed structures in brick. No shuttering is required for columns and walls; for beams and slabs a simple horizontal support is sufficient. Tests have shown that the behaviour of reinforced brickwork under load is exactly as in the case of reinforced concrete, and formulae for one are applicable to the other.

Prefabricated clayware slabs are already in use in America. It is not impossible that the future may bring the prefabrication of such items as reinforced porch-slabs, paving slabs, fireplaces, doorsteps, cills, and even panels of wall construction. One of the needs of the building industry to-day is a floor construction as reasonable in cost as was timber in pre-war days. Hollow block could help in supplying that need.

1807

Timber

**WORLD TIMBERS. VOL. I. (Timber Development Association.)** Fifty loose leaflets, each giving concise description of an individual tree and timber (seasoning, strength, durability, working qualities, use, supplies, etc.), filed in handy binder. Easy reference table. Useful reference book for all users of timber.

1808

Metal Lathing

**SPECIFICATIONS FOR SUSPENDED SOLID PLASTER CEILING SUPPORTS. METAL LATH AND PLASTER PARTITIONS. (The Association of Metal Furring and Lathing Contractors, August, 1944.)** Lays down standard of workmanship and materials for design of supports of suspended plaster ceilings.

This is a general specification, the outcome of long experience of specialist firms engaged in this work. Specifications of proprietary types of metal lathing are prepared by the manufacturers themselves.

## HEATING and Ventilation

1809

Sound in Ducts

**THE STUDY OF SOUND ATTENUATION IN AIR DUCTS. B. G. Churche and A. J. King. (Metropolitan-Vickers Gazette, January, 1944, p. 261.)** Largely discussion of method of studying reduction of sound along ducts. Few results quoted. No discussion on principles.

1810

Mist and Dust Collection

**MIST AND DUST COLLECTION. C. E. Lapple. (Heating, Piping and Air Conditioning, July, 1944, p. 410.)** Review of commercial applications of mist and dust collection, with discussion of characteristics of mists and dusts.

The various applications mentioned include (a) the elimination of dust nuisance (as in

air-conditioning of buildings), (b) improvement of commercial products (as in the photographic industry), (c) the protection of machinery (e.g., air cleaners for internal combustion engines), (d) the elimination of safety and health hazards (dust explosions, silicosis), and (e) recovery of valuable products and the collection of powdered products. Dust is defined as solid particles greater than 1 micron (1/1,000 mm.) in diameter produced by mechanical means such as grinding; spray consists of liquid particles greater than 10 microns in diameter produced by mechanical means. Fumes and mists are produced by condensation from the vapour state, fumes being solid particles less than 1 micron, and mists liquid particles less than 10 microns in diameter.

This article, the first of a series dealing in a comprehensive manner with the problems of dust collection, forms a valuable introduction to the subject, and clearly indicates the nature and magnitude of the problem involved.

1811

Mist and Dust Collection

**MIST AND DUST COLLECTION. C. E. Lapple. (Heating, Piping and Air Conditioning, August, 1944, p. 464.)** Methods of measurement and character of atmospheric pollution.

Among the methods of measurement which are reviewed are (a) the Ringelmann chart, commonly used by smoke inspectors, (b) the impinger and jet dust counter, which give the number of particles per cubic foot, (c) electrical and thermal precipitators, which are more efficient, but also give number per cubic foot, and (d) filter paper methods. The sizes for which each type is effective are given. The average suspended pollution in 14 American cities during the winter was found to be 0.22 grains per 1,000 cubic feet, the mean particle size being about 0.6 micron (one-thousandth of a millimetre). The pollution was found to consist of 65 per cent. of carbonaceous matter, with 35 per cent. ash. Domestic sources were found to contribute the major portion of the pollution. (These figures and conclusions agree fairly closely with English experience.)

1812

District Heating

**LAI-ON ENGINEERING SERVICES TO SATELLITE TOWNS. D. G. J. Matthews. (Air Treatment Engineer, May, 1944, p. 74.)** Ideal district heating scheme providing steam heating and electric power.

A combined steam and electricity station provides (a) low-pressure steam for heating, domestic hot water and cooking, (b) high-pressure steam for factory process work and for laundries, and (c) electricity for lighting, radio, domestic appliances, factory equipment and cold water supplies.

1813

Office Block Services

**ENGINEERING SERVICES FOR A NEW OFFICE BUILDING. H. Kirkby. (Air Treatment Engineer, April, 1944, p. 50.)** General outline scheme for heating and ventilation of office block, using off-peak electrical thermal storage and panel-heating. Details of necessary controls included.

