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De La Warr Pavilion, Bexhill-on-Sea.

Architects: Mendelsohn & Chermayeff.
Metalwork: J. Starkie Gardner Ltd.

Entrance hall with balustrade hand railing of polished "Birmabright" Aluminium Alloy.

428A


44

IF building is to go forward at the speed which the nation demands, new ways of planning and of construction will be needed. Whatever may be the scope and shape of the building programme, structural steel will have an important contribution to make.

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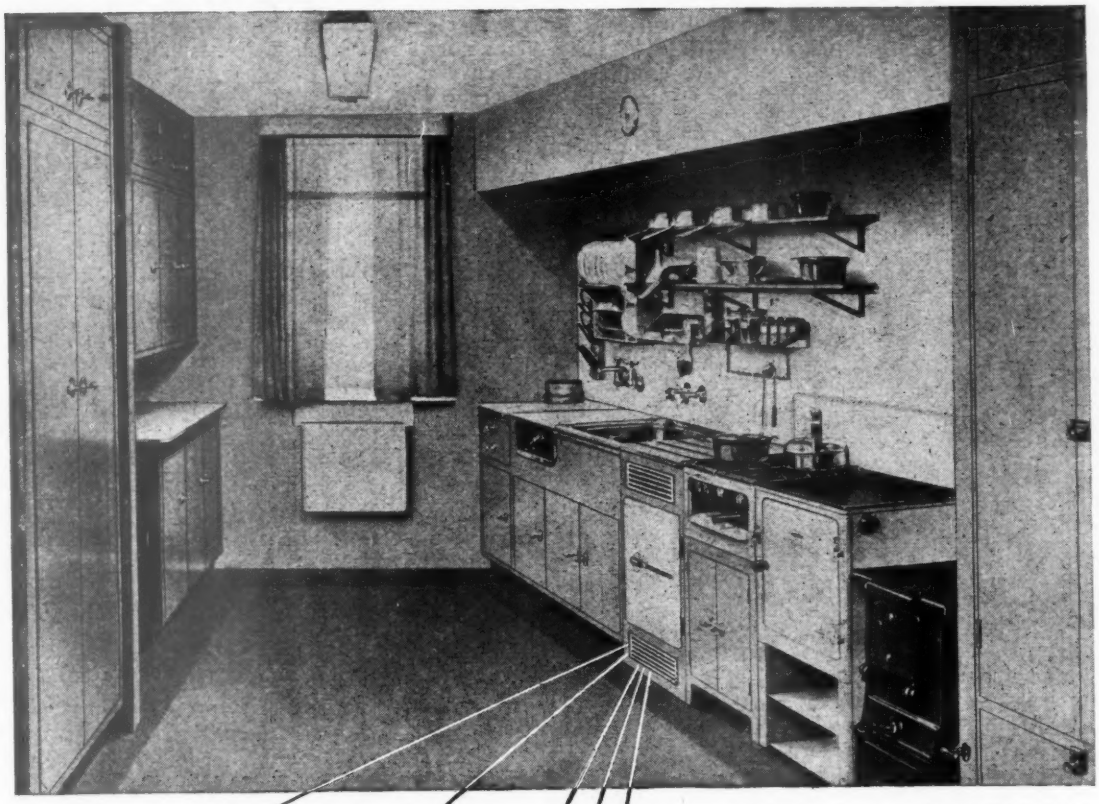
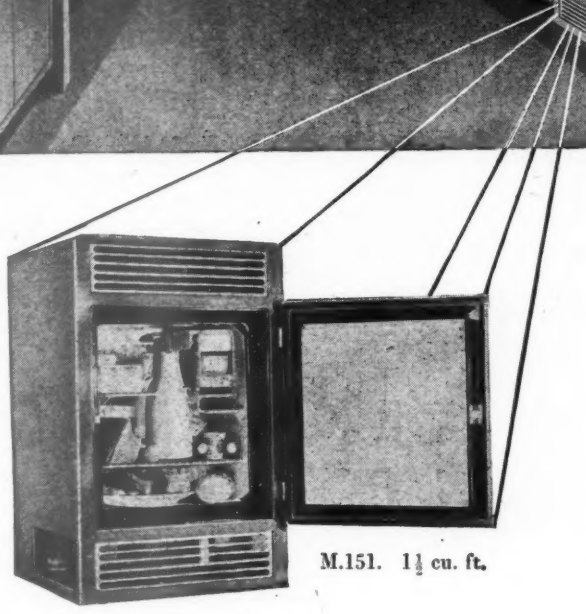


Post-war Kitchen Interior by courtesy of MESSRS. RADIATION LTD



M.151. 1½ cu. ft.

Kitchen equipment must satisfy the housewife's needs and, by its adaptability, meet the requirements of the kitchen planners. That is why Electrolux 'built-in' refrigerators are so popular. The M.151 shown fulfils the needs of the average small family, and like all Electrolux 'built-in' cabinets, fits in to any kitchen design. Moreover, it is noiseless, has no moving parts, and does not interfere with wireless reception.

Electrolux Refrigerators operate equally well by Gas, Electricity or Paraffin. Free standing models will be available.

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Works: **LUTON, BEDFORDSHIRE**

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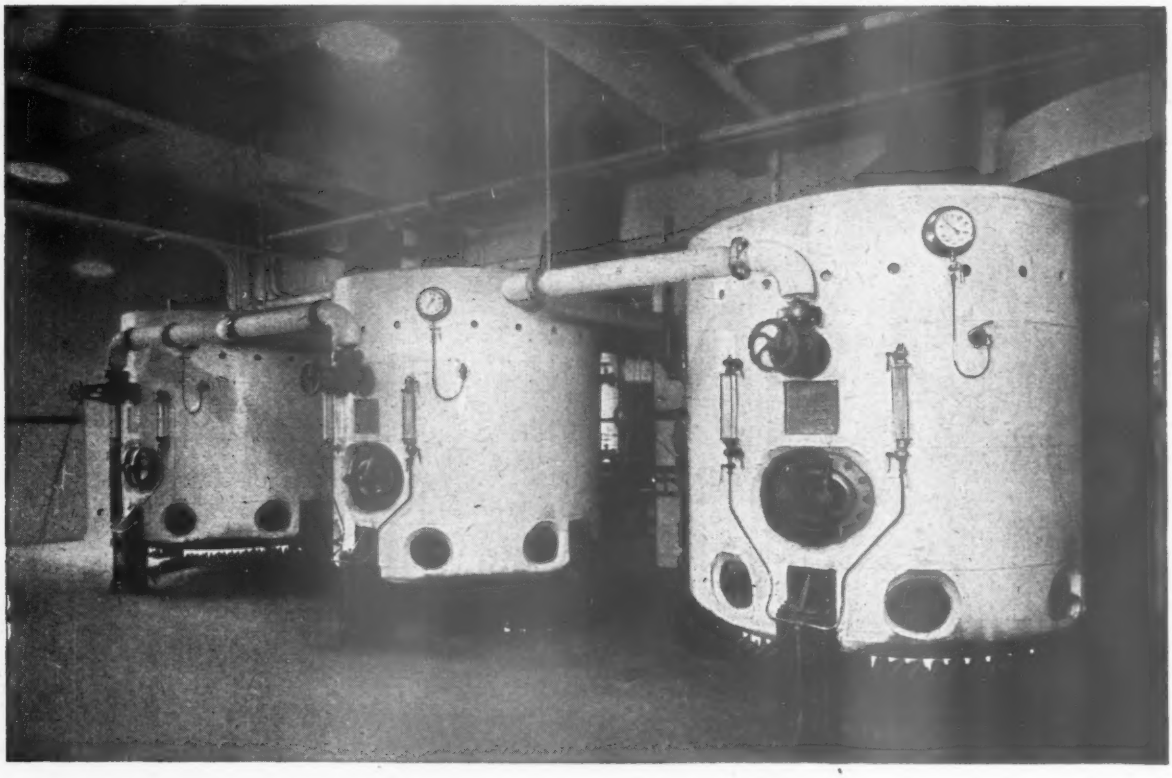
MODERN ENGINEERING INSTALLATIONS *by* HADENS



THE Boiler House of a large gas fire public bath installation designed and installed by Hadens.

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DOOR FURNITURE should do its job gently and thoroughly. It should be designed so that years of use and even of abuse will not disturb its smooth functioning. It should be pleasant to the hand and a quiet delight to the eye.

That is the kind of door furniture Lacrinoid make. And they make it at a price that ensures its widest use.

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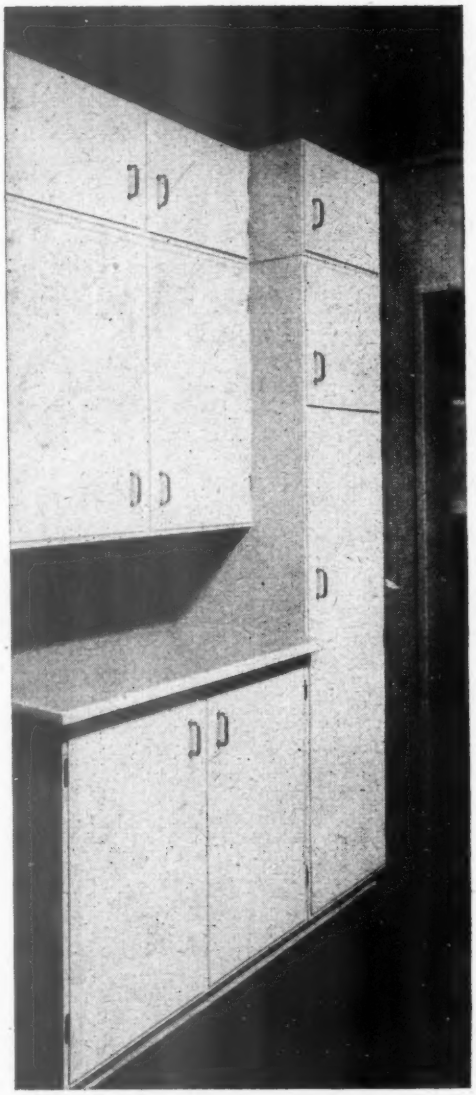
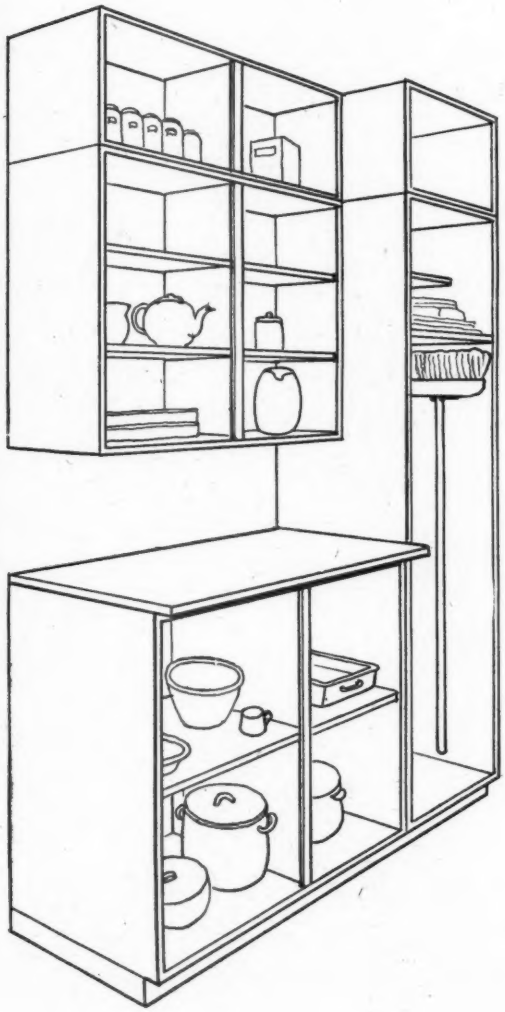
EJMA STANDARD KITCHEN UNITS



EJMA kitchen units are designed for flexibility of planning. Each unit, single or double, is a separate entity yet all of them may be combined in an infinite variety of ways to suit the large or small kitchen, new or old.



Cupboard sizes and shelf or drawer spacings have been so chosen that they are neither too small nor too large to accommodate the usual kitchen equipment.

THE ENGLISH JOINERY MANUFACTURERS ASSOCIATION

SACKVILLE HOUSE, 40 PICCADILLY, W.1 REGENT 4448 [INCORPORATED]

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

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

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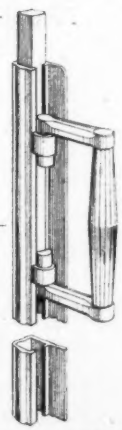
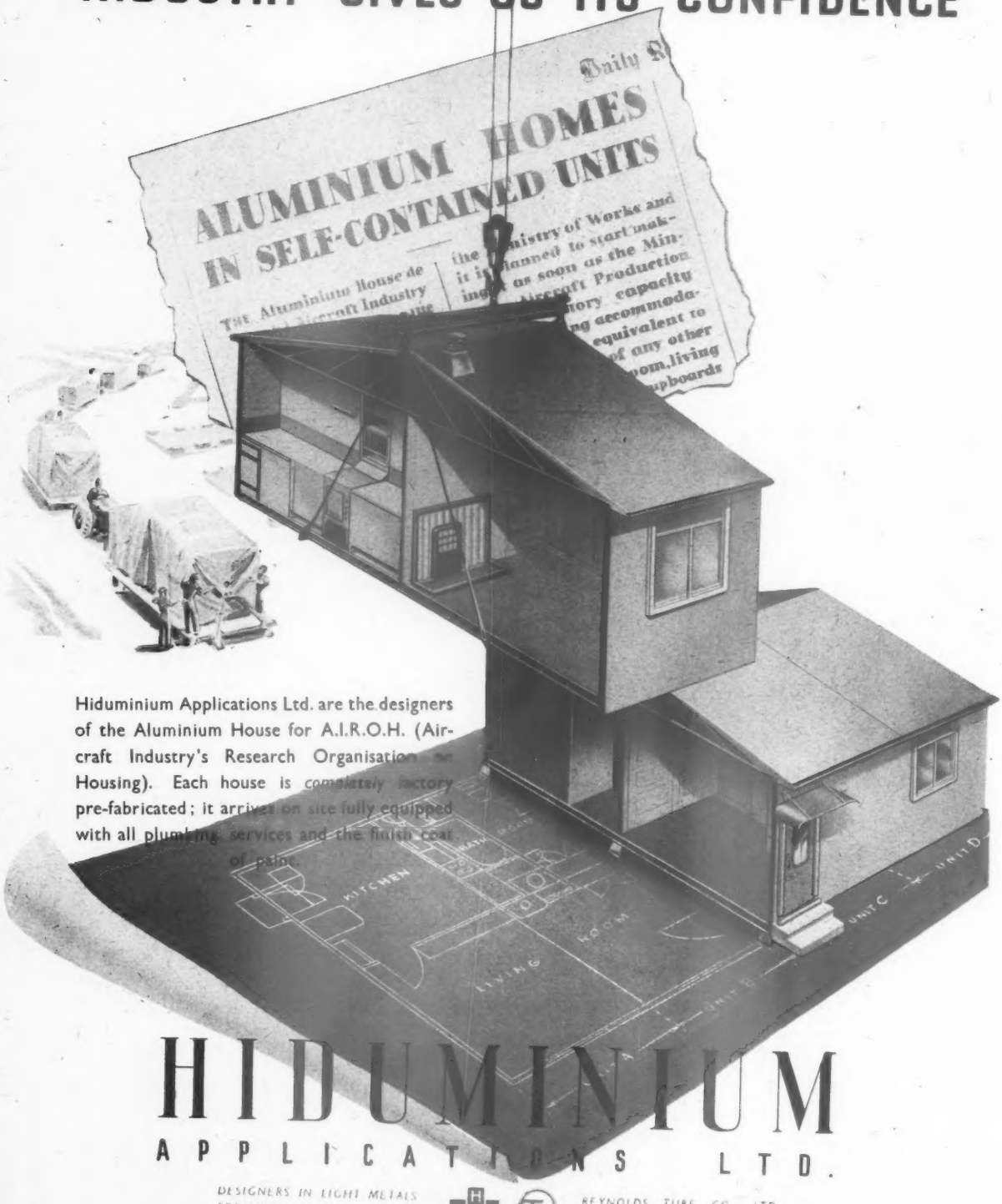


SELF LOCKING HANDLE AND SLIDE. *Ideal for operating controls connected to windows, ventilators, Light Dampers, etc. Colour of grip and finish available in a range to harmonise with decorative schemes. Control can be locked in any position by a quarter turn of the handle. An indicating pointer can be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

JUST SLIDE THE HANDLE!

WHEN THE NATION WANTS HOUSES

INDUSTRY GIVES US ITS CONFIDENCE



Hiduminium Applications Ltd. are the designers of the Aluminium House for A.I.R.O.H. (Aircraft Industry's Research Organisation on Housing). Each house is completely factory pre-fabricated; it arrives on site fully equipped with all plumbing services and the finish coat of paint.

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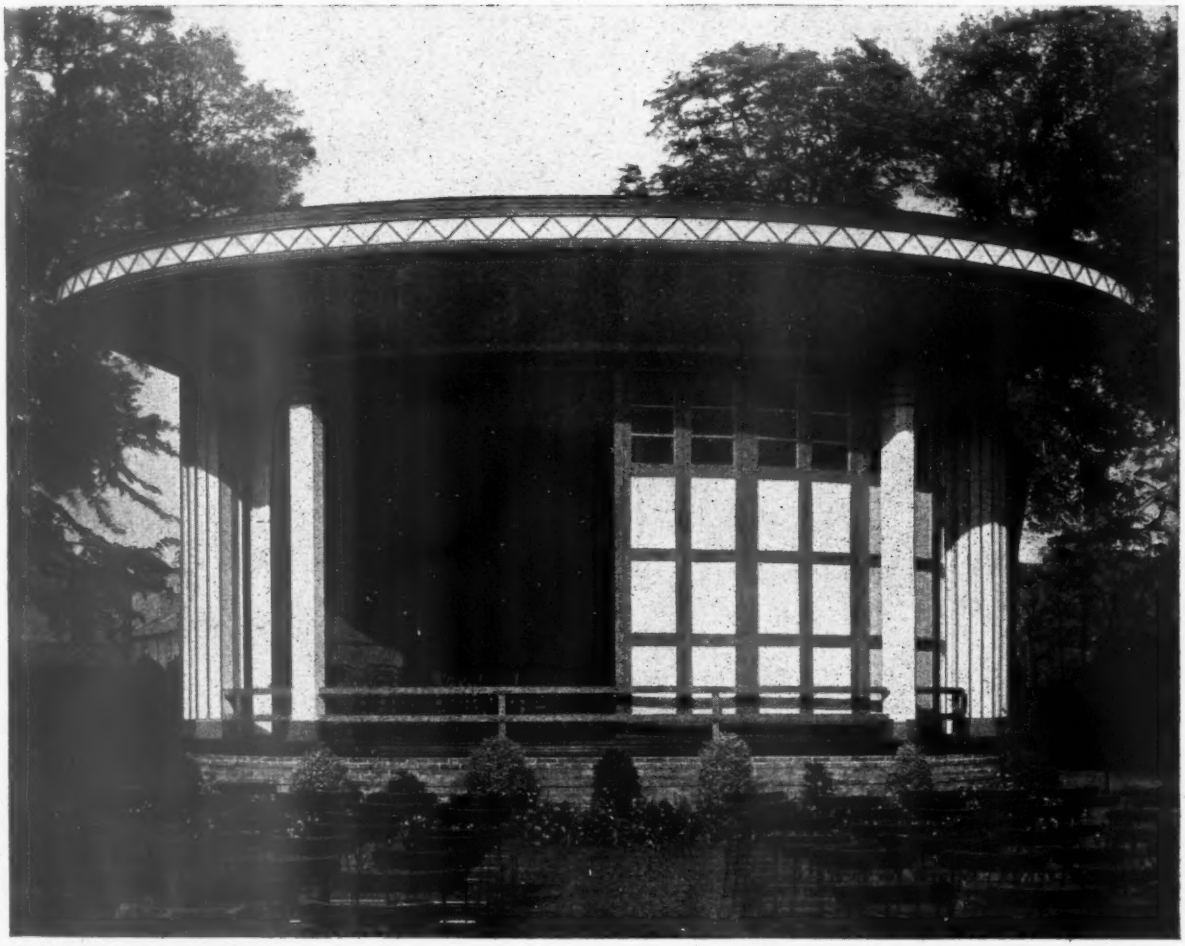

BANDSTAND, DERBY

Architect : C. H. ASLIN, F.R.I.B.A., *Borough Architect*

ESAVIAN Sliding Screens are specially constructed to give complete protection against wind and bad weather. They are easy to operate, smooth and silent in movement, and the robust design and high qualities of materials employed render them particularly suitable for use in loggias, sun parlours, bandstands, etc.

