Safety

3-PIN SURFACE SCREENED SOCKETS & PLUGS

5 E 15 AMP. 3-PIN B.S.S. 546



The "BRITMAC" range of 5 and 15 amp. 3-pin Surface "SCREENED" Sockets and Plugs are made to the only existing British Standard Specification, namely B.S.S. 546. There are literally millions of this pattern in use—not all made by "BRITMAC"—but we have supplied a very large quantity. The demand is increasing for these "BRITMAC" Sockets and Plugs, which are also available in Flanged and Flush patterns. The Socket and Plug illustrated, List No. P4312, is the 5-amp. Surface pattern.

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First of all, it must function perfectly; it must turn the lock mechanism sweetly and silently, and it must allow the door to be pushed and pulled with ease on its hinges.



It must stand up to a lot of knocks and strains which have very little to do with its proper function. (Educational Note: Children favour door knobs for swinging purposes).



Its shape must be "right," suiting the hand that uses it and remaining a quiet delight to the eye of the beholder. It should be available in colours to suit any decorative scheme.



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It must be easily fixed, and once fixed, be firm and free from rattle (Lacrinoid door furniture dispenses with grub screws, the patent retention devices ensuring good fit).



Well, that is the kind of door furniture Lacrinoid makes perfect in function, pleasant to both hand and eye and produced at a price which allows its most widespread use.



for plastics

DOOR FURNITURE





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

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

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

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

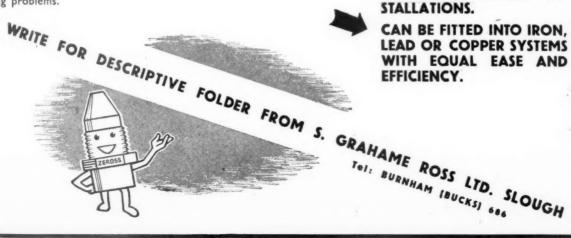
Zeross technicians will gladly give advice and assistance on all your freezing problems.

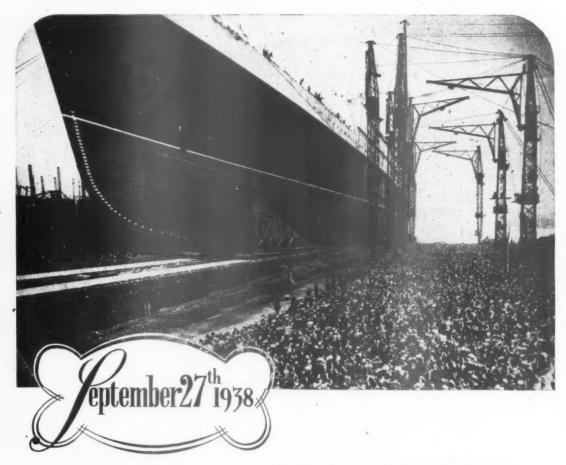
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CANNOT CORRODE. ESSENTIAL PARTS IN CON-TACT WITH WATER.

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New County Hall, warehouses for the Port of London Authority at Royal Victoria Docks, large extensions to the Shredded Wheat Factory at Welwyn Garden City, to Broadcasting House and to Fulham Power Station. We were also engaged on extending the works of Daimler, B.S.A., De Havilland and Rotol Airscrews. We were building a new town house for the Rt. Hon. J. A. de Rothschild and enlarging the Clapton Greyhound Stadium. All these, in addition to numerous smaller contracts covering almost every conceivable type of building.

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 $THE\ G.K.N.\ ADVISORY\ BUREAU,\ HEATH\ STREET,\ BIRMINGHAM\ is\ willing\ to\ co-operate\ with\ architects, designing\ engineers\ and\ others\ who\ are\ interested\ in\ modern\ fastening\ devices\ and\ assembly\ methods.$







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

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

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

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Ice making and 'cold cooking' facilities.

Most important too is the fact that this Prestcold refrigerator provides the food storage temperatures necessary for the proper safeguarding of perishable foods—for instance 35°F for fresh fish and

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poultry; 40°F for milk—and even the lower temperatures needed to store the frozen foods which will be available after the war. It will be most economical in current consumption, using only one unit a day.