1814

Theatre Services

**ENGINEERING SERVICES FOR A MODERN THEATRE. (Air Treatment Engineer, August, 1944.)** ENGINEERING SERVICES FOR A SAVILE ROW NEW BUILDING. (Air Treatment Engineer, September, 1944.) General outline of heating,

ventilating and engineering services for these two classes of building.

1815

Hospitals

**REFRIGERATION AND AIR CONDITIONING. T. Mitchell. (Architectural Record, August, 1944, p. 97.)** Applications of refrigeration and air conditioning in hospitals.

The author discusses the various needs for refrigeration in a modern hospital, and gives a summary of the optimum temperatures for keeping foods and other items. Optimum temperatures and relative humidities for wards, operating rooms, nurseries and so on are also given. Reference is made to the book *Hospital Air Conditioning*, by C. P. Yaglou (1936).

## QUESTIONS and Answers

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

1816

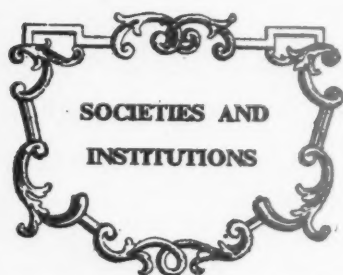
Approximate Estimating

**I** have a copy of *Approximate Estimating* by Sir John Burnett, Tait & Lorne (Architectural Press, 1937). If possible I wish to bring the prices up to date, and would appreciate any information you can give me concerning percentage increases, or publications that will be of use.

**A** So many different statements have been made that it is impossible to give an authoritative reply. However, two statements with particular reference to Housing made about the middle of last year were not very conflicting, and as *Approximate Estimating* appears to be primarily for Housing, they may be taken as a guide. Lord Portal, in a statement to the House, put the increased cost of building since the war at 105 per cent. and the House Builders' Federation, in a letter to *The Times* suggested 100 per cent.

Other statements from more or less authoritative sources have been made, putting the figure at as low as 40 per cent., and it is difficult to reconcile these opinions. However, there must be a considerable difference if one person is trying to show the effect on the Building Industry of increased wages, decreased output (due to recruitment for the Services) and increased cost of materials, etc., and another person is trying to show the actual increased cost bearing in mind that men are now often called upon to work a 60-hour week and generally have to be brought in from an outside and possibly higher grade district, etc.

It appears that it is this sort of difference which accounts for the extreme variance in the estimates, made, and 100 per cent. to 105 per cent. must be considered as the more reasonable estimates for your particular purpose. The increase from 1937 to 1939 and from 1943 to 1944 was not great, and to account for the total increase from 1943 to the present day, it should only be necessary to increase the figures mentioned by about 5 per cent.



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

## RIBA

### Goodhart-Rendel

February 13 at 66, Portland Place, W.1. Paper on THE WORK OF THE LATE SIR EDWIN LUTYENS, O.M., read before the RIBA by H. S. Goodhart-Rendel, F.R.I.B.A., P.P.R.I.B.A.

#### H. S. Goodhart-Rendel:

Throughout the ages two ways have so far been discovered of making architecture. The first is that of letting forms be suggested primarily by usefulness and stability. The second is that of choosing what will be useful and stable from among forms that are preconceived for their beauty. Probably no individual architect can go very far on the first way by himself, it needs a school—a succession of like-minded workers—to bring to maturity the architecture that springs from the nature of building. The best method of building that one man alone can think of is not likely to be positive and definite enough to produce any architectural expression of itself. If M. le Corbusier and Herr Gropius have produced a school and not merely an apéry we may see architecture arising out of their efforts. Evidence on this is still inconclusive. The second way of making architecture, that of combining conventional elements into a useful and stable whole, can be practised either by a school that agrees upon a convention or by an individual who makes his own. Architecture at and since the Renaissance has all originated thus.

The work of Sir Edwin Lutyens, whom we are commemorating to-night, was the final flowering of the school of George Edmund Street. By this statement I do not mean that Lutyens admired, much less imitated, any of Street's characteristics; he was a boy when Street died and probably never bothered about him at all. But Street was the great loosener of Victorian rigour in architecture; the first man, as it

were, to smile as he worked, and to seek simplicity and homeliness consciously in little things. Student designs by Philip Webb, by Norman Shaw and by Ernest George show, by their scrupulous imitation of the master's mannerisms, how overpowering was his influence upon the best young brains of his time.