The above picture shows ESAVIAN Screens sliding before being folded out of sight through the narrow opening provided for that purpose.

THE ESAVIAN PRINCIPLE

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WPD/A17

'What, no larder!'

SHE may consider the idea of a kitchen without a larder somewhat revolutionary. But actually, with a refrigerator of ample size, a larder is quite unnecessary. With this in view, Prestcold engineers have designed a model of 4½ cubic feet capacity for mass-production at a popular price. It would hold sufficient perishable goods for a family of four. Non-perishable foods would be kept in kitchen cupboards. The "no-larder" kitchen has been proved satisfactory in actual practice, and architects and builders will be quick to realise the constructional saving to be effected. For the future health of the nation a refrigerator is a desirable addition to every home. For the "quick-frozen" foods which will be available after the war, refrigerators will become an absolute *necessity* to all. The following advantages of the Prestcold design are well worth noting.

Storage capacity of approximately 4½ cubic feet, which will hold all the perishable foodstuffs for a family of four.

Larder space rendered unnecessary. Dry goods and non-perishable foodstuffs would be kept in kitchen cupboards.

Waist-high refrigerator door, allowing access to interior without stooping.

Height adaptable by varying position of supporting frames.

Refrigerator can be built into kitchen fitments with cupboard space above and below it.

Design provides for adequate ventilation of mechanism without the necessity for special air-bricks or ducting.

Ice making and "cold cooking" facilities.

PRESTCOLD

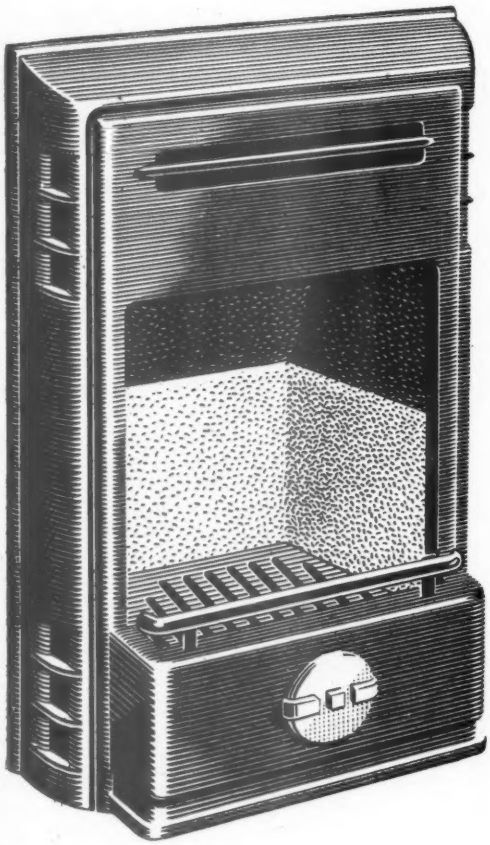
Refrigeration

A PRODUCT OF THE PRESSED STEEL COMPANY LIMITED

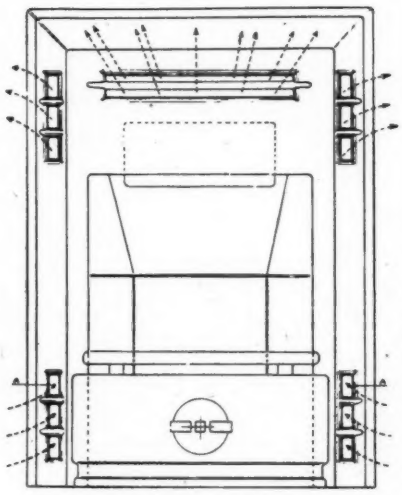
NEW-FASHIONED VISIBLE HEAT

EXAMPLE

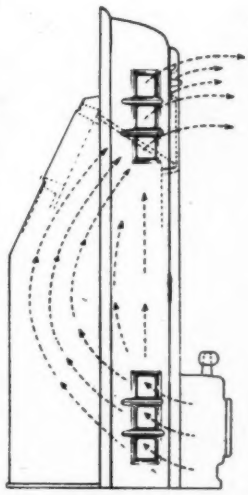
A.I "PROJECTOR" HEATING UNIT



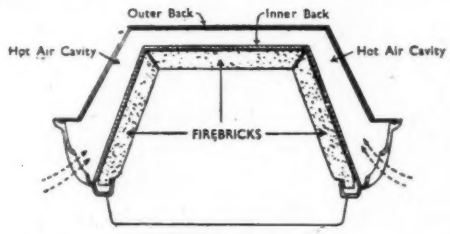
SPECIFICATION: This is a self-contained interior grate, with double casing, which gives warmth on the convection principle. By carefully arranged air inlets in the sides and top of the unit, the heat from the fire is projected over the whole area of the room. The path of this heated air is indicated by dotted lines in the accompanying diagrams.



FRONT ELEVATION



SIDE ELEVATION



SECTIONAL PLAN A.A.
with bottom grate & fret removed

SIZES : Overall sizes : 25¼" high x 18¼" wide x 12" fire. Minimum size of existing fire opening required : 22" high x 16" wide. Clearance from underside of projecting lintel (if any) over fire opening to level of hearth must be at least 26".

FINISHES : Ebony black or coloured vitreous enamel, or "Alisheen" de Luxe enamel.

ADVANTAGES : The unit can be fitted to most existing fireplaces. It gives more heat per unit of fuel, and cuts down fuel consumption by approximately 40% over the ordinary coal fire.

ONE OF THE MANY CONTRIBUTIONS TO THE POST-WAR HOME THAT WILL BE MADE BY

ALLIED IRONFOUNDERS LIMITED

ALLIED IRON
REGD. TRADE MARK

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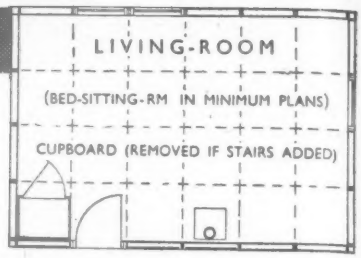
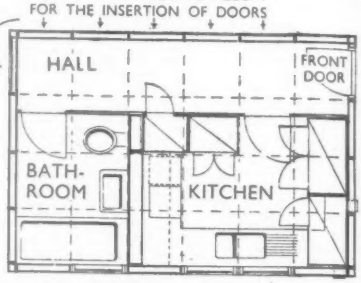
Aluminium and Unit Construction

SUGGESTION FOR AN EXPANDING HOUSE



PANELS REMOVABLE TO ALLOW FOR THE INSERTION OF DOORS



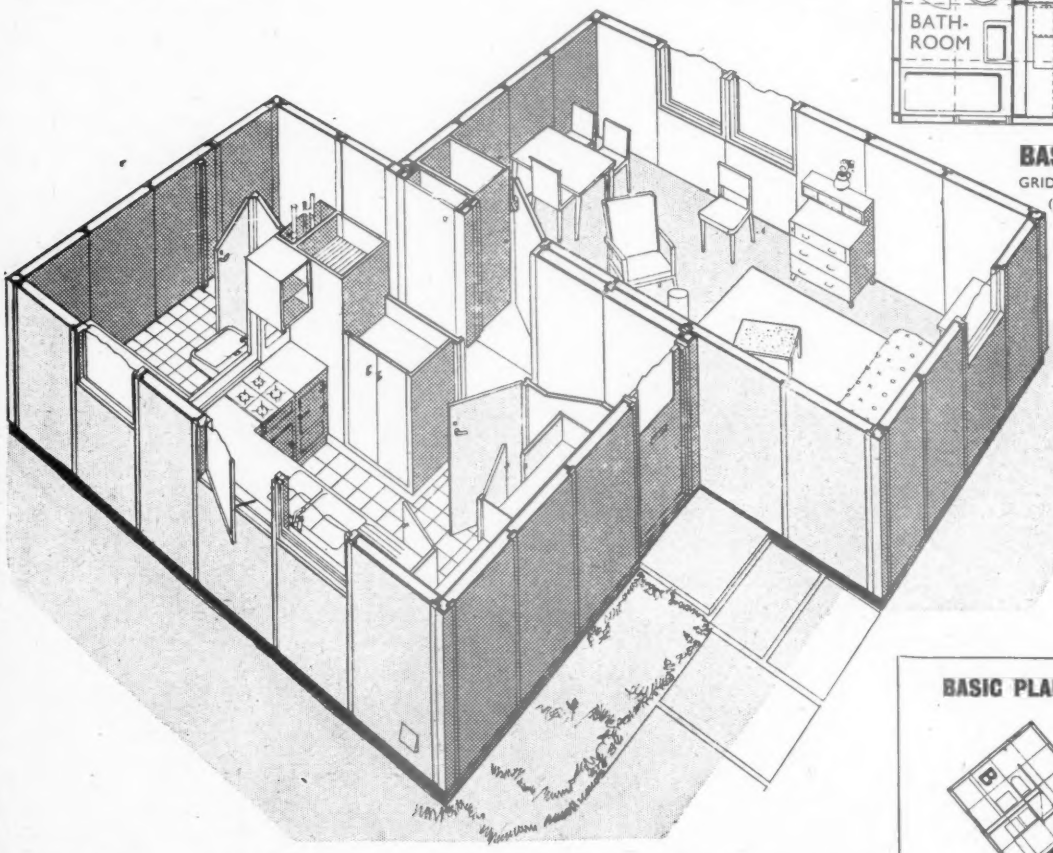
BASIC CELLS
GRID DIMENSION 2' 9" SQUARE (INSIDE EXTERNAL WALLS)

(1) The house is so designed that it can be made up from a number of basic cells each forming one or two complete rooms. The minimum house contains two such cells, one forming a bed-sitting-room, the other a kitchen, bathroom, and hall.

(2) These cells are designed in unit dimensions so that they may be erected in the factory from a number of standard panels. The complete cell can be sent to the site, thus avoiding site work. It is only necessary to construct foundations and to lay drains.

(3) The size of the cell enables it to provide all the rooms normally needed in a small house and by adding to the basic unit of two cells (the living-room with kitchen and bathroom) considerable variation in accommodation is possible.

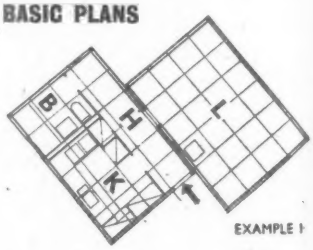
By varying the arrangement of the panels, when building up the cells, the following rooms can be formed:—
(*a*) living-room (*b*) kitchen and bathroom
(*c*) large bedroom (*d*) two small bedrooms
(*e*) medium bedroom with dressing-room



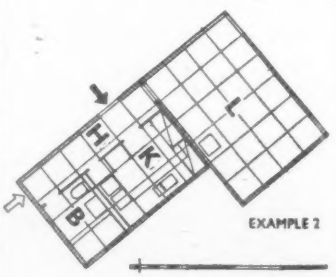
(4) The panels are constructed from an extruded light alloy frame with a covering of light alloy sheeting. Panels of the standard size with door and window openings are used for the walls and also for the roof and floor decks. As the complete cell is assembled in the factory, site jointing is avoided and complete control over the construction is attained.

(5) Flexibility to suit the requirements of orientation and access is obtained by varying the placing of the cells. Some are shown here, but further variations are possible. We illustrate two possible arrangements of the basic cells, to form minimum houses. These houses could be enlarged in a number of different ways to form bungalows or two-storey houses with two or three bedrooms.

BASIC PLANS

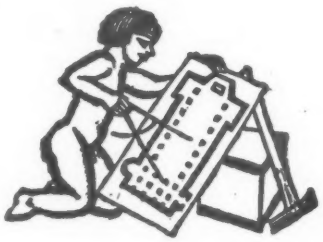


EXAMPLE 1



EXAMPLE 2

In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents now cannot supply the* JOURNAL *except to a "firm order." Subscription rates: by post in the U.K. or abroad, £1 15s. 0d. per annum. Single copies, 9d.; post free, 11d. Special numbers are included in subscription; single copies, 1s. 6d.; post free, 1s. 9d. Back numbers more than 12 months old (when available), double price. Volumes can be bound complete with index, in cloth cases, for 15s. each; carriage 1s. extra. Goods advertised in the* JOURNAL *and made of raw materials now in short supply, are not necessarily available for export.*



DIARY FOR JUNE JULY AND AUGUST

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

CHELMSFORD. *Country Life and Country Needs Exhibition.* At the Shire Hall. (Sponsor, BIAE.) JUNE 18-30

KETTERING. *Rebuilding Britain Exhibition.* At the Alfred East Art Gallery. (Sponsor, BIAE.) JUNE 16-30

LINCOLN. *Rebuilding Britain Exhibition.* At South Park High School. (Sponsor, BIAE.) JUNE 14-16

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

LONDON. *Royal Academy of Arts.* One Hundred and Seventy-Seventh Summer Exhibition. JUNE 14 to AUG. 15

Newer Heat Exhibition. To demonstrate the great advances in the design of solid fuel burning appliances for domestic heating, cooking and hot-water supply brought about by recent research. At the Building Centre, Conduit Street Entrance, London, W.1. Organized by the Coal Utilization Joint Council. The exhibition has been designed by Darcy Braddell, F.R.I.B.A., and Mrs. Braddell. The appliances themselves, some demonstrated under fire, are displayed in settings similar to their actual surroundings when in household use, and their suitability for the type of house envisaged in the Government's post-war building programme are clearly illustrated. Although open to the general public, the exhibition has been designed primarily to assist local authorities, housing officials, architects and builders, by indicating the types of solid fuel appliances that will be available for post-war housing schemes. (Sponsor, Coal Utilization Joint Council.) Week-days, 10 a.m. to 7 p.m. JUNE 14-30

Professor Lionel B. Budden. *The Future of Architectural Education.* Result of Council Election. At 66, Portland Place, W.1. (Sponsor, RIBA.) 6 p.m. JUNE 19

W. Stephenson, President of the National Federation of Building Trade Operatives, or R. Coppock, General Secretary of the National Federation of Building Trade Operatives. *Welfare, Working Conditions and Output in Post-War Building.* Third of five lectures on *Post-War Problems for the Building Industry.* At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. Admission 2s. (Sponsor, University of London.) 5.30 p.m. JUNE 14

F. L. Brady, *External Rendered Finishes.* Architectural Science Board lecture. At 66, Portland Place, W.1. The materials and methods used in the application of rendered finishes in various parts of the world differ widely. On the continent of Europe it is the practice to use mixtures containing a good proportion of lime. In 1937, a survey was made of the methods used in Germany, Austria, Czecho-Slovakia, Switzerland. The characteristic features in respect of which the technique differs from that customary in this country before the war are: 1. Use of mixtures of lime and cement. 2. Application by throwing-on not laying-on by trowel. 3. Scraping to produce a textured finish. 4. Protection of projections and horizontal surfaces by flashings. The lecture is illustrated by a film recording the observations made during the survey. The recommendations of the Burt Committee and the Housing Manual, regarding rendered finishes represent a trend in the direction of the continental practice, and lend interest to this account. (Sponsor, RIBA Architectural Science Board.) 5.30 p.m. JUNE 20

Nigel Hannen (Messrs. Holland & Hannen and Cubitts, Ltd.). *The Contractors' Site Organization.* Fourth of five lectures on *Post-War Problems for the Building Industry.* At the London School of Hygiene and Tropical Medicine, Keppel Street, W.C.1. Admission 2s. (Sponsor, University of London.) 5.30 p.m. JUNE 21

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

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

MANCHESTER. *Worthwhile British Products.* An exhibition of furnishing fabrics, glass, pottery and printing showing our pre-war attainment and chosen from the Manchester City Art Gallery Collection. At the Municipal School of Art, All Saints, Manchester, 15. Open during school hours. Closing 8 p.m. on Monday, Tuesday and Thursday and 12 noon on Wednesday and Saturday. JUNE 14-23

NEWS

THURSDAY, JUNE 14, 1945
No. 2629. VOL. 101

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

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

★★ *means important news, for reasons which may or may not be obvious.*
Any feature marked with more than two stars is very big building news indeed.

★

The Ramblers' Association calls for early action in creating NATIONAL PARKS.

The Ramblers' Association welcomes the White Paper on National Parks as an excellent statement of the case for the preservation of some of the finest scenery in England and Wales, and for the provision of adequate facilities for public enjoyment of the countryside. For many years the association has advocated the creation of National Parks, the right of public access to uncultivated mountains and moorlands, revision of footpath legislation, and the creation of a coastal path and long distance footpaths such as the proposed 250 miles—long Pennine Way. It is, therefore, highly gratifying to find these proposals fully endorsed in a White Paper. The association notes with particular approval the criticism of the Access to Mountains Act, 1939, and the admission that there is a strong case for new legislation " to confer public right of access over *all* uncultivated land." This is in full accord with the declared policy of the Association, as recently stated in a memorandum submitted to the Minister of Town and Country Planning. The association states: More people than ever before will soon be turning to the country, and particularly the wilder areas, at week-ends and holidays. It is highly important, therefore, that there should be ample provision for their needs, and that it should no longer be possible for large tracts of wild moorland country to be maintained inaccessible to harmless walkers. There is, consequently, urgent need to give effect to the proposals of the White Paper, and the association is pledged to use all its resources to that end. Rambling Clubs and individual members are to be called upon to support the demand for immediate action, and all prospective candidates at the general election are to be asked for pledges of support for the necessary legislation.