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Information on REINFORCED CONCIE

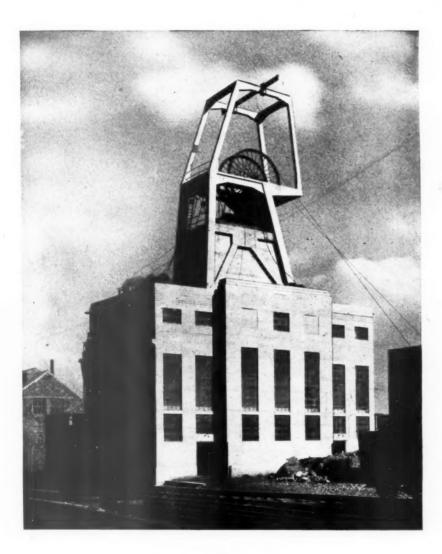
In all new industrial plants and in the development of existing undertakings the permanent buildings are for the most part constructed in reinforced concrete, a material having very wide possibilities for such use. Factory buildings, pithead frames, winding engine houses, bins, bunkers and silos for grain and coal, tanks, coal washery buildings, dust cyclones, bridges, gantries, heapsteads, airlock buildings, fandrifts, reservoirs and cooling towers, whilst differing greatly in character, are equally suitable subjects for designing and erecting in reinforced concrete.

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- 3. Replacements of colliery headframes and heapsteads can be carried out during working hours without disturbing the normal operations of winding coal and men.
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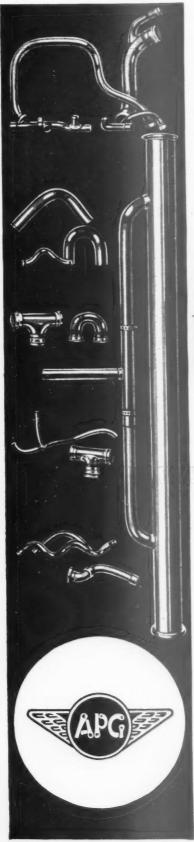
THE BRITISH REINFORCED CONCRETE ENGINEERING CO. LTDAFFOR LONDON, BIRMINGHAM, BRISTOL, LEEDS, LEICESTER, MANCHESTER CAST

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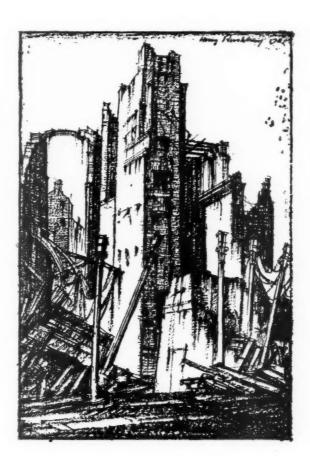


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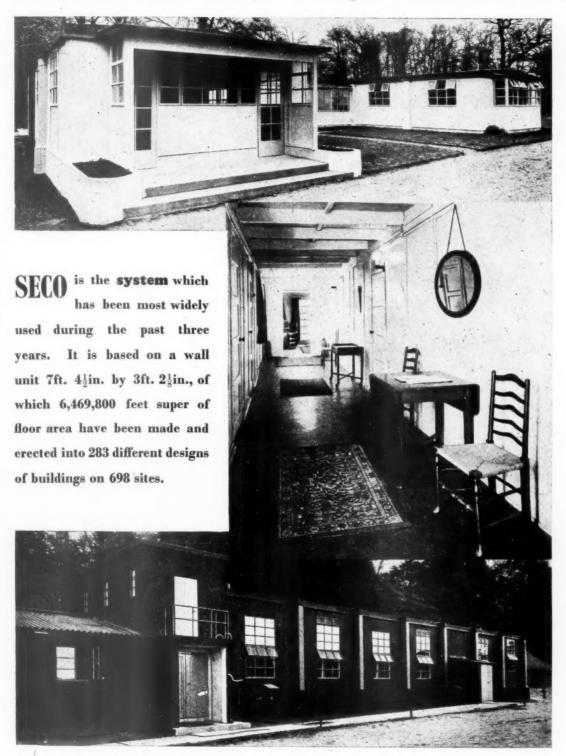
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This picture is of a Bartlett "A" Pattern Speediserv Rubber Tyred Trolley, fitted with an 8 Gallon "Servot" Tea Container, lined with stainless steel.