The link between Street and Lutyens is Ernest George; the disciple of one and the master of the other.

The first works in which Lutyens found himself contain actually more of Shaw than of George, but they contain more of Lutyens than of either. The look-out windows of Shaw's *Swan House* on Chelsea Embankment seem to have captured Lutyens' young fancy, and these we find recurring so constantly in his earlier houses as almost to become their salient characteristic. Also, in these houses, roofs were for the most part hipped, such gables as there were having close-cut verges without barge-boards: following thus the marked simplification of Shaw's style in its later developments. A breadth of design can, however, be traced in many of Lutyens' earlier houses that is peculiarly his own. *Le Bois des Moutiers* in France and the house added to the old inn at Roseneath in Argyllshire are happy exemplifications of this. As we travel the road of Lutyens' art I think it is at Roseneath that we first feel there is magic in the air.

Aerial magic like this is evanescent, and I do not find it easy myself to recapture the thrill I experienced when in my teens I first visited *Orchards*, a house near my home that Lutyens had just finished. In it the elements of *Chinthurst Hill* are used again more artfully, the details have become less tentative, the rooms are of more reasonable shape, less broken by bays and ingles, and the picturesqueness generally is less destructive of convenience than it is in the earlier design.

All Lutyens' architecture is primarily picture-building, and we might therefore expect what we find in it, a concern with natural surroundings almost as intense as its concern with brick, oak, or tile. Whether natural surroundings were beyond his control, as in the wild rock of *Lindisfarne*, or were malleable by his hand, as in the gardens of West Surrey, we find always in his finished work a carefully sought affinity between the forms of dead and those of living matter. In establishing a just proportion between buildings, courtyards, and the garden spaces that surround them his judgment was unerring, although sometimes he may not have resisted the temptation to overfill the garden spaces with steps, balustrades and ornaments.

As time went on the pictures that he built became more and more demurely composed, although during all his career he would occasionally revert to the looser integration of his cottage-style. The house he built for his mother-in-law at *Knebworth*; the two houses on *Walton Heath*, *Chussex* and the *Dormy House*; and the house *Monkton* near Singleton in Sussex all display bilateral symmetry and details in the post-Renaissance convention.

Almost at the beginning of this lecture I allowed myself the fanciful expression that Street, as it were, smiled as he worked, and I have returned to the same line of thought in suggesting that architecture was to Lutyens above all a wonderful game. Sometimes the game is a Solitaire that hardly seems to invite onlookers; such designs as *Papillon Hall* or the expensive villa at *Ilkley* were obviously much more fun to make than they are to look at. Sometimes the player's zest has flagged as at—but why enumerate that cannot be praised? When his eye was in, there never was such a performer.

Beauty in a plan whether of a building or of a garden is not that of a pattern on paper, but that of the succession of emotions a spectator will experience as he walks through its spaces. These emotions

may be nothing more than the satisfaction of expectation: in compact, economical plans we can ask nothing more than that there should be some governing proportion, some ubiquitous ratio that leaves no dimensions to chance. The plan of the *Petit Trianon*, unequalled of its kind, claims no rarer beauty than this. But in extended lavish plans there can be drama in the spectator's progress, he can be diverted from his course, brought back to it again, surprised by vistas, stimulated by alternations of light and darkness, so that even going to bed is a nightly-repeated adventure. In all Lutyens' plans, even the smallest, there is some spice of this dramatic element, sometimes no more than the ending of a passage in a quadrant so as to prepare you for the side turn you will shortly have to make; and in all there is also that simpler but invaluable virtue of sustained proportion. To wait in the porch at *Munstead Wood*, to be ushered through the entrance hall to the big room in which its owner was sitting, and to be taken upstairs by her to look down on the garden court from the windows of that delightful gallery was to experience a harmony of successive pleasures that her architect had foreseen and provided for his friend and her guests. Living in a Lutyens house may have its disadvantages, the offices are sometimes queer, you can't always see out of the windows, and there is an awful lot to dust and keep clean. I expect that the same was true of most fairy palaces, but the amenities of fairyland are worth a lot.

When his path as an artist joined the path once trodden by Wren, a stage in his career was reached at which his work first became widely popular. Wren as a man must have been one after Lutyens' own heart. Ingenious, inventive, full of gusto and also of fantasy, hugely energetic, wilful, poetic, perverse—it is hard to find an epithet for either man that will not do for both. Architecture in Wren's day, however, was a much less exigent calling than it was in Lutyens'; indeed it was only one, and not always the most absorbing, of Wren's activities, whereas it occupied nearly all the working hours of Lutyens' life. Wren directed craftsmen all trained to work in one formal language; a slight sketch from the master was enough to set them off, and most of them could and did originate designs for his approval. Lutyens directed craftsmen to whom he had to convey his intentions by drawings in which the most minute detail was decided by himself. Such is the price of our modern loss of tradition.