From AN ARCHITECT'S *Commonplace Book*

POST-WAR STATE OF PORTLAND PLACE, 1817. [*From* Walks Through London, *by David Hughson, published in* The London Miscellany, *compiled by Robert Harling* (*Heinemann*).] Portland Place is one of the finest streets in Europe. It was intended to form the opening to the new street next to the Regent's Park and Mary-la-bone Park. The north end of this street is terminated by an iron railing and a gate, which separated it from a field, extending to the New Road. That field is now a garden and a shrubbery, enclosed on all sides by handsome railing, corresponding with that which encloses the Regent's Park on the other side of the road. The new part of the street commences with a crescent on each side of the way, which is not finished, and the works have been so long in this half-built state that grass has grown on the top of the walls, reaching, in some places, not higher than the kitchen windows. The houses nearest to Portland Place are entirely raised and covered in, but since the peace, are fast returning to their pristine mould, as the wood work is rapidly decaying, from exposure to the weather : the fronts, as far as completed, have a very neat colonnade of double Ionic pillars, with a balustrade and a balcony. Many of the houses on this spot have pediments ; and those with this addition face each other all the way on both sides of the street.

The Ministry of Education has issued a circular to local authorities giving ADVICE ON PRIORITIES IN SCHOOL BUILDING needs over the next twelve months.

An allocation of building labour and materials for educational purposes has been made for this period in order to meet the most immediate and pressing demands. New school accommodation will, for the time being, have to take the form mainly of prefabricated temporary buildings, but new schools of permanent construction will have to await the submission and approval of the local authorities' long term development plans under the Education Act. Most immediate tasks facing education authorities are the provision of such school accommodation as may be needed to enable the school leaving age to be raised to 15; the extension of training college accommodation for teachers, and during the next few months the provision of training for demobilized men and women, training for the building industry, and part-time day courses for young people during working hours. A proportion of available building resources has also been earmarked for the development of the school meals service.

★

A Ministry of Works' mission in Stockholm is placing orders for 5,000 *SWEDISH PREFABRICATED TIMBER HOUSES FOR ERECTION IN GREAT BRITAIN.*

Four types of houses are being ordered. They are: Semi-detached two-storey house for rural England. Total area of 1,040 sq. ft., with porch, entrance hall and living room, two double and one single bedrooms, bathroom and w.c. Outside wash-house, fuel room and store room. Semi-detached two-storey house for Scottish urban areas. Total area 931 sq. ft., with front and rear porches, entrance hall, living room, kitchen, bathroom and w.c., three double bedrooms, and fuel store. Two-storey terrace house. Total area 877 sq. ft. Front and rear porches, entrance hall, living room, kitchen, bathroom and w.c., three double bedrooms and fuel store. Two-storey house for rural Scotland and England. Total area of 991 sq. ft., with front and rear porches, entrance hall, living room, one double and two single bedrooms, bathroom, w.c., linen cupboard; and detached wash-house and fuel store. In all the houses the foundations will be of dwarf bricks or concrete. Floors will be of timber, and walls will be timber framed. Wall units will be adequately insulated and clad outside with vertical timber boarding. Roofs will be of pitched timber covered with local materials. Party walls and fire-places will be of brick or concrete. The mission consisted of Mr. C. C. W. Goodale, Director of Contracts at the Ministry of Works; Mr. Arthur W. Kenyon and Mr. R. H. Matthews, Chief Architect, Department of Health for Scotland.

★

Mr. R. H. Stein has been appointed DEPUTY DIRECTOR OF PERMANENT PREFABRICATED HOUSING at the Ministry of Works.

Rolf Stein has a long history in the building industry, and has been particularly associated with the development of modern building materials. He has taken a leading part in the development of prefabrication as a contribution to a solution of the nation's housing problem. He will work with Col. Kenneth Post to assist the Ministry in solving problems of permanent prefabrication.

Mr. E. B. Gillett has been elected PRESIDENT OF THE CHARTERED SURVEYORS' INSTITUTION.

Mr. Gillett was born in 1888. Educated at Marlborough, he was articled in 1906 to Mr. J. H. Oakley (now Sir John Oakley, Past-President), with whose firm, now Messrs. Daniel Smith, Oakley and Garrard, he has remained ever since. In the first Great War, Mr. Gillett served first with the Artists Rifles, which he joined in August, 1914, and later as an officer in the East Surrey Regiment, with whom he saw service in Belgium, Italy and France. He qualified as a Professional Associate in 1910, and became a Fellow ten years later. He became a partner in his firm in 1922, and in the following year was elected Chairman of Junior Meetings, as the Junior Organization was then known. He was Chairman of the London (North-Western) Branch in 1934-35, and was elected to the Council as a representative of that Branch in 1938. He became a Vice-President in 1943, and Senior Vice-President in 1944. He has served on various Standing and Special Committees, and has been Chairman of the Professional Practice Committee and the Special (Review of Internal Affairs) Committee.

The all-electric kitchen at the exhibition Aluminium from War to Peace, *organized by the Aluminium Development Association, now open at Selfridges. The kitchen is designed by E. R. Gilbert and was described in the A.J., March 29.*

Bombed Buildings Abroad — VIII

Benevento Cathedral was wrecked in September, 1943, when allied bombers attacked bridges and the railway near the cathedral. Benevento is a little town some thirty-three miles north-east of Naples. The cathedral was founded in the Ninth Century, but was rebuilt about 1200. The bell tower was added in 1279 and was miraculously unharmed. Little else remains; the mediæval marble reliefs on the walls, a bronze chest made in the Twelfth Century, a huge Thirteenth Century Easter candlestick, Sixth Century Langobardic manuscripts and other treasures were destroyed. The greatest loss, however, was that of the Twelfth Century bronze doors containing scenes from the New Testament, and portraits of local bishops. Some of the sixty-eight panels have been recovered and are being pieced together by the local clergy under the supervision of the AMGOT authorities. After the war, the doors will be reconstructed and placed on a cathedral rebuilt on the ruins of the old.

★★ *The RIBA has issued the following notice concerning members who require assistance in OBTAINING EMPLOYMENT ON DEMOBILIZATION.*

The notice, entitled RIBA Card Index—Post-War Employment, reads: In order that the fullest possible assistance may be given to those requiring employment on demobilization or release from national service, it is important that notice should be sent to the Secretary RIBA immediately a man or woman becomes available for employment. Those who have already completed and returned Questionnaires A and B should give notice of any change in their qualifications or plans for post-war employment. Those who have not submitted questionnaires should do so at once. The necessary forms may be obtained on application to the RIBA.

A Bill has been presented to Parliament by the Minister of Health to provide an easier procedure for TEMPORARY HOUSE BUILDING IN PARKS.

Mr. Willink, Minister of Health, has presented a bill to make it easier for local authorities to erect temporary houses in their own parks and open spaces. In laying down a speedier procedure the Housing (Temporary Accommodation) Bill stipulates that: The Minister of Town and Country Planning, or the Secretary for Scotland, must certify that the use of the particular land is expedient in the present emergency. The temporary houses must be removed after not more than 10 years, and the land restored. This power to build in parks is given for the limited period of two years. At present procedure by Provisional Order is necessary, and the method is slow.

The Minister of Works: Technical representatives are to examine the possibility of obtaining PREFABRICATED HOUSES FROM GERMANY.

In the House of Commons, Sir E. Spears asked the Minister of Works whether he will arrange with the Allied military authorities that all prefabricated houses in Germany, suitable for use in this country, should be requisitioned and shipped over here for the accommodation of British families who have lost their homes through bombing. Mr. Sandys: As I said in reply to a question on April 25 by the hon. member for South-West Norfolk (Mr. De Chair), I have arranged for technical representatives of the Ministry of Works to go to Germany to examine the possibility of obtaining prefabricated houses from that country.

Mr. H. C. Weston has been appointed PRESIDENT OF THE ILLUMINATING ENGINEERING SOCIETY.

Other officers and members of Council elected are:—Vice-Presidents: Howard Long, H. E. Chasteney, and J. M. Waldram. Hon. Treasurer: N. V. Everton. Hon. Secretary: J. S. Dow. Members of Council: J. N. Aldington, M. G. Bennett, Dr. W. M. Hampton, A. G. Higgins, J. S. Preston, A. J. Pashler, E. B. Sawyer, Dr. W. S. Stiles, Dr. W. D. Wright.

MAKE HOUSES ADAPTABLE

OUR leading article for March 29 stated: "The length of life of the so-called permanent house should in the main now be regarded as finished in 25 to 30 years." This policy, however, should be regarded only as a general working rule, implying a new attitude towards house building. It should not be construed as a call for the drastic and automatic demolition of all houses after 25 to 30 years. It is not possible accurately to predict the future of housing and planning, and it may be that some part of housing erected to-day will be in the right place from the planning point of view and will continue to be suitable for more than one generation.

The question arises as to whether all conditions governing the design of houses are liable to change. There are several requirements, such as protection against weather, loads to be carried on floors and roofs, and drainage, which may not require change for a long time to come. We have, therefore, to distinguish between requirements which may be considered permanent for a comparatively long period and between requirements which vary with every generation, such as equipment and the layout of rooms. If houses are built in such a way that their internal arrangement can be altered without affecting the outer walls, the floors and the roof, then it is easy to adapt them to changing conditions from time to time, while their carcases may be able to serve more than one generation.

The traditional brick house with load bearing partitions cannot easily be adapted, but buildings in which the partitions have no other function than to sub-divide the house into rooms, and in which the floors are capable of carrying partitions anywhere, can be completely transformed at comparatively low cost to suit changed conditions of living.

The Duplex house is a particular example of a building designed for two different conditions. Here the later use is predetermined and taken into account in the design. For this reason, Duplex houses can also be built by traditional methods, *i.e.*, with load bearing partitions. However, complete flexibility of the lay-out can only be achieved by separation of the structural and non-structural components. This separation is the characteristic feature of framed structures. Before the war, framing was not usual in domestic buildings, except for multi-storey blocks of flats, but even among these are many examples of four or five storey blocks with load bearing brick walls. Enemy action reduced many of them to heaps of rubble, whereas framed buildings subjected to the same test did not collapse.

Quite apart from the consideration of war, a strong argument in favour of framing not only large blocks of flats, but also such buildings as two-storey terrace houses is the possibility of adapting them for new conditions of living. A special system which permits later internal alteration is Box Frame Construction, suggested by Mr. Arup, who describes its

advantages on pages 439 to 440 of this issue. "What Box Frame Construction does is to make a clear cut distinction between the structural and non-structural elements of a building," he writes. At the same time "it provides standardized conditions for the fixing of non-structural elements, consisting of the external (longitudinal) skin-walls, partitions and all internal equipment." In this system not only the lay-out of the dwellings but also the front and rear elevations of the house can be completely altered without affecting the structural parts.

If houses become obsolete and sub-standard within a few decades, as is more than likely, then we should not hesitate to demolish them and build anew, provided, of course, there are no physical limitations. However, here in this way of making internal planning readily adaptable, is a *via media* between the permanent and the temporary which would make for economy without obsolescence. It should be carefully considered by all housing authorities.

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

NOTES & TOPICS

RIBA ELECTION

An architect writes: "In common with many others, I have been engaged during the war years, on jobs which largely precluded close contact with professional and Institute affairs, and which at times cut me off from them altogether.

*

"The RIBA Council Voting List has just been sent to me. Of the 40 names on it, I have heard of 15; of these 15, there are 8 of whom I know sufficient facts to justify the giving or withholding of a vote.

*

"It would be interesting, and possibly depressing, to know how many other members of the thousands to whom this list has been sent are similarly in ignorance. If the proportion were as large as I suspect, to send out such a list, without an accompanying list giving some biographical and objective facts about the candidates, would be a direct and menacing invitation to apathy and mis-use of the vote on the part of members of the Institute."

*

For how many other members at home, and for how many serving members abroad, does my friend also speak?

THE ALI EXHIBITION

Since 1939 aluminium production has increased sevenfold, and now the aluminium interests seem to feel that they deserve a fair slice of the peace. Sir Stafford Cripps has given them a good first helping with 90,000 tons of Airoh, and now there is the Selfridge show to give the public some further ideas.

*

Thither Astragal, to wonder how the minds capable of producing the everlasting marvel of the Merlin engine can yet design light fittings straight out of an 1898 Army and Navy catalogue. In a rather quick tour you can see some excellent stuff, the pots and pans, a child's cot, a milk churn, and some nice clean kitchen fittings, but far the best is the straight engineering in which no particular thought has been given to what it looks like.

*

The architects have had a small chance to clean up the Airoh house (to be seen in a street at the back). Another architect, Mr. Lavers, has turned out some very cheerfully successful murals in built up and engraved sheet.

FIRES OF COAL

There is another show on at the Building Centre (in the new Conduit Street section) called the *Newer Heat Exhibition*. It is not large, but it shows several remarkable improvements in solid fuel fires and cookers which should be in large-scale production before long—remarkable because of their designs for smoke-reduction, fuel economy, and general convenience.

*

As Major Lloyd George pointed out at the lunch, which marked the opening of the exhibition, conservation of our coal resources is becoming a vital national necessity. We certainly cannot afford any longer to send 70 per cent. of this valuable stuff to harmful waste up our chimneys, even though we may be deprived of the glamour associated for ever with the fog that swirls down Baker Street to the undertone of Sherlock Holmes's fiddle.

*

But to compensate for that loss to the melancholy spirit, we are going to have some splendid practical gains if this exhibition is anything to go by. For instance, no more miseries of fire lighting when the "morning light creaks down again." All these new fires and cookers will burn all night at a reduced consumption of ½ lb. of coal an hour—less than is needed for relighting a normal fire in the morning.

*

One fire will heat two or three rooms by means of fresh warm air ducts, and will burn day and night for the same amount of fuel that was consumed by

the pre-war open fire that warmed only one room and had to be lighted every morning. Here the rate of burning can be controlled and all fuels can be burned. With house coal, smoke is reduced by at least 50 per cent. compared with the pre-war open fire. Draught comes from a duct running below the floor, so that room draughts are avoided. Another model has an ash pit and container below floor level, so that ash need only be removed once a week.

*

In fact, it's all splendid. But what about cost?' Let us hope that mass-production will deal with that problem *plus* Mr. John Brown's "adequate measure of buying power."

POETS' CORNER

DEGENERATING STATION

There's nae energy in men
Now that Life hae left the Glen,
And the Sun nae shines on tree and grass and flower,
There's nae fruit tae fill our farms,
And nae muscles to our arms;
But we've got the Power, lads, we've got the Power!

We're tae weak tae climb on high
For the views that light the sky
Where we used tae spend a bonny April hour.
The pipes we canna blow
Wi our breath sae faint and slow,
But we've got the Power, lads, we've got the Power!

The Brae is dull and dead
Where the living soil hae bled,
And the sweetness of the Strath is sad and sour.
For Nature's slunk in shame
From the land that loved her name.
But we've got the Power, lads, we've got the Power!

EDWARD LEWIS

TEAPOT HALL AGAIN

This talk about Teapot Hall needs winding up because a lot of people, including myself, and also, it seems, even Nathaniel Lloyd, have been under a wrong impression about its age and significance. On March 15 I wrote that the owner of the cottage has declared his willingness to hand it over to the Society for the Protection of Ancient Buildings; also that, it is an unusual and possibly unique example of cruck construction. According to Nathaniel Lloyd, Teapot Hall is "a survival of an early type of building, which in this instance is itself ancient."

*

But it is, in fact, neither of cruck construction nor very ancient. I have this from Mr. John McGregor, technical adviser to the Society for the Protection of Ancient Buildings. "It was," says Mr. McGregor, "at the earliest built in the 18th century. This is obvious because the timbers are of *deal, nailed* together in the form of a simple triangular truss. There is no cruck construction about it"—a fact born out by Mr. R. L. Whiston's sketch of it in the JOURNAL for May 3.

*

Now that this red herring may perhaps be dragged around no longer, why not repair Teapot Hall in any case, even if it is no more than a bit of fun on the part of some 18th century local builder? Habitable cottages are hard enough to come by anywhere, especially those of such amusing character as Teapot Hall.

ASTRAGAL

Left, a continuous-burning fire at the Coal Utilization Joint Council's exhibition at the Building Centre. It has air control and underfloor air supply. Warm air is convected into the room through the louvres. An ash pit holds a week's ashes. Right, another similar fire showing the closing of the lid used overnight or when the room is not occupied; this obviates the need for relighting. See Astragal's note.

LETTERS

Peter Shepheard, B.Arch., A.R.I.B.A.

Robert Townsend, A.R.I.B.A., A.A.Dip.

C. D. Spragg, (Secretary R.I.B.A.)

Malcolm MacTaggart.

RIBA Council Election

SIR,—The RIBA, in resuming—and I hope extending—its peacetime activities, should concentrate on five main tasks:—

1. To support and work for planning legislation, without which all architectural work will be frustrated.
2. To dispel the prevalent public opinion that the profession is a luxury, and is interested only in the more conservative forms of private practice; and to present to the public the views of those of us who consider that architects have a vital social responsibility.
3. To work for the early demobilization of architects, not as "jumping the claims" of any other men, but as people who are prepared to play their part, whether in private or public offices, in a planned programme of reconstruction, and to collaborate with others in the development of prefabrication and other new techniques.
4. To continue research into methods of improving the standards of architectural education in the schools.
5. To foster by every possible means the interest and participation of the whole profession, and especially of its younger members, in what goes on at No. 66, Portland Place. For example, the work of the boards and committees should have the maximum publicity and discussion among members, both in London and in the allied societies; and the usefulness of the RIBA building

itself could be increased by the provision of meals and other social amenities.

London PETER SHEPHEARD

SIR,—In response to your request for a few lines on my policy as a candidate in the forthcoming RIBA Council election, I will try in a few words to indicate why I have accepted the invitation to put my name before the members.

I conceive the Royal Institute as having two main functions:

1. Improving the standard and understanding of architecture in this country.
2. Improving the status of the profession and its members and ensuring that it plays its part in providing an essential social service.

My wish is to devote such energy and ability as I am able to assisting the Institute in this work. I am the more eager to do this because, having for some years been connected with public service in one way or another, and latterly particularly in connection with housing, I have been impressed with the miserable influence the architectural profession is exerting compared with that of the manufacturer of bricks, sanitary engineers, speculative builders, men who "get things done" and men of "administrative experience." It is our right and our duty as architects to make our country beautiful and see our fellow countrymen well accommodated. We look like losing the chance, and I wish to help those who are trying to seize it.

It is clear to me that unless the Institute has something positive to say, says it quickly and vigorously, architects will be unable to regain the leadership in making England beautiful that they have lost, to the cost of the people.

The people as a whole is now our client, not wealthy individuals or city companies, and we must not fail in our duty.

At the same time, the architect will remain unrespected and ignored, unless architects insist that their services be recognized as essential to the community, and that a status be accorded them at least equal to that enjoyed by those who, as I have suggested above, are at the moment conditioning our environment.

I can make no election promises. I hope for an opportunity to play my part as a citizen and an architect in the profession I have chosen.

Sutton Benger, Near Chippenham ROBERT TOWNSEND

Temporary Attachment of American to British Architects

SIR,—The following is an extract from a letter from the British Council:—

"The American Forces have put before us a scheme for the attachment to professions, industries and trades in this country, for periods of three to four weeks at a time, of American officers and men serving on the Continent. As the men will be in full receipt of Service pay, it is proposed that the men should be attached as unpaid observers and should only receive payment where trade union regulations make the latter arrangement necessary.