Wren's architectural idiom owes a great deal to accident, to French and Dutch fashions that influenced his time and to provincial localisms. It is not always markedly personal; you can attribute all sorts of buildings to him which the critics will acknowledge until documentary evidence is found for their discredit. Whenever Lutyens went the whole Wrenian hog, which was very seldom, I do not think that he added much to our artistic treasury; but there are nowhere more remarkable pieces of architectural bravura than some of his ingenious variations on Wren's themes. Personally, I like the earliest of these the best. I find in the offices of *Country Life* in Covent Garden a façade that he never surpassed. Here are combined a Wren-like ordonnance, Wren-like details—Gibbonsy carving and the rest—with a dramatic roof and chimneys à la Norman Shaw and a care for colour and surface that was Lutyens' alone. The success of the whole seems to me in its way complete.

In his later polite accomplished building fairyland was left behind; but the leisure of childhood passes, and in the press of an active career an architect must canalise his invention in a narrow channel of rapid flow. This Lutyens nearly did, but not quite. By his extraordinary accomplish-

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ment he brought the Classical orders completely under his control, a rare achievement in an Englishman, but his perpetual boyishness led him sometimes to play Classical pranks the humour of which may pall. The Italian extravaganza at Ilkley that I have mentioned already is extravagant only in consideration of its size and surroundings. It has the sculptural self-sufficiency of true baroque; and, on a larger scale somewhere else, would make an impressive design. But what can one say of the Institute in the Hampstead Garden Suburb but that it is both naughty and boring? What look like mistakes in it cannot be mistakes because Lutyens never made mistakes of so elementary a sort. They cannot be mistakes because, also, they have a flavour that reappears in some obviously deliberate but to me dyspeptic details in his great cathedral. I hope there may be some point in them that I have missed.

The two churches side by side at Hampstead show in its highest development the pitting of urbanity against rusticity that we observed beginning in the little house at Bramley. Never was there stranger mixture of temple and barn than the Anglican church here with its barrel vault, its naked beams, its fine mouldings and its crude brickwork. The result is faultlessly picturesque, and as successful in its way as Norman Shaw's parallel reconciliation of Gothic stonework with "Queen Anne" dormers and balconies in *St. Michael's, Bedford Park*. No one but a master could have produced either, and no place but a garden suburb could have inspired a master to do so. The broad handling of masses externally in Lutyens' church seems to me most impressive.

Individualism is a word that seems to collect more and more contentious connotations every day, and yet I needs must

use the epithet *individualist* for Lutyens' art, since no other would be so appropriate. At the outset of every work, an architect is confronted with people he must please, requirements he must satisfy, and materials he must use; all with fairly strong wills and tendencies of their own. Is he to bend his will to theirs, or theirs to his? Is he to guide the complex of conditions and circumstances to its own expression, or is he to force upon it an expression that he wishes for, and thinks suitable enough? The architects of Antiquity and of the Middle Ages chose the first alternative, and their choice is followed by the young school of to-day. The architects of the Renaissance and afterwards have chosen the second, imposing at first the Vitruvian canon; and, later, the personal preferences of minds attuned to the Picturesque. They have worked for the most part surrounded by ease and plenty, so that strict serviceability and permanent value have often concerned them as little as they have concerned the arbiters of fashion in dress. While the Vitruvian canon held, while there was accepted a formal language that all could speak and understand, the mean level of achievement was high. Architecture was no longer the fundamentally creative art it had been, but it was an honourable profession, in which an artist could find scope and he who was no artist would be kept out of serious trouble. When the Vitruvian canon foundered completely in the morass of the Picturesque, all hands went down with it save the few who were strong enough to clamber on to lonely rocks of individual achievement. And on lonely rocks the Victorian masters continued to dwell.

Lutyens' rock was a firm one; his achievement being founded upon a sensitiveness to form, a retentive memory for past sensations, and a power of revoking

them and conveying them to others such as are given to few. He had exceptional fertility of invention, very great industry, and a technique always increasing to meet the increasing demands he made of it. He could be extraordinarily perverse and get away with it—and could also be extraordinarily perverse and not get away with it—in short, he was a great artist of a typically English kind. His work had that evocative quality that in English Poetry needs no explanation to Englishmen and to foreigners is capable of none. In estimating his work as a whole we must not forget the enormous volume of his output; the link between him and Street was George the prolific, and not Philip Webb, who is said to have refused a commission for a house because he was "already building one." Yet there seems to be nothing discovered by Webb in his minute researches into craft and material that Lutyens did not know as well as Webb did. Designs for everything connected with his buildings and gardens, furniture, metal work, decoration, all poured from his brain in inexhaustible spate; and although in these there was inevitably, and quite properly, some repetition, in none was there any perfunctoriness.

"The final flowering of the school of Street"—yes, I think it will prove to have been that. When another Lutyens is born he will find himself rationed by necessity into a much smaller expenditure of fantasy. Even should an age of Faith miraculously return, and men build again to the glory of God and not for the passing delight of Humanity, there is not likely to recur a century like that through which we have come, a century in which so much money can be spent for the benefit of so few. It was a glorious time for the architect who found and pleased a rich public. Lutyens had a glorious time; in the presence of his works we can re-live many of its moments.

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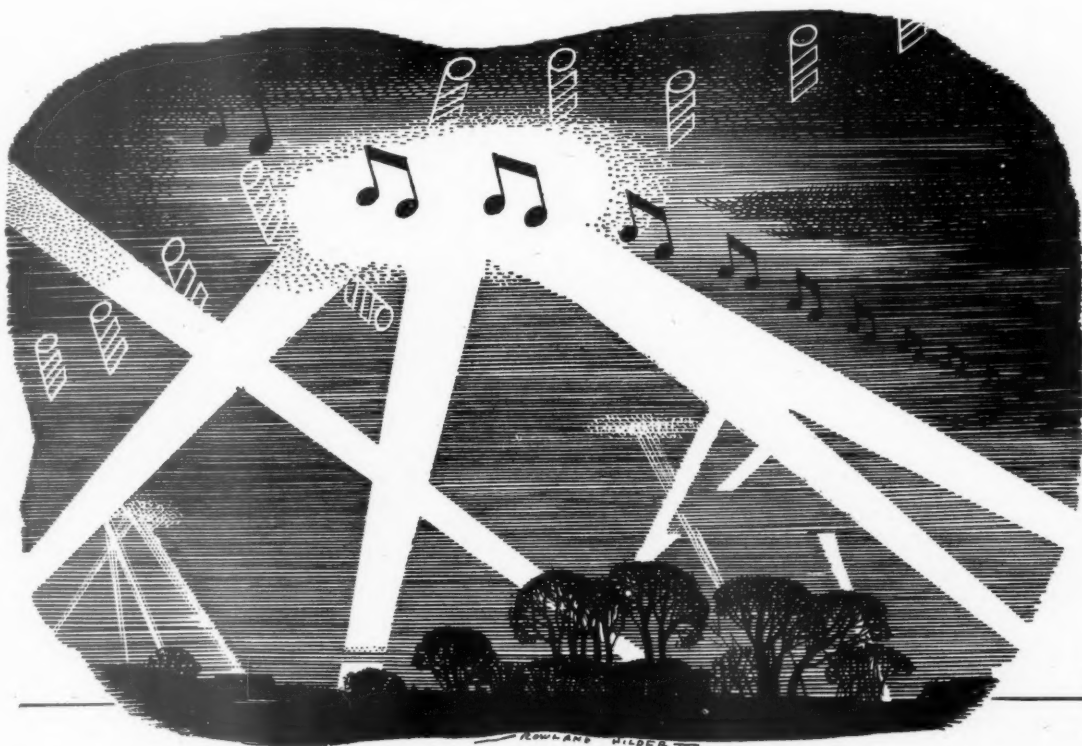