"The American European Force amounts to a very large number of men who are likely to remain in Europe for the next nine to twelve months and the Americans plan that a proportion of this number, possibly 150,000 spread over the nine to twelve months, should be detailed to participate in the scheme. The scheme is not a leave scheme, the men will be directed, as part of their Service duties, to fill the places which may be made available by the professions and industries of this country. The scheme is put forward with the two-fold purpose: (1) of assisting in the maintenance of the morale of the American troops in a period of comparative inactivity; (2) of improving Anglo-American relations by encouraging a mutual understanding between the Americans and the British in the sphere of their daily occupations."

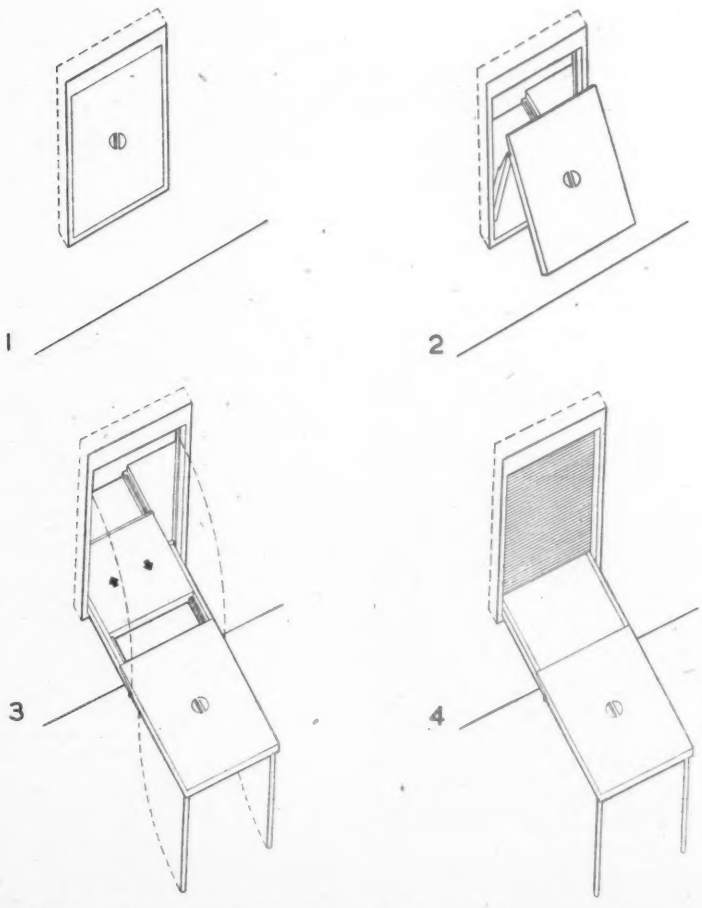
Following on a meeting between representatives of the American Forces, the British Council and the various professions, the RIBA has agreed to do its utmost to support the scheme by giving it publicity and inviting architects, both those in private practice and those in official positions, to co-operate by taking American architects into their offices for either three- or four-week periods.

As will be seen from the British Council's letter, the operation of the scheme will be spread over the next nine to twelve months, and it is hoped, therefore, that those architects willing to take part will be able to accept a number of American architects during this period. The number for whom places are required is not yet known, but the authorities are anxious to get the scheme started without delay, and members who are prepared to assist are requested to submit their names to the Secretary of the RIBA as quickly as possible.

It is obvious that there is a limit to the amount of information regarding British practice which can be gained during such a short spell as three or four weeks, but, on the other hand, these contacts cannot but be beneficial and help to make more close and cordial the existing happy relations between the architects of this country and their professional brethren in the United States.

It should be added that the billeting of the men will be the responsibility of the American military authorities.

C. D. SPRAGG,
London Secretary, R.I.B.A.



Hatch and Dining Table Fitment. See letter from Malcolm MacTaggart.

Hatch and Dining Table Fitment

SIR,—In your issue of April 20, 1944, you included details of two embodiments of an invention of mine by which the use of hatch and dining-table is combined.

I now send you illustration of a further embodiment of the same idea; this time the table projects substantially into the room, and the (five) diners, therefore, instead of facing the wall (as in the previous embodiments) would be able to kick each other's shins and observe each other chew—that is, would sit facing each other.

The device is for the saving of work and of floor-space: the shuttle tray forming part of the table-top at meal times and of the kitchen dresser or equivalent fitment at all other times would reduce the amount of fetching and carrying usual both in the laying and in the clearing away of meals, and, except at meal times, the table itself would occupy no floor-space at all.

Welwyn MALCOLM MACTAGGART

Box Frame Construction has been referred to a number of times in the Journal. Mr. Arup here analyses the present situation on the building front and explains why this system of construction would have considerable advantages at the present time. "It has the essential merit," he says, "of simplifying the organization of building on a large scale, and of reducing the technical problems of prefabrication and site organization to manageable proportions."*

BOX FRAME CONSTRUCTION

[*By Ove Arup*]

If I read the situation rightly, this is a rough outline of the position on the Building Front. *The traditional building industry is not at the moment able to deal with our present-day building needs inside a reasonable time.*

There are shortages of certain materials, such as timber; but the main difficulty is the shortage of trained labour. Even if the number of building operatives were increased to the pre-war level, it would not be enough; we would need considerably more than that to deal only with our housing needs along traditional lines, and *that would necessarily be a slow process.*

Naturally, our thoughts turn to new building processes, to new industrial resources, to the factories created for war purposes, to rationalization, prefabrication, etc. The trouble is that whereas

New building methods are in the process of development, such development takes a long time and has not as yet crystallized into definite solutions of proved value.

Building technique is in a chaotic state at the moment. The traditional technique with its brick walls, timber floors, tiles, lead flashings, ironmongery, joinery with its knotting, priming and three coats, etc., is being interspersed with new techniques using steel, glass, concrete, hollow blocks, building and plasterboards, and a wealth of insulating, waterproofing, jointing and surfacing materials, not to speak of such materials as resin-bonded plywood, plastics, light alloys, etc., developed in the Aircraft Industry. *One result of this is that the architect, instead of knowing exactly how each particular problem can best be solved, is faced with a bewildering number of possibilities, the soundness or cost of which he is unable to assess with sufficient accuracy.*

It is partly for this reason, that the considerable progress made in building technique has resulted in no commensurate improvement or lowering of cost of the bulk of building. (This applies at any rate to the carcase; fittings and equipment amenable to factory production are both cheaper and better, resulting in an improvement of the standard of living rather than in a lowering of costs.) *As often as not, modern building methods do not attain the same high standard of workmanship and durability as do the best of the traditional methods.* The new techniques are not sufficiently familiar, are not sufficiently tested, snags are not yet weeded out, good practice not yet established.

Moreover, *the traditional organization of the Building Industry, with its Architects, Quantity Surveyors and Builders, is not necessarily the right one for new building methods making more use of factory and workshop.* Design then becomes a matter of teamwork between a number of specialists. Organization should ideally extend over a much larger field and include the placing of bulk orders for purpose designed prefabricated parts, and Execution depends on specially trained assembly gangs. It takes a good deal of time and thought to produce such new Designs and new Organizations. Normally they would evolve slowly and gradually under the pressure of economic forces by methods of trial and error.

The process could be speeded up if the Government were to create a design organization of experts with powers to co-ordinate the brains and experience of Industry and were to organize a planned production of priority buildings with as much energy as that applied to war production This, however, has not happened and is not likely to happen now, and possibly neither the Government nor anybody else would quite know how to go about it. Private enterprise is probably not able to tackle the problem in a sufficiently comprehensive way, it is more likely to develop schemes for the exploitation of particular materials or industries.

This is borne out if we examine what has actually happened in the last couple of years. Most of the extensively prefabricated schemes produced so far are for sub-standard bungalows, which are of course the easiest proposition to deal with. They suffer from serious drawbacks, however:

(1) They are expensive.
(2) They present standardization at its worst: complete and unrelieved uniformity.
(3) They take up a lot of space, and their road and drainage plans will not easily fit any subsequent permanent development.
(4) They are sub-standard and temporary.

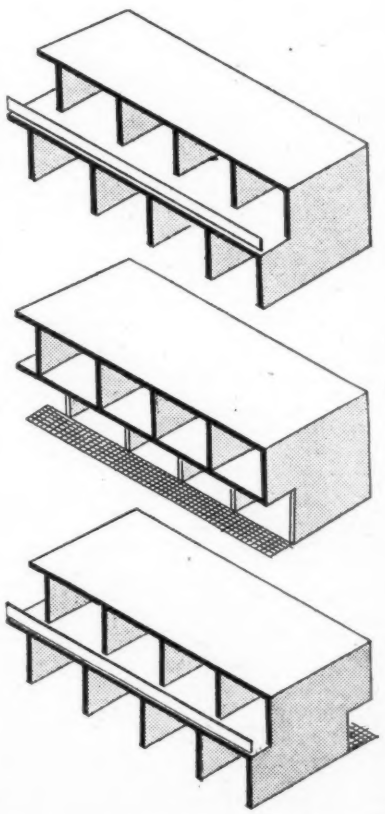
No wonder that the Government is turning away from temporary to permanent houses. As far as I know this means on the whole a return to traditional designs, with such alternative schemes thrown in as may successfully compete on a limited scale with the normal brick buildings. In other words, the Government, chastened and disillusioned by the comparative failure of innumerable Government committees (I fail to see how any other result could have been expected of the type of organization created, and I may be wrong in assuming that it was expected), turns its back on any ambitious rationalization of the Building Industry which might produce the houses we need in a reasonable time and resigns itself to meet the inevitable public outcry with whatever means come to hand.

It would, of course, be easy—and not very constructive—to attribute this partial failure to Government ineptitude. *I believe the main cause is to be found in the very real complexity of the problem, and the difficulty of achieving any radical improvement without stirring up controversial issues* which—rightly or wrongly—are feared more than is failure to produce results. It is *not* to be found in any technical impossibility of effecting a substantial measure of progress, if we only knew how. We know that the means at our disposal are:—

(1) Extensive standardization.
(2) Organization on a large scale to reduce waste.
(3) Replacement of manual labour by power and machinery.
(4) The use of Engineering and Industrial resources *in addition* to the normal Building Industry,

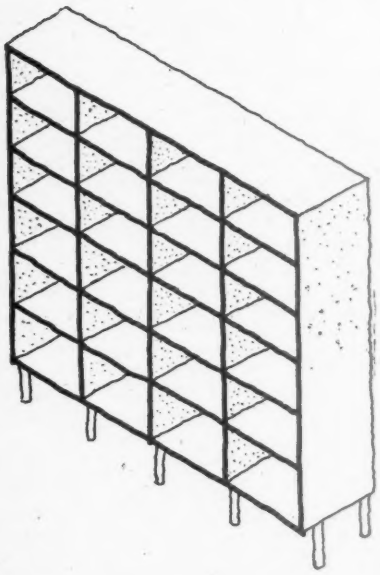
but we do not know what and how to standardize, which designs to adopt, what organization to impose. Standards are generally agreed upon *after* an accepted building practice has been established, it is very difficult to project standards ahead of the normal development.

Owing to the technical progress which has been made during the war, it would no doubt be possible to create new designs and invent new methods of construction which would exhibit the features mentioned above and would speed up building in the future, but this cannot be done by any amount of talk in committees, it would require hard work at the drawing board and in the workshop by teams of technicians



Diagrams showing Box Frame Construction applied to terrace houses with three possible cross sections.

* Notably in the Information Centre No. 1710, 14 : 12 : 44, on Mr. Arup's Memorandum on the subject, and in Astragal's Notes and Topics for May 10 this year.



chosen with care, with all relevant information at their disposal, and adequately paid.

If this is correct, it would explain why no very substantial progress has been made, and also why I believe that the adoption on a fairly large scale of the proposed principle of Box Frame Construction would be a help.

Box Frame Construction does not pretend to be able to revolutionize building technique. It is not even a new method, it has been used before the war in Copenhagen and elsewhere, and if used only on a small scale it would not offer any very substantial advantages. *But it has the essential merit of simplifying the organization of building on a large scale, and of reducing the technical problems of prefabrication and efficient site organization to manageable proportions.* That, it seems to me, is exactly what is wanted at the moment.

Box Frame Construction does not attempt to anticipate the Building of the future. It accepts the fact, that modern methods of factory production are not as yet suitable for all parts of a building. For the manufacture of all kinds of fittings and equipment, for cupboards, doors, windows, etc., they should obviously be used, and it may be profitable in the near future to extend their use to light, non-structural walls which can be given a firm support at the top and the base, and possibly to internal stairs. But the main structural elements, such as load-bearing walls and floors, can probably for the time being best be constructed of heavier materials, such as brick or concrete (heavy or light-weight, cast in situ or precast).

What Box Frame Construction does is to make a clear cut distinction between the structural and non-structural elements of a building. The first are arranged in a very simple grid, consisting only of crosswalls and floors—the Box Frame—which takes care of all the loads and wind-forces acting on the building and *provides standardized conditions for the fixing of the non-structural elements*—the Infilling—consisting of the external (longitudinal) skin-walls, partitions and all internal equipment.

To start with, the Box Frame can best be constructed of reinforced concrete, which is immediately available, but there is nothing to prevent it being constructed in any suitable material, for instance, a structural steel frame with brick or concrete panels.

The In-filling offers excellent scope for total prefabrication, but while this is being organized, any type of construction can be used.

If this simple principle was adopted for a large number of flats or terrace houses, many problems connected with building would be considerably simplified (not least the administrative problems).

(1) There would be created a large and steady market for factory produced wall sections (external and internal), floor and ceiling panels, all to be fixed and supported under identical conditions: A standard distance between floor and ceiling, with a tolerance of say half an inch, and no interfering beams and columns. *These conditions would be the same for flats and houses.* With the technical problems thus simplified and drastically reduced in number, and with an assured market, prefabrication, with its attendant advantages, can be expected to flourish.

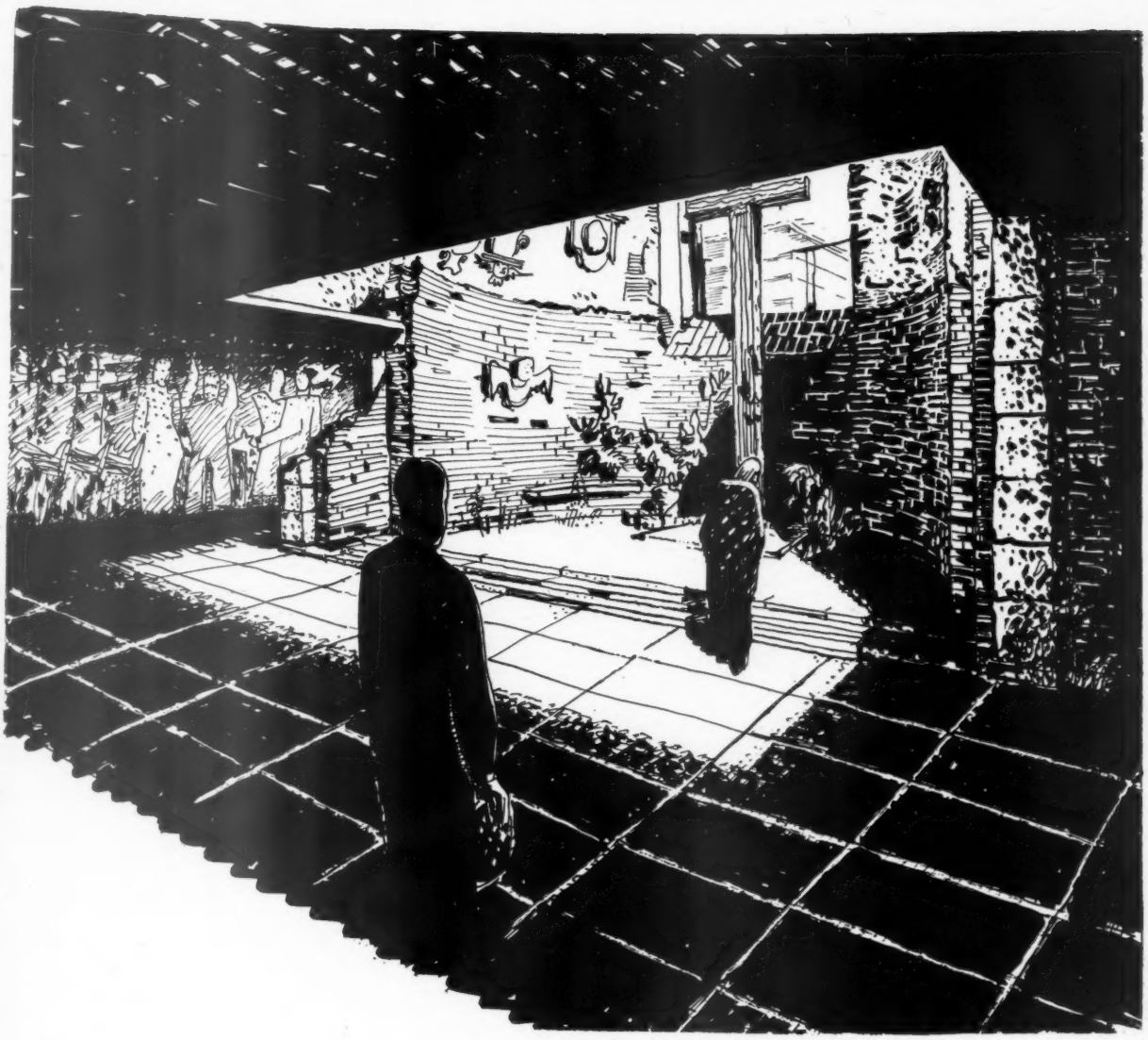
(2) The Box Frame, in spite of the fact that it can easily be adopted to any site and a great number of plans, is so simple that it enormously facilitates efficient site organization. The shuttering can be standardized, scaffolding is not required, the Box Frame is open and offers ideal conditions for access, working and separation of the various trades.

(3) Whilst offering most of the advantages of thorough standardization, Box Frame Construction does not restrict freedom in the planning of the individual dwelling and the treatment of the elevation. Freedom to employ a multitude of alternative materials both for the Box Frame and the In-filling, or the freedom later on to effect alterations or improvements in planning of non-structural elements. *This is a very important point*, as standardization, although indispensable to any rationalization of Building, mostly involves a severe restriction of architectural or structural freedom. It would also allow the provision of partly temporary dwellings, or of duplex houses, with a minimum of waste.

(4) Box Frame Construction offers full scope for engineering and industrial resources to implement the building industry.

(5) There are no proprietary rights of any kind attached to Box Frame Construction.

Top left, diagram of Box Frame construction applied to flats. Above and left, flat buildings in Copenhagen built before the war on the Box Frame principle. Top, Architect: Mogens Lassen, Structural Engineer: Ernst Ishoj. Left, Architect: Hubert Paulsen, Structural Engineer: Ernst Ishoj.