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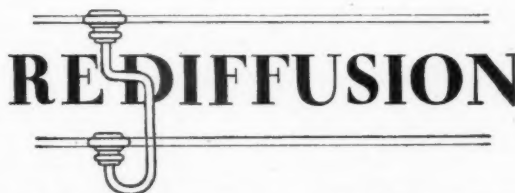
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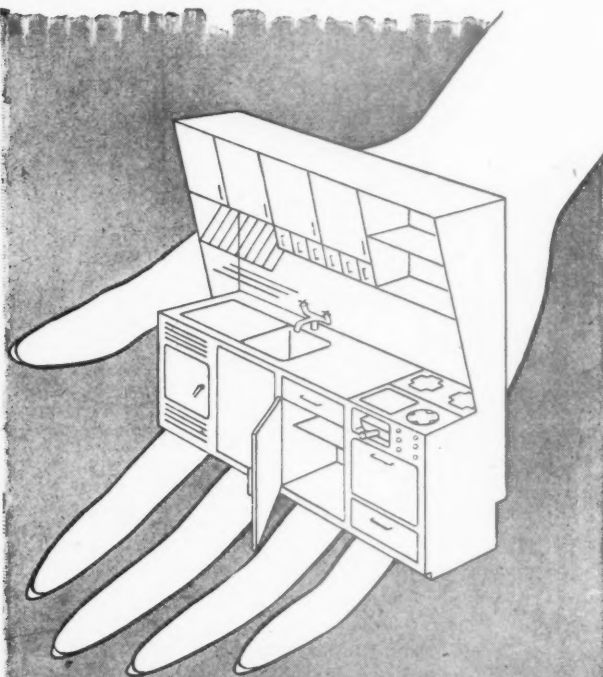
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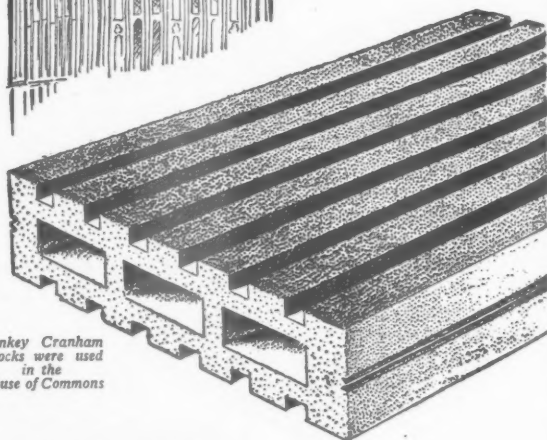
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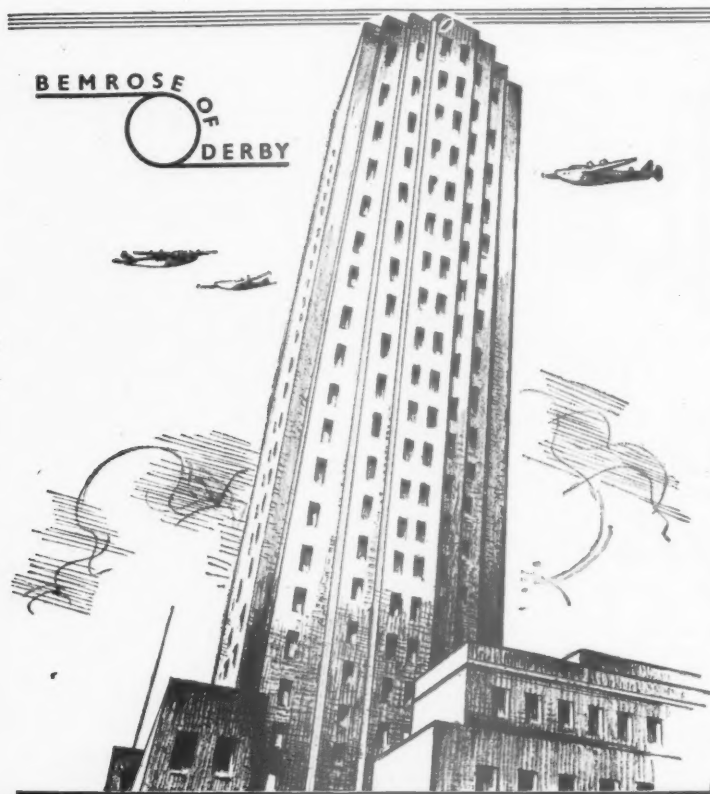