ST. ANNE'S, SOHO

Two burning questions of today are concerned with what form memorials to the dead of this war should take, and what the future should be of the bombed churches of Britain. In *Bombed Churches as War Memorials a solution is offered to these questions. From this beautifully illustrated little book is taken the following scheme for St. Anne's, Soho, by Mr. Jacques Groag. This scheme skilfully fulfils the threefold function of a garden ruin, that it should act as a shrine, as open space, and as a memorial.**

by Jacques Groag

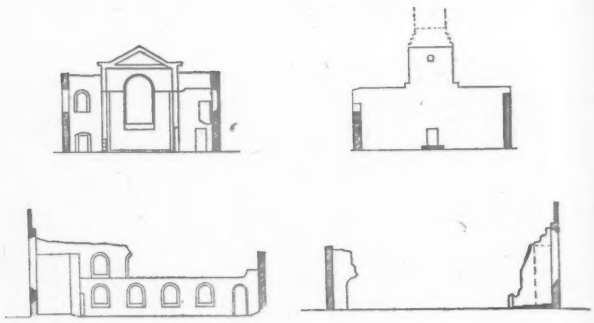
St. Anne's, the Parish Church of Soho, was built in 1685. The curious top of the tower was added by S. P. Cockerell about 1803. The church was bombed out in the winter of 1940-41.

This scheme for converting its ruins into a war memorial deliberately neglects any town-planning project that may already be in existence. Its intention is to show how a new beauty and a new function can be made out of destruction in the centre of a neighbourhood which is especially manifold in its visual appeal. Once it is admitted that the scheme is successful in this, means could no doubt be found to translate it into reality.

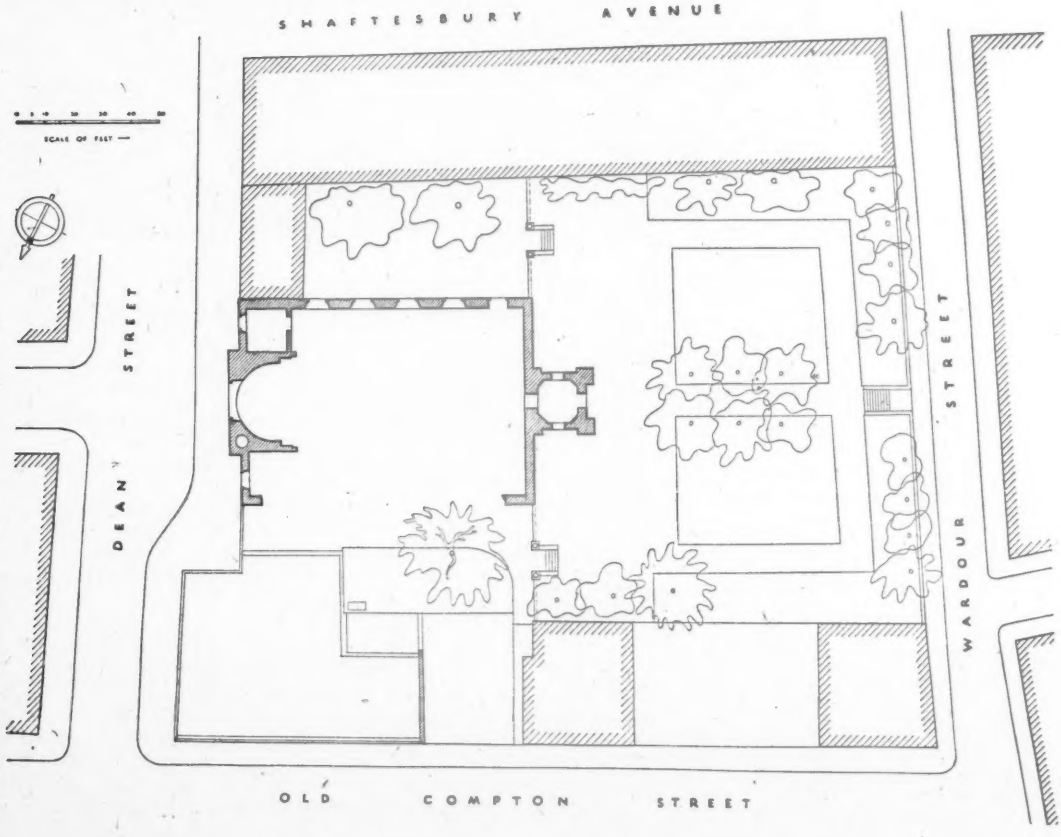
The architect has nowhere departed from the existing building lines. All he has done in his drawings is to replace bombed out houses by new ones in the style of our century. Their function is not altered. Restaurants are suggested with offices or flats above. Even the emergency water supply has been kept, as it happened to fit to perfection the aesthetic possibilities of the site. Actual building work is confined to a covered passage and a partly open chapel on the East side, the cantilevered canopy by the tower, and the balustrade of the lilypond into which the emergency water supply will be converted. Even there materials could be used which are mostly available on the spot. The two stone vases which appear in the drawings are there, and the flagstones in their

* *Bombed Churches as War Memorials.* The Architectural Press. 3/6.

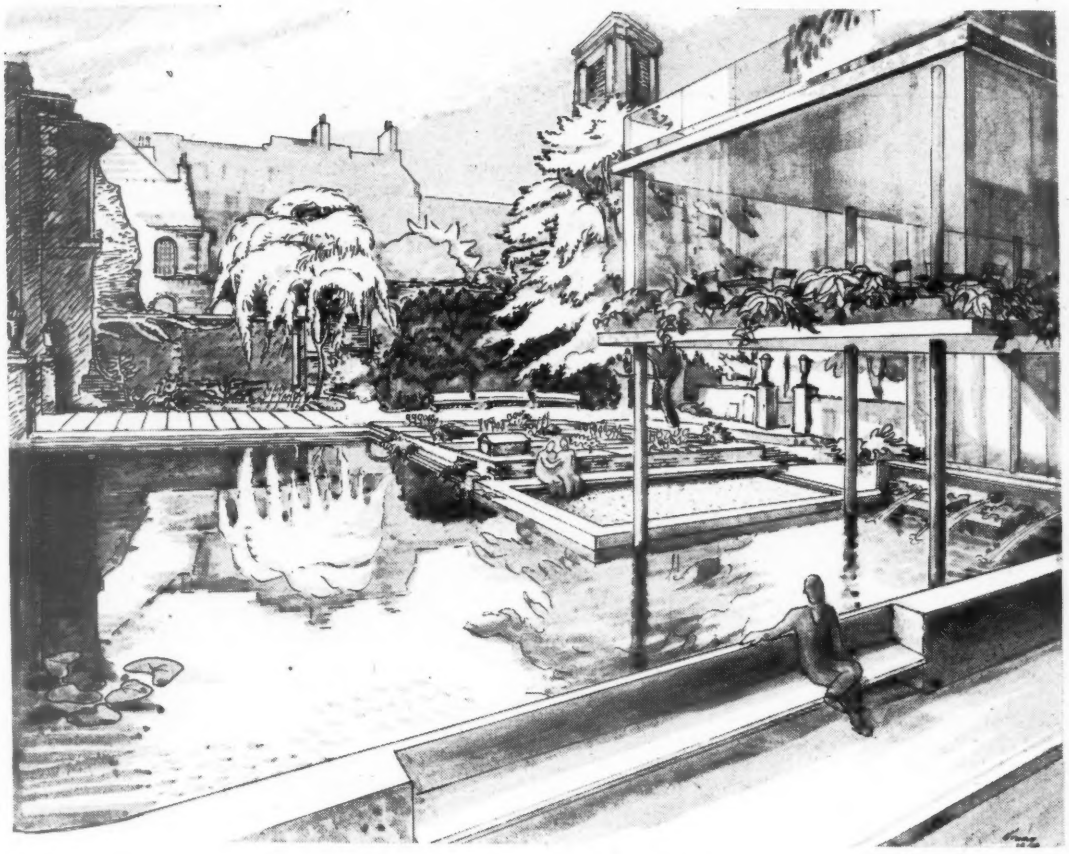
THE SITE TODAY

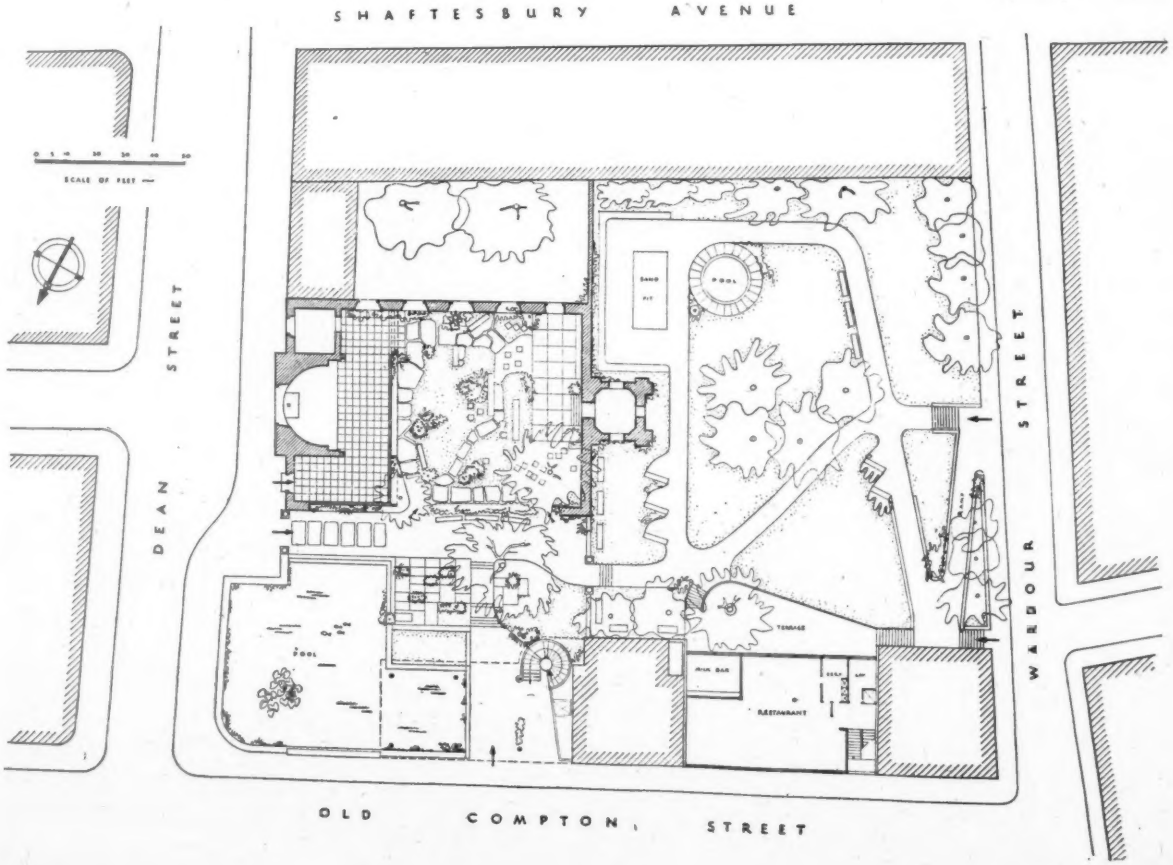


On the left is St. Anne's, Soho, as it looked after it was bombed in the winter of 1940-41. The little sections above show how much of the main fabric of the church remains. The tower is comparatively undamaged. Below is a plan of St. Anne's as it stands to-day with its north wall vanished, an emergency water tank placed in the north corner of the site, and big gaps torn in the houses along the south side of Old Compton Street. On the facing page, top, is the architect's impression of the site as it might be. It is a view looking from Old Compton Street across the lily pool to the garden ruin beyond. The restaurant terraces are shown on the right overhanging a small formal garden. Below is the site transformed into a garden ruin. The memorial chapel made in the eastern end of the ruin is either entered direct from Dean Street, or is approached through the garden formed within the old fabric of the church. The illustrations on pages 441 and 444 show the interior of the memorial chapel.



THE SITE TOMORROW?





broken, irregular shapes could be obtained from the existing débris, and either used as they are or broken up in a coarse cement mosaic. The total cost of the scheme would thus be very small indeed—in fact, almost negligible when compared with the effect the redesigned ruin would have on the whole character of the district. The scheme consists of two parts which are loosely inter-related: the former church will be kept for worship and rest, and the surrounding open spaces will serve recreational needs. Changes of building heights, texture of materials, a variety of entrances and exits, and an ever changing relation of architecture and nature, will all co-operate to link up the replanned precinct with the surrounding street life.

Entrance from Dean Street is by a low, covered passage leading round to a cross below the roofless apse which forms the focal point of the war memorial chapel. The chapel is as low as the passage, but entirely open towards the East. All along the passage and in the chapel there will be dark wall paintings with larger than life-size figures. The paintings should have some of the terror of mediaeval cycles of the Dance of Death; death in battle, death in the midst of pleasure, death coming suddenly from the sky, and death coming as a solace to the wounded. Standing in the memorial chapel and turning East one will suddenly see the chancel of the church with its tall East window all open to the sky. The contrast between the gloomy and oppressive darkness and the light in the East will be sudden and forceful. The tall cross stands where once the altar stood, before the East windows. The *sursum cord* could not be more impressively emphasized.

Leaving the chapel, the passage leads the visitor to the nave and aisles of the church, which are enclosed partly by ruined walls covered here and there with creepers, and partly by a tall hedge. This wide space should be accessible to everybody for rest and meditation. In fine weather it could also be used for open air services. It is designed as a peaceful garden with lawns and flagged paths, with trees planted in a loose pattern, and with informally grouped seats and chairs. The outer wall of the chapel facing the garden has a distinctive texture, and is rhythmically divided into panels. The long recess above the seat is to contain fragments found on the site.

On the west side of the church, where the tower stands, a sheltered space has been created by a canopy projecting out of the wall of the tower. It is open towards the nave, and could be used with or without the nave for religious or other community meetings. For it should never be forgotten that in centuries in which churches were much more part of everyday life than they are to-day the church was used for many community purposes of no immediate connection with religion. On the one side of the canopied space stands a tall old tree transplanted from the western outer garden. In the hedges closing the church space and separating it from this western garden there are entrances on the left and on the right.

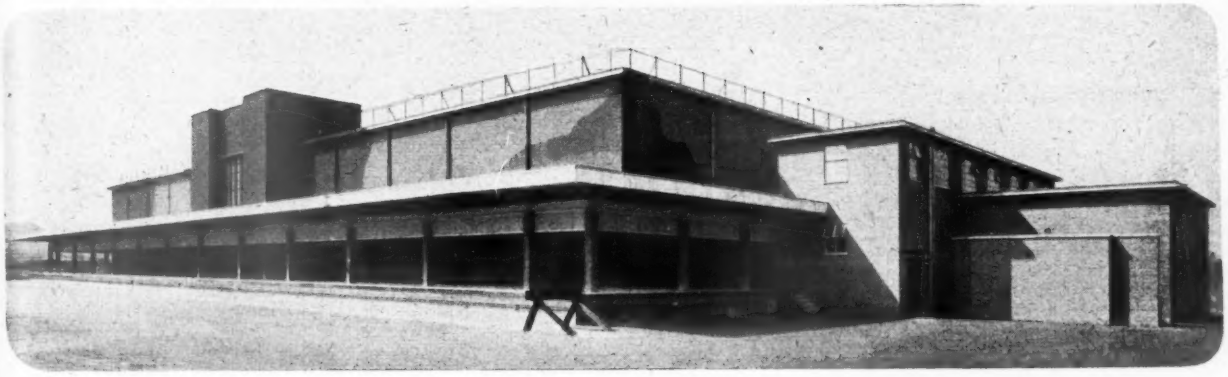
The western garden, which is between the church tower and Wardour Street, is already in existence. It needs, however, to be replanted and replanned to become part of the new scheme. In its present form it has nothing of the character that even the smallest open space should possess to serve for rest, play and recreation. A precisely central avenue leads from Wardour Street straight towards the tower which has no entrance or special motif in this place to justify such a *point de vue*. The tower is much too tall in proportion to the short avenue. The people walking or sitting cannot possibly feel any relation in space between themselves and the tower facing them so plainly and squarely. Nor does the garden on the left and right of the avenue hold any surprises. Once one has walked from its west to its all too close east end, one knows all about the garden and can do nothing better than to sit and read the paper on one of the closely pushed-together garden seats. There are no vistas, no winding paths with changing views, no lawns of interesting shapes. The rigid symmetry of this garden is broken in the new layout, and a less formal grouping of trees makes the connection with the church and the new church garden more fluid. A ramp will replace the present steps to make access more convenient for mothers with young children in prams. A special children's play corner with a shallow water basin and a sand pit will be provided in the warmth of the afternoon sun. The church wall and the new tall parapet wall will act as sound screens between the noise of this corner and the quiet of the church garden.

A new architectural garden will be formed on the part of the site by the corner of Dean Street and Old Compton Street. This corner is marked by the Lily Pond which, thanks to the slight projection of the present emergency water supply, can be seen from Shaftesbury Avenue. A fountain might stress this introductory motive. The preservation of the sheet of water in this corner is essential. It will reflect the surrounding buildings and trees, and should add considerably to the picturesqueness of the design.

The entrance from Dean Street along the pond is accentuated by two vases taken from the present Priory Gate. The entrance from Old Compton Street has the pond on the left, the all-glass staircase of the new restaurant on the right. Additional spatial interest is contrived by ingenious use of the change of level between Old Compton Street and the Church. On the left two steps lead down to a square lawn with a low, eighteen-inch parapet, and a long seat by the water. Some further steps take the visitor to the gently sloping square ahead, paved with old tombstones, except where there are flower beds. This way continues towards a group of benches and then turns right to reach the higher level of the Western garden.

The new restaurant buildings along Old Compton Street will, of course, be privately built and privately owned. It is, however, imperative that their design should form part of the whole concept. The western restaurant with its first floor dining rooms and terrace is connected with the western gardens—the terrace is actually built round one of the trees in the church grounds, and the eastern restaurant is partly built out over the lily pond, which would give it especially pleasant views.

This scheme, for one out of so many severely damaged churches, proves how many are the possibilities of beauty and use which destruction may hold.



STANDARDIZED GOVERNMENT COLD STORE

GENERAL—Among the war-time buildings that can now be illustrated, is this cold-storage depot. The building is one of forty-eight of standard design and construction built throughout the country during the war by the Ministry of Works for the Ministry of Food. The result is that the cold storage capacity of the country is now 33⅓ per cent. greater than it was in August, 1939.

The designs for these Government cold stores were prepared by Mr. T. Laurie Price and Messrs. Hal Williams & Co., who acted as consultants to the Ministry of Works, the Ministry of Food having laid down the capacity, the system of cooling by air circulation and the provision of two engine rooms.