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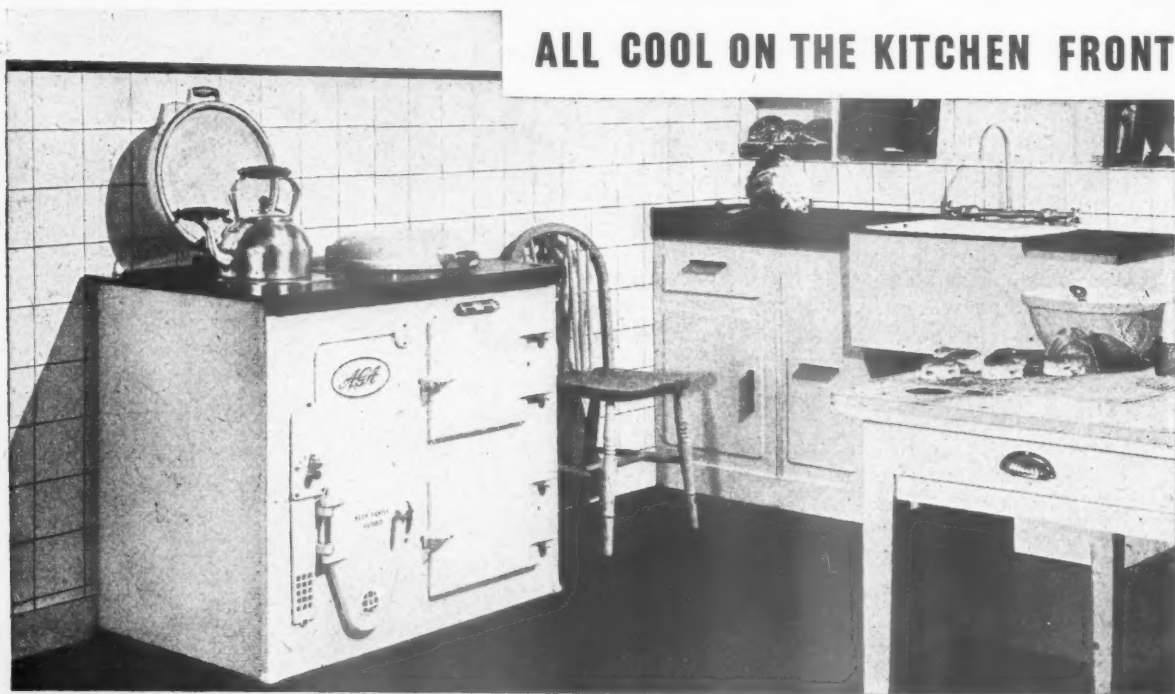
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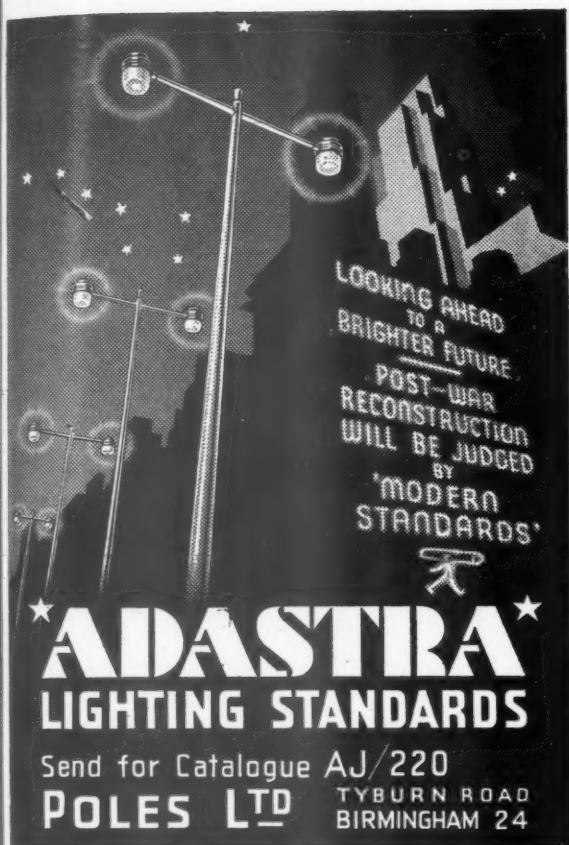
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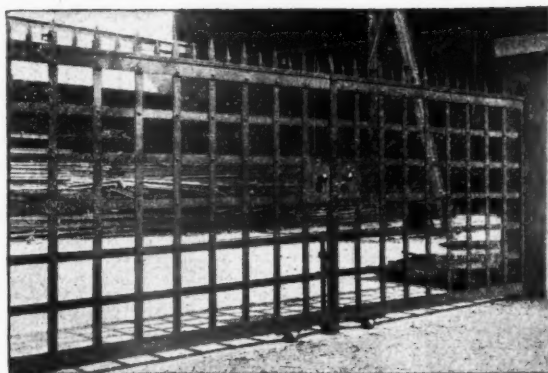