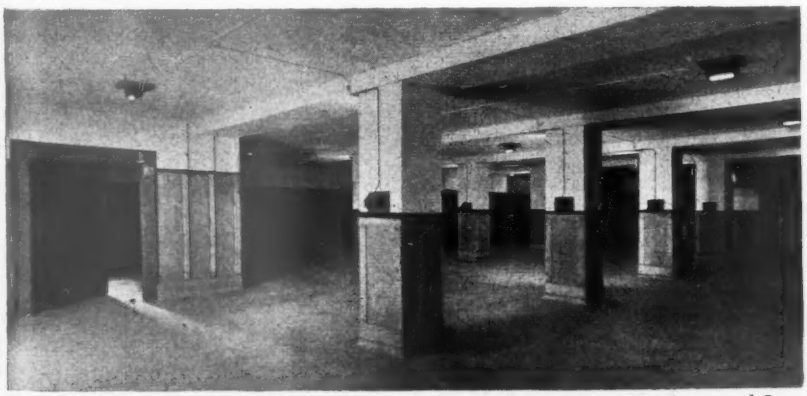
PLANNING—The standard plan is symmetrical, having a central block and two wings. The central block, three floors high, contains the air coolers on the ground floor and has a total storage area of 250,000 cubic feet. Projections at front and rear contain air locks, lifts and a staircase. The side wings contain the refrigerating plant, and also the canteens, cloak rooms, other conveniences for the staff, and offices.

The standard plan was orientated in each case to suit the local conditions of railway and road access, and ground levels.

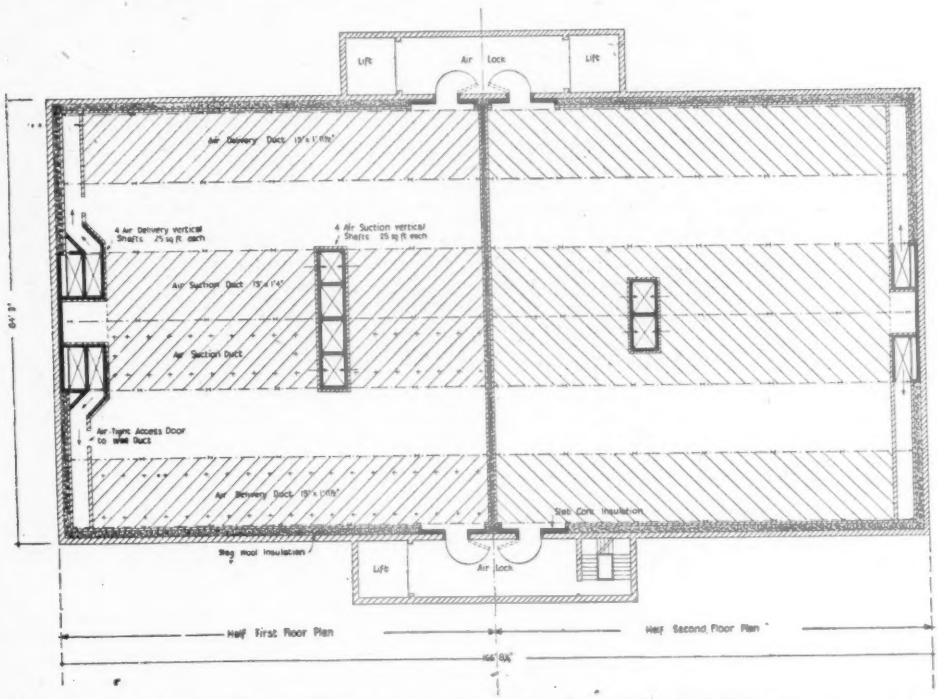
CONSTRUCTION—The structure of the main block is of steel frame encased in concrete, walls being of 14-in. brickwork externally, 4½ in. internally with 15 in. of slagwool insulation sandwiched in between. To prevent the slag wool from packing down, cork insulation is inserted at each floor level in the walls to hold the slag wool in position.

Large steel and wood framed suction and delivery ducts circulate the air throughout the storage area, both vertically and horizontally. The humidity of the air can be controlled and could actually be adjusted to dehydrate the stored food.

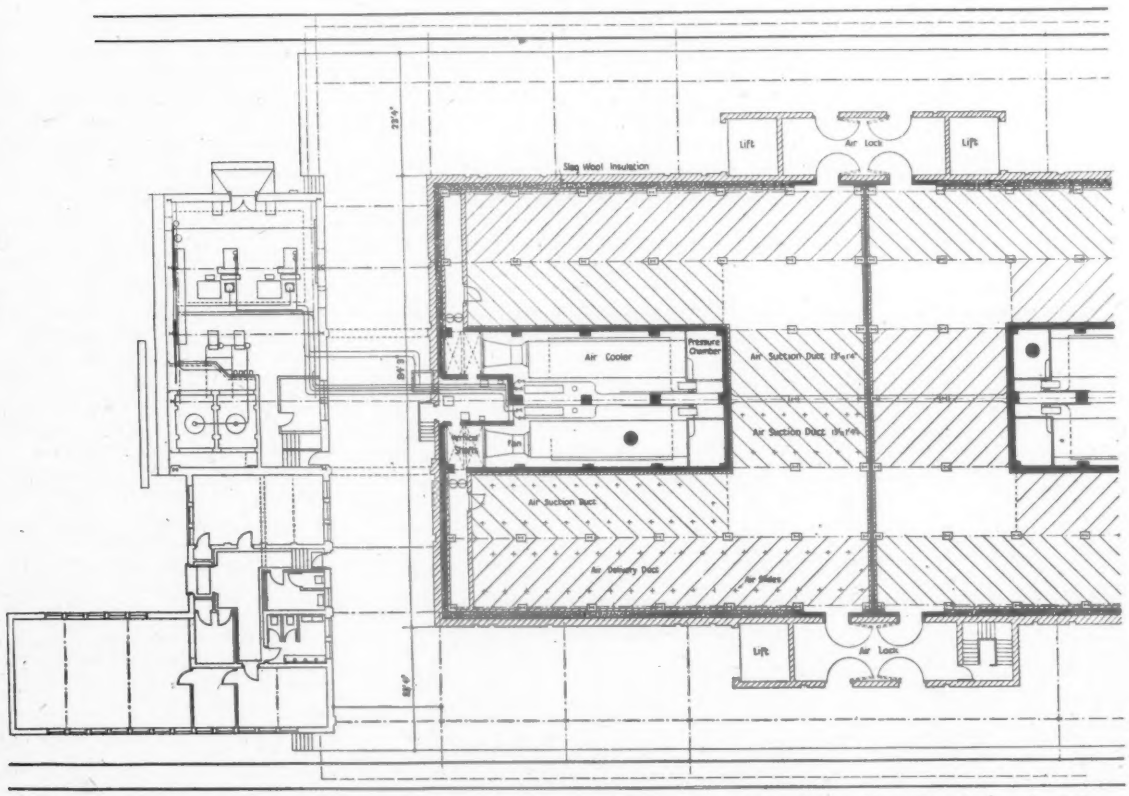
Roofs and floors are of reinforced concrete slab construction spanning between steel joists. The roof is insulated with 8-in. thickness of cork, and floors with 4-in. thick cork slabs supported by wood fillets at 4-ft. centres. These fillets are themselves supported on cross timbers bolted to the concrete floor slabs and provide a 4-in. air space for additional insulation. The cooler rooms are entirely insulated with 8-in. cork.



Top, general external view. Below, internal view of the storage area on the ground floor.

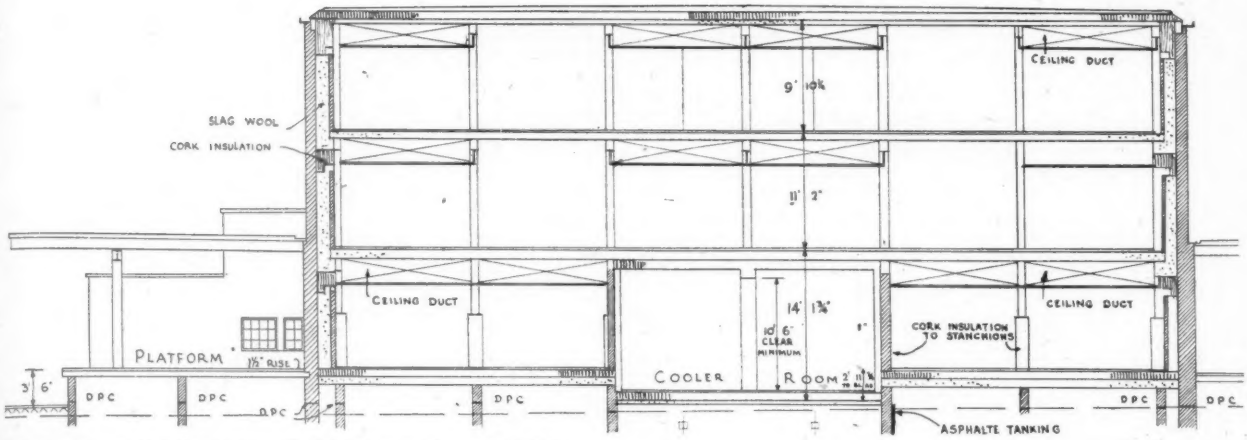


HALF FIRST FLOOR AND HALF SECOND FLOOR PLANS [Scale : $\frac{1}{32}$" = 1' 0"]



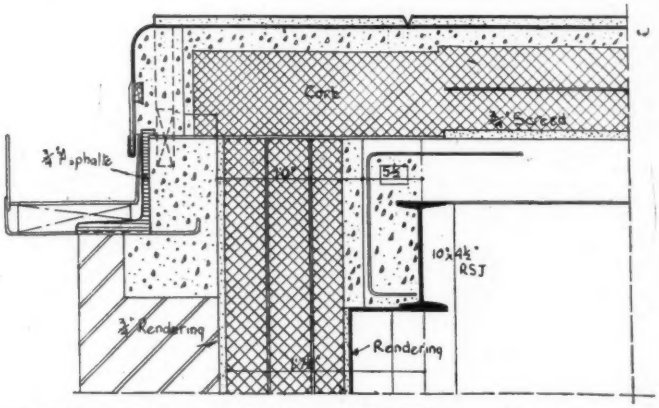
HALF GROUND FLOOR PLAN [Scale : $\frac{1}{32}$" = 1' 0"] *Canteen and refrigerating plant is on the left.*

STANDARDIZED GOVERNMENT COLD STORE

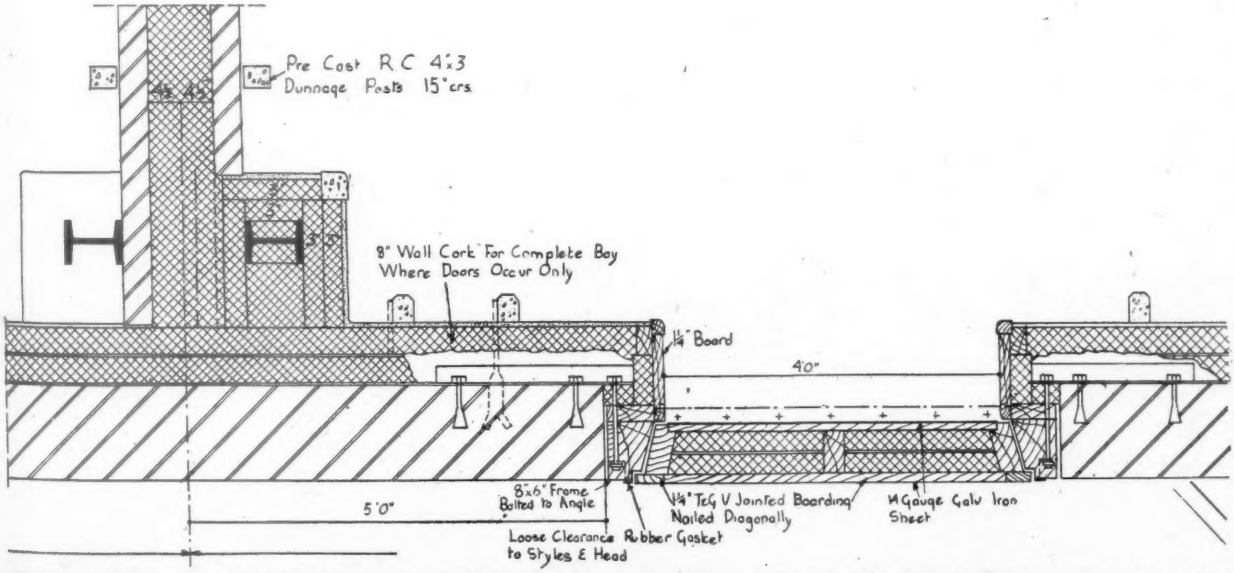


CROSS SECTION THROUGH STORE [Scale : $\frac{1}{16}$" = 1' 0"

Typical cross section through the main store block. Right, typical detail section at eaves to $\frac{3}{4}$" scale. Below, plan detail at ground floor level of door from air lock to $\frac{1}{2}$" scale.



TYPICAL EAVES DETAIL OF STORE [Scale : $\frac{3}{4}$" = 1' 0"]



PLAN ABOVE STANCHION CASING

PLAN BELOW STANCHION CASING AT GROUND FLOOR [Scale : $\frac{1}{2}$" = 1' 0"]

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

1982 — *Trunk Roads*

THE LOCATION OF TRUNK ROADS IN URBAN AREAS. *Prepared by L. B. Escritt.* (*Report No.* 35 *of the Association for Planning and Regional Reconstruction, February,* 1945.) Schemes of yesterday. By-pass roads, ring roads, through roads, and direct roads in light of theory and traffic censuses. Irrationality of ubiquitous use of ring roads. Advantages of the Three-Axis Direct, or Triangular, System in places where there are no marked features.

This is a sensible essay on urban road planning, free from all too common preconceptions based on insufficient evidence. Its main purpose is "to oppose, and as far as possible, prevent, any further layout of highways to arbitrary patterns, without proper investigation, and without the advice of competent engineers." A typically arbitrary pattern, the author believes, is the ring road system. Reasons for this belief are stated. The following quotations from the report are significant:—

"While present traffic censuses are very serviceable they are on the whole not completely adequate from the point of view of the highway engineer in that the majority of them do not indicate the sources and destinations of vehicles, but give only the types and quantities of vehicles passing certain points during the limited period of observation. This is unfortunate because in the absence of sufficient information a number of suppositions have been made which, although inaccurate, have been too often accepted without question.

"Shortly after the last war many by-pass roads were constructed. . . . This in some cases relieved moderate sized towns, which had grown up on main highways, but in the case of the larger towns it was found that while at times the new by-pass roads absorbed fair quantities of traffic, relief in the urban centres was negligible and further measures had to be considered. The by-pass principle has now been extended as a suggestion for the relief of the congestion at the centres of those larger county towns from which many main roads radiate, and also as a possible solution of the traffic problems of large conurbations such as London. In these cases the by-pass becomes a so-called 'Circular Road' forming an arc of a circle on one or more sides of a town or a complete Ring Road surrounding a town . . . . For example, it has been proposed that for Greater London five concentric rings should be constructed.

"This idea of ring roads does not appear to have been put forward as a new solution of traffic problems and supported, as any innovation should be, by arguments and data. It has merely grown up and become accepted by some and not questioned by others. It has certainly ousted the square grid.

"The alternative to by-pass roads is the construction of proper through roads. This is the suggestion of Sir Alker Tripp, who has contended with success that, in the future, large towns and conurbations must be provided with arterial and sub-arterial through roads, passing between the precincts or built-up areas and so constructed and fenced as to permit free flow of traffic. . . Within the precincts there would be only local and pedestrian traffic.

"Through roads are unavoidable. Traffic between point and point within a built-up area cannot journey entirely by ring road but must use the radial or any other roads that are provided. Moreover, in a built-up area a ring road itself must be a through road cut at the expense of the destruction of existing property; its only difference from other through roads is that it is 'circular' following a pre-conceived route, regardless of traffic needs and not direct. If, then, all roads within the built-up area must be through roads, why design some as circular by-passes, seeing that by by-passing one obstacle they can only pass through another? Obviously, the best course when designing through roads for central areas is to find the traffic needs, search out the lines of least resistance as determined by local features and values of property and lay out a network of through roads accordingly. . . . The truth is that most journeys are not circumferential.

"As an alternative to preconceptions and the layout of roads to orderly patterns and to doctrines not supported by data and reasoning, the writer does not suggest the general adoption of a novel scheme or system, but merely the plain commonsense proposals that:—

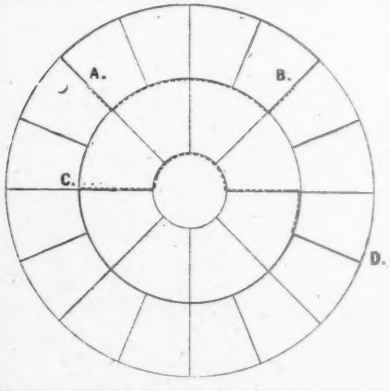
(1) Volumes and directions of flow and sources and destinations of traffic should be determined. . . . A traffic survey is not an expensive item compared with the cost of the works to be based thereon, and its omission can only be described as the utmost folly.

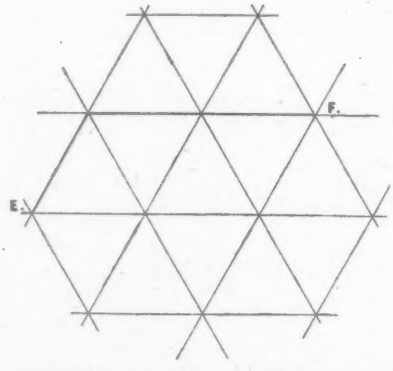
(2) Roads should be constructed to serve the estimated flows of traffic by providing the most direct and unimpeded routes.

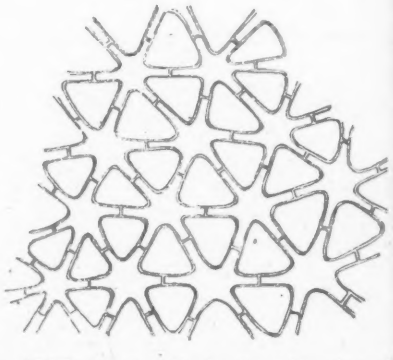
(3) As roads are intended to serve the needs of built up areas they should follow routes that do not unduly interfere with the local activities of either the areas that they serve or others between which they pass.

(4) Only after the position, directions and proportions of the individual roads have been determined in broad outline should the system as a whole be built up and the positions, types and details or intersections decided.

"In those places where there are no marked natural features and where, the whole area being built up, there are no ascertainable individual sources or destinations, it would not appear unreasonable to apply some form of regular grid or consistent pattern, and in these circumstances it might be asked whether the radial and ring system would serve as well as any other. . . . There is no reason why 'direct' systems should not be the most satisfactory, but it remains for one system to be found which is preferable to all others. The radial and ring pattern has a disadvantage when applied to a large conurbation, for it assumes that there is some arbitrary centre from which main roads must radiate . . . and from the point of view of distance travelled compared with distance as the crow flies, is very inefficient indeed. . . .







Left, traffic diagram of the ring-radial road type criticized as an inadequate traffic solution in the APRR report on the location of trunk roads. Centre, traffic diagram of the Three-Axis or Triangular Grid system suggested for built-up areas where there are no marked natural features or there are no ascertainable individual sources or destinations. Right, diagram of pith cells of Juneus Effusus, one example of many found in nature which illustrates that when material is stressed equally in all directions the stresses in one plane frequently tend to resolve along three axes, forming six-way points of symmetrical intersection. This suggests that the Three-Axis system is a sound solution for "when a designer exploring new ground is in difficulty, he often turns to nature." See No. 1982.

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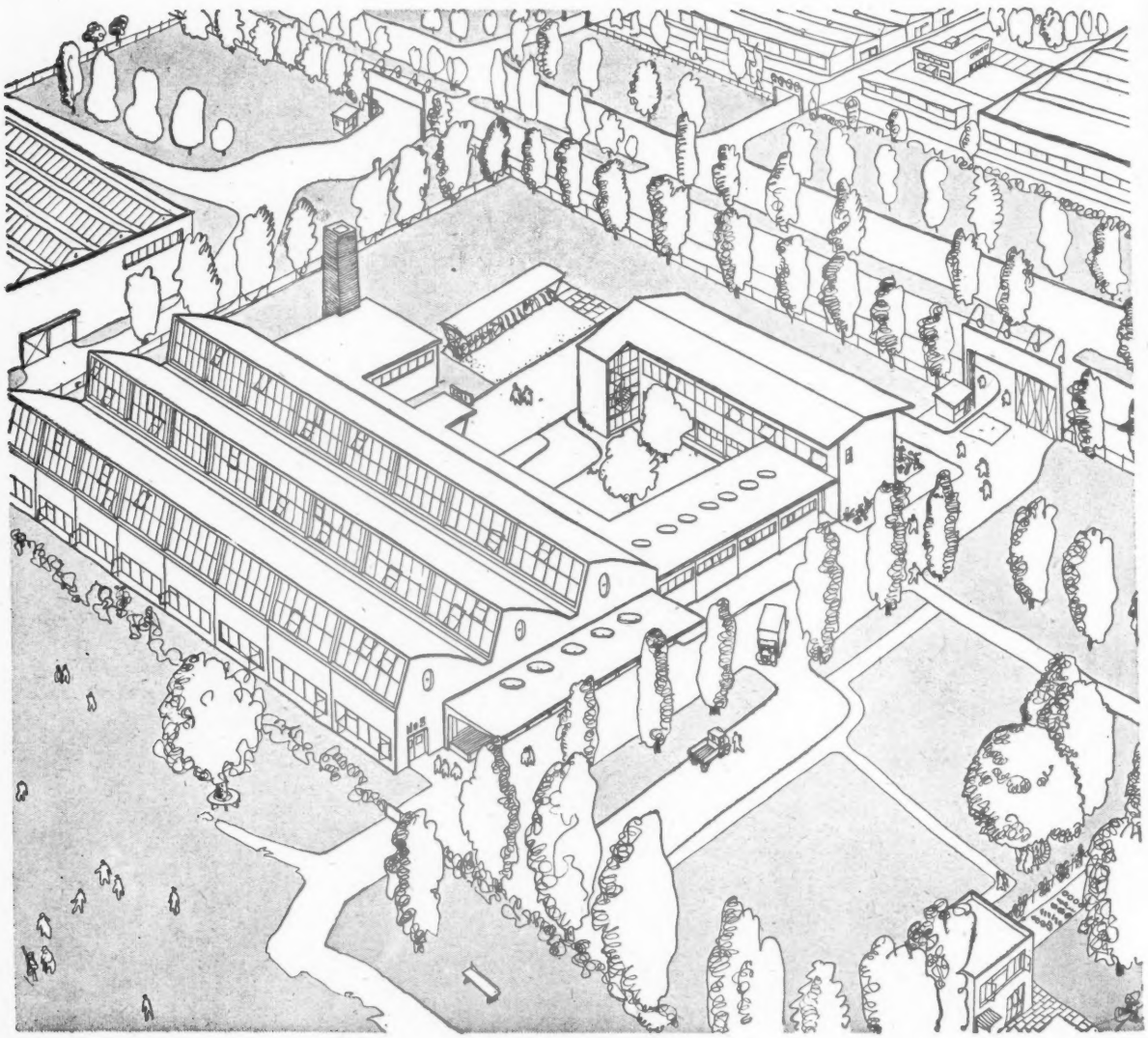
BUILDING FOR DAYLIGHT

No. 9 FACTS FOR ARCHITECTURAL STUDENTS



This factory is a type suitable for light industry based on road transport.

North light roof lighting with shell concrete construction is used. The administrative block is connected to the works, but is sited to road frontage, thus securing a south aspect. Abundant light and air are ensured by linking playing fields and gardens with factory layout.

The best results with a ring road (complete circle) might be expected when the ring is a small one in the centre of a congested town.

"Taking a rough average, distance travelled in excess of distance as the crow flies on a Three-Axis or Triangular Grid System is less than one-third of that which would have been made on a radial and ring system. . . . A particular advantage of the Three-Axis Direct System is that each main intersection roundabout is a centre of radiation. Thus the problem of how to provide an interlocking series of radial and ring road systems with several centres is solved. Incidentally, each intersection is also the centre of a number of concentric circular or, strictly speaking, hexagonal roads, which fact may appeal to the circular road enthusiast, although these hexagonal roads have no value except in so far as they form the radii of other centres. But what is of importance is that the approach to these hexagonal 'circular' roads is no longer at right angles, but tangential and therefore travel along the circular road does not involve deviation of route, but is direct. The Three-Axis Direct System may therefore be used in places where there are no marked features, but not elsewhere. Wherever local conditions have any bearing on transport routes, the routes must be located accordingly."

LIGHTING

1983 **Wiring and Gear**

WIRING AND LIGHTING. *H. T. Young.* (*Official Architect, December,* 1944, *p.* 569.) Design, choice of fittings, installation, wiring systems and control gear. Mainly for domestic installations.

An attractive article, giving a good outline of the main points about design, fittings, installation, wiring systems and control gear for domestic lighting. Although the facts are equally applicable over the whole cost-range of housing, the article seems to focus on the small or medium-sized house designed by an architect. In such cases the designer very often leaves everything but the location of switches and outlets to the contractor, often for want of convenient advice. The article seems to fit this requirement well.

1984 **Lighting History**

THE CENTENARY OF A LIGHTING COMPANY. (*Lighting and Lamps, November,* 1944, *p.* 30.) Good description of early types of lamps.

1985 **Light Sources**

BRIGHT LIGHT SOURCES. *J. N. Aldington.* (*Transactions of the Illuminating Engineering Society, January,* 1945, *p.* 1.) Incandescent light sources for special purposes.

This article has a highly specialist character, but it contains one point that applies generally, and is a refreshing reminder—the fluorescent lamp is still, and is likely to remain only supplementary to the incandescent source.

1986 **Theatre Lighting**

THEATRE LIGHTING. *L. G. Applebee.* (*Electrical Review, January* 19, 1945, *p.* 90.) Socket outlets on stage floors. Illumination in dressing rooms.

The author indicates how the design of socket outlets on stage floors can be improved. Their individual loading has been nearly halved, but sizes have remained unaltered for interchange ability. The lid should be self-closing, and a 15 w. pilot lamp in the box would help plug manipulation when making "dark" changes on the stage.

Dressing rooms for stars should have facilities for full length viewing at stage lighting intensities. Fitting types and circuits for general dressing rooms are described, and the control of stage lighting is mentioned.

1987 **Church Lighting**

REQUIREMENTS FOR CHURCH LIGHTING. *E. Rowbusch.* (*Architectural Record, September,* 1944, *p.* 111.) General requirements. Combination of general and specific illumination. Design of fittings.

The author states the following requirements:—

1. Illumination of sanctuary, chancel, etc., for use.
2. Illumination of pew area for reading.
3. Creation of atmosphere.

It is suggested that a general illumination be provided to an intensity of about 2 f.c. at all times, to be supplemented by downward directed light over the pew area when required, and by lights focused on pulpit, lectern, etc. The latter, it is said, should incline at an angle of at least 45 deg. to illumine faces well. The choir and altar should also have separately controlled lighting. Suitable fittings are described in detail, and a few installations are analysed.

The article arouses questions of philosophy because of the virtual staging of the religious service. One's first reaction is doubtful; but it would certainly be nothing new.

1988 **Store Lighting**

STORE LIGHTING SURVEY INDICATES HUGE POST-WAR DEMAND FOR FLUORESCENT. (*Lighting and Lamps, November,* 1944, *p.* 28.) National survey of American shop lighting conditions and demands. New and interesting method of survey.

The survey technique has a huge variety of uses, as so many English surveys, especially by the Wartime Social Survey have shown. This American study is along a new line, and with one qualification, it is interesting. The qualification is this, that it seems to have been directed to find what the market is like for fluorescent lighting. The results show that about 66 per cent. of merchants want fluorescent, and less than 20 per cent. do not. Questions were asked also about equipment, existing conditions, and many other details. The whole questionnaire and analysis is published. The results have no direct application here, of course, but trends may be similar and shop designers will find food for thought.

1989 **Perforated Metal Screens**

LUMINOUS METALS. *F. H. Blumer.* (*Lighting and Lamps, November,* 1944, *p.* 38.) Decorative use of finely perforated sheet metal.

Luminous metal is a misleading term. It proves to be sheet metal finely perforated so that it transmits up to 25 per cent. of light from a source behind it. By altering the perforation, patterns can be produced.

ACOUSTICS and Sound Insulation

1990 **Recording Theatre**

RECORDING THEATRE AT DENHAM FILM STUDIOS. (*Architects' Journal, August* 5, 1943, *pp.* 95-96, *and Builder, March* 2, 1945, *p.* 171.) Acoustic design of recording theatre.

Brief descriptions with plans and photographs of the theatre at Denham Studios, re-built after damage by war action. The acoustic design appears to follow recently developed theory. One could wish for a published analysis of the characteristics.

1991 **Noise in Plant**

NOISE IN ENGINEERING. *A. J. King.* (*Bulletin of the Liverpool Engineering Society, October,* 1944, *p.* 11.) Measurement of noise, its main sources in mechanical plant, and its reduction.

It is customary to assume that the noise of mechanical plant should be treated at source if real success is to be obtained. In this paper it is suggested that this is not a balanced view. The noise from any surface is generated by vibrations of very, very small size; for instance, a movement of only 10^{-4} in. is sufficient to cause an uncomfortably loud noise.

Often it is extremely difficult in mechanical design to reduce the size of this vibration significantly, but only the simplest of enclosures is needed to secure, say, a reduction of 40 db., which corresponds to a reduction in size of vibration to less than 1 per cent. The author states that such a reduction in a mechanical or electrical source is generally uneconomic, if not impossible.

This applies where the noise is air-borne. If it is a question of resilient mountings for the equipment, again reductions of transmitted vibration to 1 per cent. are possible, which can seldom be achieved by improvements in the machine.

This appears to throw at least some of the responsibility for reducing the noise of mechanical plant back into the field of the building designer, who has for long been told that he should devote great care to the choice of quiet plant. This remains a desirable course, but often the less important one of the two.

The descriptions of the measurement and nature of mechanical noise are lucid and useful.

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.*

1992 **Cleaning Brick Fireplaces**

Q *During the requisitioning period by the local Councils of seriously damaged and vacated houses, I find that builders have used them as mess rooms, stores, etc., and have had large wood fires burning. Brick fireplaces which prior to the damages were in perfect condition are now blackened by smoke from the wood. What is the best method of removing the smoke stains and restoring the briquettes?*

A One method of removing smoke stains from brick fireplaces is by the application of Harpic. If this proves successful, you will find brushing over with a small quantity of olive oil will improve the appearance greatly. The olive oil will, however, fix any dirt remaining, and should not be used until the briquettes are clean.

D

SOCIETIES AND INSTITUTIONS

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

Minutes

The following are notes from the minutes of the RIBA Council.

The Hon. Treasurer: Mr. L. Sylvester Sullivan's resignation as Hon. Treasurer was accepted with great regret, and Mr. John L. Denman was elected Hon. Treasurer in his place.

Draft Revised Code of Professional Conduct of the ARCUK: The RIBA, as a constituent body of the ARCUK, have been asked to submit their comments on the draft Revised Code of Professional Conduct of the ARCUK.

Architectural Work of Cardiff City Council: It was reported that the South Wales Institute of Architects had sent a letter to the Town Clerk of Cardiff protesting against the proposal that the City's architectural work should be carried out by an architect acting under the City Engineer and Surveyor. At the request of the South Wales Institute, the RIBA wrote a letter in support of their action.

Ministry of Health Circular, 188/44: The attention of the Council was drawn to circular 188/44 sent by the Ministry of Health to local authorities, in which reference was made to British Standards Institution Handbook No. 3. The small selection of standard specifications, particularly in the case of windows, appeared to restrict unduly the architect's freedom in design, and representatives of the War Executive Committee arranged to meet officials of the Ministry of Health to discuss the matter.

Conference upon Methods of Social Survey: On the recommendation of the Architectural Science Board the Council approved the holding of a Conference at the RIBA in the late summer on Methods of Social Survey in Relation to Architecture and Planning. The Conference will be organized by the Institute of Sociology and the Association of Planning and Regional Reconstruction, and sponsored by the Architectural Science Board, who will consult with the Town and Country Planning Committee of the RIBA.

Revision of the RIBA Scale of Professional Charges: The proposed revision to Clause 2 (*f*) of the RIBA Scale of Professional Charges as published in the March issue of the RIBA Journal was formally ratified.

Mr. J. Hubert Worthington, A.R.A., Vice-President: The Council expressed their hearty congratulations to Mr. J. Hubert Worthington on his election as an Associate of the Royal Academy.

Battle Training Areas in the Isle of Purbeck: On the recommendation of the Town and Country Planning Committee the Council supported the representations of the Wareham and Purbeck Rural District Council against the retention after the war by the service authorities of areas in the Isle of Purbeck requisitioned for training purposes.

Appointments: Representatives on British Standards Institution Committees, Drafting Committee (Plasterboards), H. V. Lobb (F.); Dustbins and Storage Containers, Ronald Chapman (A.); the Institution of Structural Engineers: Codes of Practice Committee on the Use of Tubular Steel in Buildings, F. E. Towndrow (F.); Festival of St. Luke—Patron of the Arts: Organizing Committee, Edward Maufe, A.R.A. (F.).

ABS

Percy Thomas

ANNUAL GENERAL MEETING of the Architect's Benevolent Society. Percy E. Thomas, O.B.E., P.R.I.B.A., who was re-elected President of the Society, said:

You will notice from the Report that the Society is going steadily ahead, both in the work it is doing and in the support it is receiving. But I think we all feel that it is not quite on the scale that we all wish. We would like to see our funds increased so that we need not be restricted in the work we try to do for those in need.

We are greatly handicapped at present by the paper shortage, in our efforts to make the Society known, and here is a method by which members could help by acting as agents for the Society and persuading their friends to join. You will notice that we have recently issued a small leaflet describing the Society's work, copies of which can be obtained from the office; if members will send these to their friends who do not as yet subscribe, it would be most helpful.

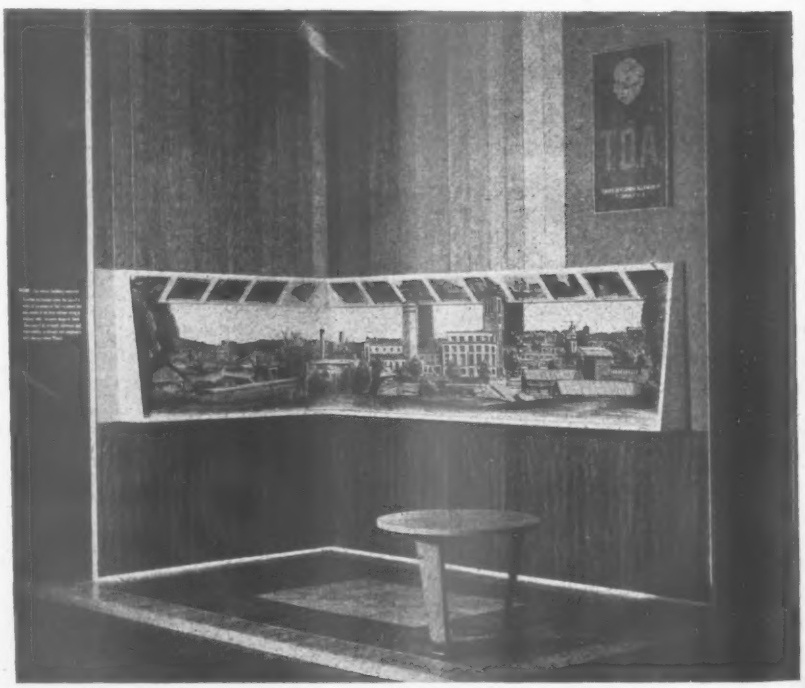
TDA

Exhibit

An exhibit has been opened at the Building Centre, Maddox Street, W.1, by the Timber Development Association showing some of the MODERN USES OF TIMBER.

Apart from the well-established uses, there have been many new developments and this exhibit at the Building Centre portrays a few of the more modern adaptations; for example, built up arches with plywood webs and gussets, which can provide roofs with large spans for factories and other types of buildings thus providing extensive floor space clear of stanchions or piers. Another fascinating method of construction is shown here in a built-up trussless roof constructed of small dimension timber in what is known as the Lamella type of construction, while with the aid of timber connectors and new glues, laminated trusses also can be built up to cover very large spans. An excellent example of this type is the Portal Frame system of construction which is used for large unobstructed spans.

Another illustration shows the use of prefabrication used in the construction of schools, making it possible readily to extend existing classrooms or, should there be a shifting population, such classrooms are demountable and can easily be moved to another site.



The Timber Development Association's Exhibit at the Building Centre. See Note above.

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PRICES

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BASIC MATERIALS	Increase over pre-war prices at end of				
	Jan., 1945	Feb., 1945	Mar., 1945	Apr., 1945	May, 1945
	per cent.	per cent.	per cent.	per cent.	per cent.
Portland cement	+ 41.46	+ 41.46	+ 56.10	+ 56.10	+ 56.10
2-in. Unscreened ballast	+108.70	+108.70	+108.70	+108.70	+108.70
Fletton bricks (at station)	+ 34.59	+ 34.59	+ 34.59	+ 34.59	+ 34.59
Stoneware drainpipes (British standard) (2 tons and over)	+ 43.75	+ 43.75	+ 43.75	+ 43.75	+ 43.75
Roofing tiles	+ 65	+ 65	+ 75.31	+ 75.31	+ 75.31
Steel joists (basic sections ex mills)	+ 47.5	+ 47.5	+ 47.5	+ 47.5	+ 47.5
Lime greystone	+ 43.53	+ 43.53	+ 43.53	+ 43.53	+ 43.53
Sheet lead	+ 73.91	+ 65.22	+ 65.22	+ 65.22	+ 65.22
Iron rainwater goods and soil pipes	+ 40.5	+ 40.5	+ 45.5	+ 45.5	+ 45.5
White lead paint	+ 38.38	+ 38.38	+ 38.38	+ 38.38	+ 38.38
RATES OF WAGES (Central London Area)					
Labourers	+ 31.75	+ 34.92	+ 34.92	+ 34.92	+ 34.92
Craftsmen	+ 26.19	+ 26.19	+ 26.19	+ 26.19	+ 26.19

LABOUR—Rates of Wages since 1st February, 1945

LONDON DISTRICT	Craftsmen	Labourers
Within 12 miles radius	2s. 2½d.	1s. 9½d.
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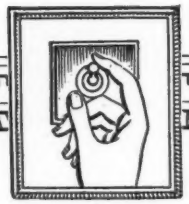
N.B.—Prices of materials include for delivery to site in the Central London Area unless otherwise stated.