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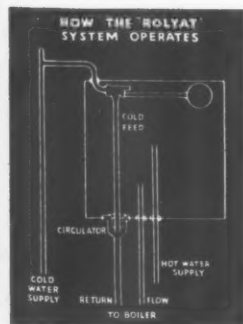


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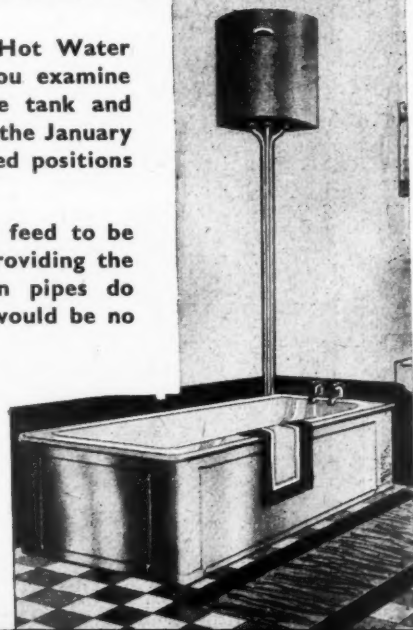
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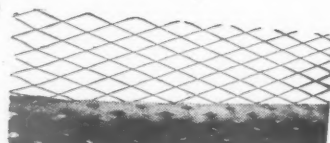
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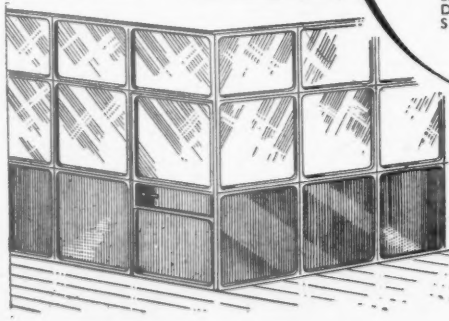
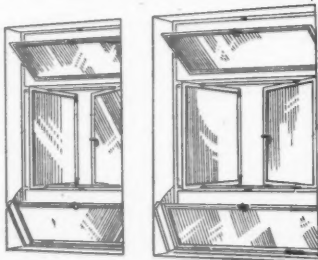
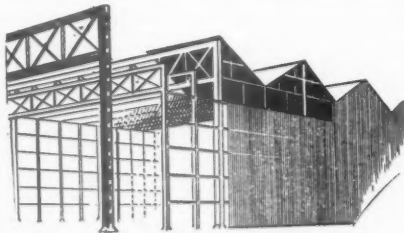
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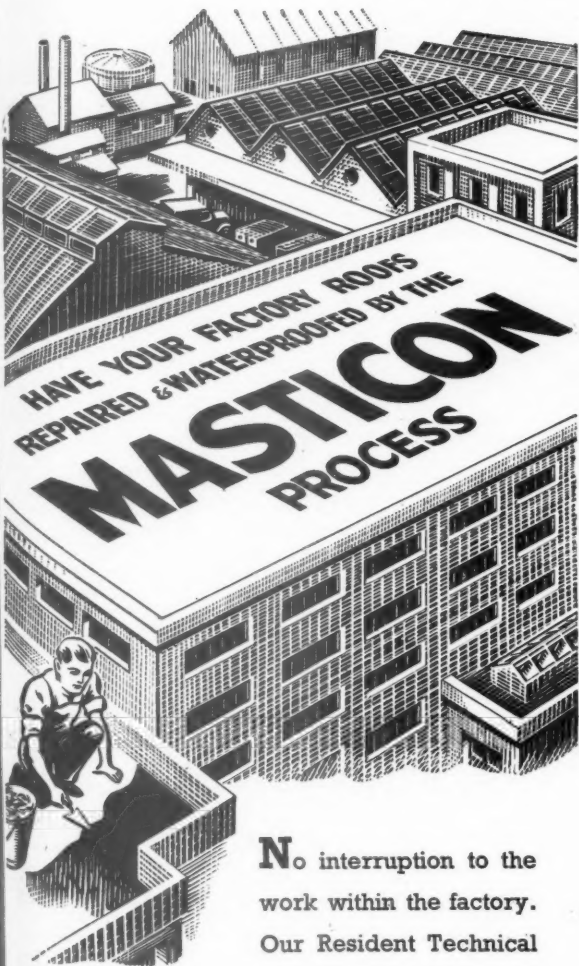
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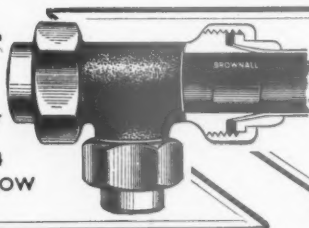
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