GRADE CLASSIFICATIONS

	A	A¹	A²	A³	B
Craftsmen	2/1	2/0½	2/–	1/11½	1/11
Labourers	1/8	1/7¾	1/7½	1/7	1/6½

W. A. Davis
F.S.I., F.I.Arb.



On Active Service

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For information and advice about the many new uses and greatly increased adaptability of Electricity consult your Electricity Supply Undertaking or the British Electrical Development Association, 2 Savoy Hill, London, W.C.2.

The Electrical Section at the Building Centre, Maddox Street, London, W.1, provides interesting illustrations of electrical applications in domestic and industrial premises.

EDA

County School, Weston-Super-Mare.
Architect: A. J. Toomer, Esq., F.R.I.B.A. Taunton.

Architects and Engineers are invited to write for a copy of this Ruberoid publication No. 326 entitled "Standard Specifications for Ruberoid Roofs."

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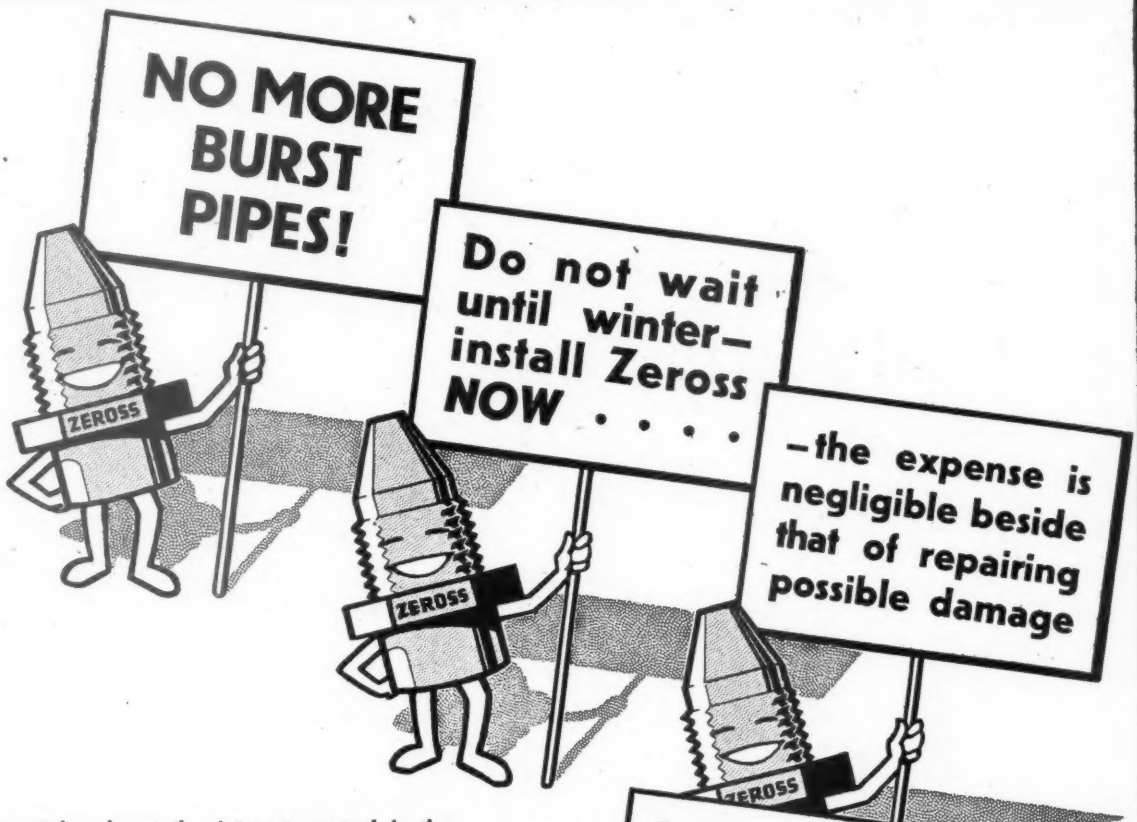

So great has been the interest aroused in the Building and Allied Trades by the Zeross Anti-Burst Valve that it was decided that further tests of the most rigorous description should be carried out in public. The results showed Zeross to be 100% efficient in operation. Representatives of the House of Commons, the Air Ministry, the Ministry of Works, Water Authorities, Industrial Undertakings and the Press were present.

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CLASSIFIED ADVERTISEMENTS

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

Replies to Box Numbers should be addressed care of "The Architects' Journal," War Address: 45 The Avenue, Cheam, Surrey.

Public and Official Announcements

** Six lines or under, 8s.; each additional line, 1s.* THE INCORPORATED ASSOCIATION OF ARCHITECTS AND SURVEYORS maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. ADDRESS: 75, EATON PLACE, LONDON, S.W.1. TEL.: SLOANE 5615. 991

COUNTY BOROUGH OF WEST HAM.

WEST HAM MUNICIPAL COLLEGE.
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Applications are invited for the post of HEAD OF THE SCHOOL OF BUILDING.

Candidates should have teaching experience, a sound knowledge of the Building Industry, and must have organizing ability.

The School comprises a Junior Technical School of Building, together with Part-Time Day and Senior Evening Courses in Building and Building Crafts.

The salary will be fixed in accordance with the new Burnham Technical Scale.

Particulars and form of application may be obtained from the Principal, on receipt of a stamped addressed envelope, and must be returned not later than Monday, 18th June, 1945.

This appointment is for the war period in the first instance, with every prospect for permanence for a suitably qualified candidate.

IRVINE G. JARDINE,
Education Officer.

Education Department, 95, The Grove,
STRATFORD, E.15. 838

HEREFORDSHIRE COUNTY COUNCIL.

Applications are invited for the following appointments on the Temporary Staff of the County Architect's Department.

(*a*) One ASSISTANT ARCHITECT (Grade T.1). Salary £400, by annual increments of £20 to £460 per annum. Applicants must be Fellows or Associates of the R.I.B.A. Experience of School Design an advantage.

(*b*) Four SENIOR ARCHITECTURAL ASSISTANTS (Grade T.2). Salary £300, by annual increments of £20 to £400 per annum. Applicants must be Fellows or Associates of the R.I.B.A.

(*c*) Six ARCHITECTURAL ASSISTANTS (Grade T.3). Salary £270, by annual increments of £15 to £360 per annum. Preference will be given to Associates of the R.I.B.A.

(*d*) Two ARCHITECTURAL ASSISTANTS (Grade T.4). Salary £200, by annual increments of £12 10s. to £275 per annum.

(*e*) Two ARCHITECTURAL ASSISTANTS (Grade T.5). Salary £150, by annual increments of £10 to £200 per annum.

(*f*) One ASSISTANT QUANTITY SURVEYOR (Grade T.2). Salary £300, by annual increments of £20 to £400 per annum. Applicants must be members of the Chartered Surveyor's Institution.

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

(*h*) One ASSISTANT BUILDING SURVEYOR (Grade T.3). Salary £270, by annual increments of £15 to £360 per annum. Applicants should have substantial experience of all Building Trades with some knowledge of Engineering and Electrical Services. Experience as Clerk of Works will be an advantage.

(*i*) One ASSISTANT BUILDING SURVEYOR (Grade T.4). Salary £200, by annual increments of £12 10s. to £275 per annum.

In accordance with the Council's regulations these appointments will be designated "temporary" for the duration of the war, and will thereafter be subject to review.

The appointments will be subject to one month's notice on either side, and will be subject to the County Council Regulations as to conditions of service of temporary staff.

The successful candidates will be required to pass a medical examination.

In addition to the stated salaries there will be paid a cost-of-living bonus, as applicable to Temporary Appointments (as present 14s. per week).

Forms of application may be obtained from the County Architect, W. Usher, A.R.I.B.A., County Offices, Bath Street, Hereford.

Applicants are to state clearly for which appointment they are applying.

Applications are to be received by the County Architect at the above address, not later than 10 a.m., Saturday, 30th June, 1945. 824

KENT COUNTY COUNCIL.

ARCHITECTURAL ASSISTANTS (two) required for temporary staff of Buildings Department. Candidates, preferably A.R.I.B.A., must have had experience in preparation of preliminary plans and working drawings of buildings of all types, and be able to prepare specifications and supervise works in progress. Salary (1) £350-£400 p.a., (2) £325-£375 p.a., according to qualifications and experience, plus war bonus, at present £59 16s. p.a. Posts are superannuable. Medical examination of successful candidates required.

Applications, which must be in writing, stating date of birth, full details of qualifications and experience (including a list in chronological order of posts held), and quoting Reference No. Q.C.4, should be addressed to the Ministry of Labour and National Service, Appointments Department, Sardinia Street, London, W.C.2. 823

URBAN DISTRICT COUNCIL OF FRIMLEY AND CAMBERLEY.

PERMANENT HOUSES.

The above Council is desirous of employing the services of an ARCHITECT to design approximately 100 permanent houses. The special scale of charges prepared by the R.I.B.A. for State-aided Housing Schemes will apply.

Applications, giving full particulars of qualifications and experience, accompanied by specimens of work, and endorsed "Architect," should reach me at the address below not later than the 23rd June, 1945.

ALAN BRADLEY,
Clerk of the Council.

Municipal Buildings, Camberley.
1st June, 1945. 821

MIDDLESEX COUNTY COUNCIL.

APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited for this full-time, established and pensionable appointment from Fellows or Associate Members of R.I.B.A. Salary £2,000, rising by £100 annually to £2,500 p.a. (no war bonus).

Appointment will be subject to medical examination and to the Standing Orders and Regulations of the Council as approved from time to time, and will be terminable by 3 months' notice. Forms of application may be obtained from the undersigned. Applications, with copies of not more than three recent testimonials, must be received by the undersigned by 13th July, 1945, in envelopes endorsed "County Architect." Applicants in H.M. Forces overseas should cable date of despatch of application.

C. W. RADCLIFFE,
Clerk of the County Council.

Middlesex Guildhall, Westminster, S.W.1. 831

WEST RIDING COUNTY COUNCIL.

EDUCATION (ARCHITECT'S) DEPARTMENT.

The West Riding Education Committee invite applications from qualified men for the undernamed appointments to be made on the permanent staff of the Education Architect's Section:—

ASSISTANT COUNTY EDUCATION ARCHITECTS (Two)—£650—£25—£750.

SENIOR ASSISTANT ARCHITECTS (Two)—£450—£25—£600.

Candidates must be Fellows or Associates of the R.I.B.A., and have wide experience in the planning and carrying out of all types of work connected with the erection of school buildings and other educational institutions, including the modernisation of existing school buildings. All the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.

Forms of application may be obtained from the Education Officer, County Hall, Wakefield. Last date for the receipt of applications, 23rd June, 1945. 802

CITY OF PORTSMOUTH—EDUCATION COMMITTEE.

COLLEGE OF ARTS AND CRAFTS.

Principal: MEREDITH W. HAWES, A.R.C.A.

SCHOOL OF ARCHITECTURE.

Applications are invited for the post of LECTURER AND STUDIO INSTRUCTOR. Applicants should be Fellows or Associates of the Royal Institute of British Architects, preferably trained in a Recognised School of Architecture, with some professional experience. Salary will be in accordance with the new Burnham Scale. Increments may be allowed for approved time spent in industry or professional work. Teaching experience would be an advantage, but is not essential. Successful candidate will be required to take up his duties in September, 1945. Last date for receipt of applications, 30th June, 1945. Further particulars and Forms of Application may be obtained from the Registrar, Offices of the College Governors, The Municipal College, Portsmouth.

E. G. BARNARD, M.A.,
Chief Education Officer.

830

COUNTY COUNCIL OF ROSS AND CROMARTY.

COUNTY ARCHITECT.

Applications are invited for the post of County Architect. Applicants must be Associates of the Royal Institute of British Architects.

Salary £750, rising by £25 per annum to £900, plus J.I.C. war bonus. Staff and office accommodation will be provided by the County Council. The post is superannuable, and medical examination is necessary. Further details of duties, terms and conditions of appointment may be obtained from the undersigned, with whom applications, stating age, experience, and present post, should be lodged (together with two copies thereof and of three recent testimonials) not later than 23rd June, 1945.

Canvassing either directly or indirectly will be a disqualification.

T. S. H. BURNS,
Joint County Clerk.

County Offices, Dingwall.
28th May, 1945. 806

DEVON COUNTY COUNCIL.

TEMPORARY SENIOR TOWN PLANNING ASSISTANT.

Applications are invited for the above appointment, at a salary of £500 per annum.

Applicants should, by examination, be Corporate Members of the Town Planning Institute, and preference will be given to those who possess qualifications in architecture and/or engineering. Practical experience in the preparation and administration of planning schemes for Urban and Rural areas is essential.

The appointment will be subject to one month's notice on either side.

Applications, stating age, experience and qualifications, present and past appointments, accompanied by copies of three recent testimonials, must be submitted to the undersigned by not later than 9th July.

A. J. WITHYCOMBE,
Clerk of the County Council.

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

CITY OF PLYMOUTH.

Applications are invited for the following appointments in the City Architect's Department:—

(*a*) SENIOR ASSISTANT ARCHITECT (Hospitals Section), at a salary of £450, rising to £530 per annum, plus cost of living bonus, at present £59 16s.

(*b*) SENIOR ASSISTANT ARCHITECT (Housing Section), at a salary of £435, rising to £480 per annum, plus cost of living bonus, at present £59 16s.

(*c*) ASSISTANT ARCHITECTS, at salaries of £270 to £380 per annum, according to experience and qualifications, plus cost of living bonus, at present £59 16s.

The posts will be subject to the Local Government Superannuation Act, 1937, and will be terminable upon one month's notice on either side. The persons appointed will be required to pass a medical examination.

Candidates must not be over 40 years of age, but this condition may be relaxed in the case of a person up to 45 years of age, employed by another Local Authority.

Applications, endorsed appointment (*a*) (*b*) or (*c*), stating age, qualifications, previous experience, and date when available, together with copies of three recent testimonials, should be sent to the City Architect, Compton Park House, Plymouth, not later than the 6th July, 1945.

Applications from Architects serving with H.M. Forces will receive consideration. 816

ASSISTANT ARCHITECT required by Government of Aden for two tours of 18-24 months; salary £690, rising by increments of £30 to £840; thence by £40 to £920 per annum. The point of entry of the successful candidate in the incremental scale to be determined, according to experience. War allowance £45 per annum. Free passages and quarters and liberal leave on full salary. Post is not pensionable, but there is a provident fund. Candidates must be A.R.I.B.A. or hold an equivalent qualification, and have had considerable practical experience in design and construction of public buildings, including schools and hospitals; reinforced concrete design; specification writing, and the supervision of building works; also in town planning, including preparation and implementation of Schemes; administrative experience would also be required.

Write, quoting EA.1371A, to Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for application form, which must be returned completed by 30th June, 1945. 840

ARCHITECTURAL ASSISTANT, temporary, required by the Borough of Glossop, Derbyshire.

Candidates should be A.R.I.B.A. or hold an equivalent qualification and experience of housing schemes will be an advantage.

Salary, £350 per annum, plus cost of living bonus, £59 16s. per annum.

Write, quoting EA.1300XA, to Ministry of Labour and National Service, Central (T. and S.) Register, Room 5/17, Sardinia Street, Kingsway, London, W.C.2, for application form, which must be returned completed by 25th June, 1945. 833

Architectural Appointments Vacant

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

ARCHITECTURAL ASSISTANT required immediately; in private practice; permanent position; must be capable of war damage schedules, surveys, and general post-war development. Clark, 44, Great Russell Street, W.C.1. 804

ASSISTANT required in Architect's Department of large Multiple Company. Write, giving full details of qualifications, experience, and salary required, to Box 829.

ARCHITECTURAL ASSISTANT required in West Norfolk for busy practice, principally housing and small commercial buildings; man with experience in private practice and quantities preferred; salary by arrangement, according to qualifications; car owner/driver. Box 827.

ARCHITECTURAL DRAUGHTSMEN required in West Norfolk; preferably Juniors studying for R.I.B.A. examinations; must be good surveyors and car drivers; salary by arrangement. Box 828

JUNIOR ARCHITECT, well experienced, required for the permanent staff of a National Organization; a good knowledge of construction is necessary, and applicants must be adaptable and prepared to specialize in the application of a modern material to building purposes. Box 826.

LONDON Architects require two Assistants in their country practice (Buckinghamshire) for Housing and other work. State age, salary, experience, and when available, to Box 825.

ARCHITECTURAL ASSISTANT required in small Office; good designer, with knowledge of specifications and detail essential. Particulars with age and salary to Box 819.

SENIOR ASSISTANT required by West End Architects; capable of taxing complete charge of important contracts. Apply in writing, stating qualifications and salary required, to J. Stanley Beard & Bennett, F./L.R.I.B.A., 101/3, Baker Street, London, w .1. 841

ADVANCED JUNIOR ASSISTANT required by West End Architects; must be good draughtsman, experienced in detailing, making surveys and measured drawings. Apply in writing, stating qualifications and salary required, to J. Stanley Beard & Bennett, F./L.R.I.B.A., 101/3, Baker Street, London, W.1. 842

WEST END Architect requires Part-time Assistant; capable of undertaking surveys, preparation of sketch plans, etc. Reply, stating qualifications, time available, charges per hour, etc., to Box 839.

YOUNG man, with Architectural training, required for Technical Sales Promotion, and to contact Architects, Shop-fitters, etc., introducing new material for wall coverings; should be capable of preparing suggested schemes and working details. Replies to Box 837.

ASSISTANT to Architect required; private practice, London; mainly constructional design; new materials; engineering experience an advantage; opportunity for young man with progressive ideas, willing to take personal interest in the work; state age, experience, and salary required. Draughtsman or woman also required; quick and clean; state age, experience, and salary required. Box 832.

ESTATE Department of an Assurance Company (London office) require qualified Architects and Architects' Assistants; a good knowledge of general practice with good draughtsmanship essential; progressive posts. Reply in writing, giving age, training, qualifications, experience, and salary required, to Box 810.

Architectural Appointments Wanted

TWO STUDENTS, completed second year day course, desire post for first three weeks in September in London office where they can gain experience. Box 25.

YOUTH, aged 17 years, seeks post in London Architect's office; 3 years student School of Building; studying for R.I.B.A. exams. Reply Box 27.

DRAUGHTSMAN, age 20, desires work in Architect's or Surveyor's office until September. Box 26.

DESIGNER (light welded construction); interested in post-war appointment with progressive firm; has practical experience and valuable contacts. Box 8.

TO Architectural Sculpturers.—Student desires vacation work; expenses only; if possible would like bronzes, in addition to stone, plastic modelling, etc. Box 19.

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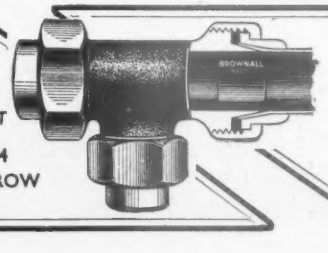

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