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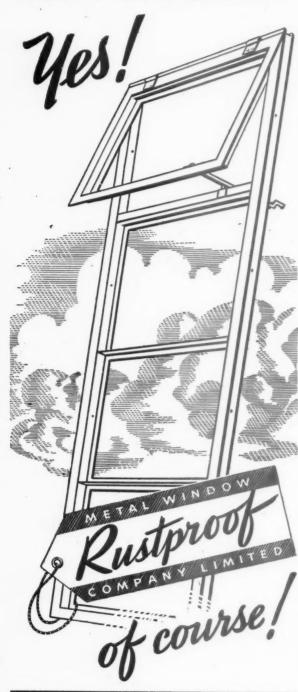
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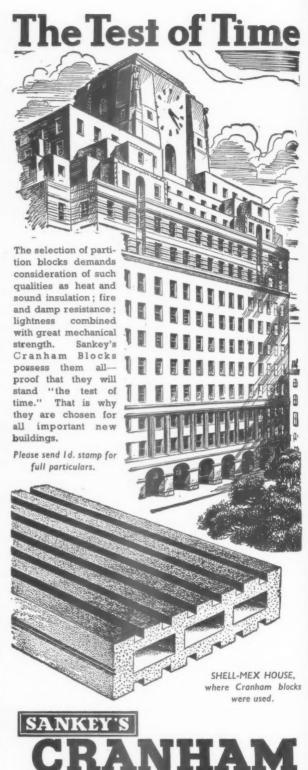
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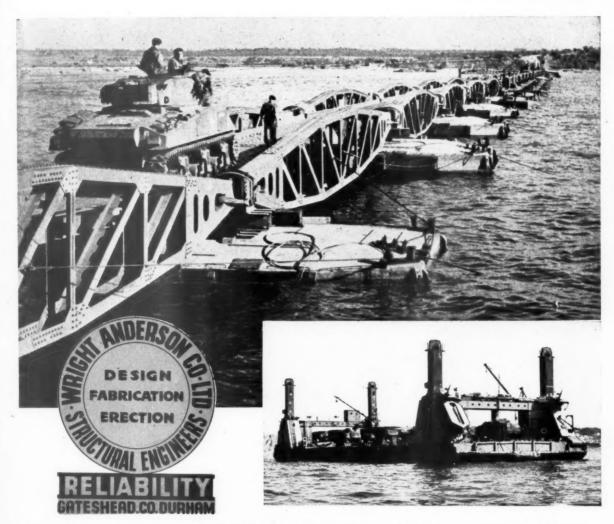
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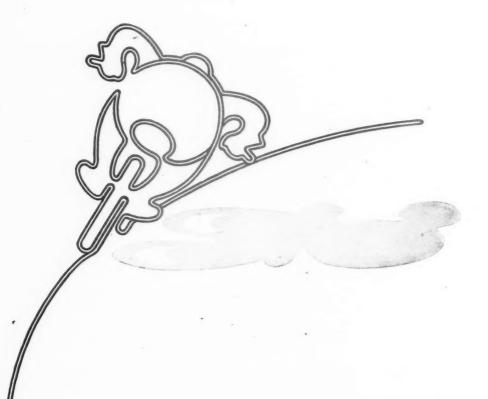
To meet home and Export demands on the cessation of hostilities we must undoubtedly prepare now, and with this object in view we offer our expert technical services. We invite you to consult us on your post-war problems.

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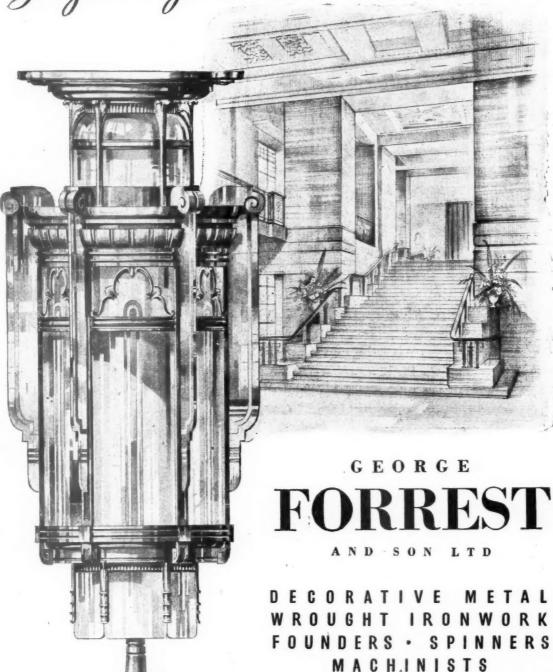


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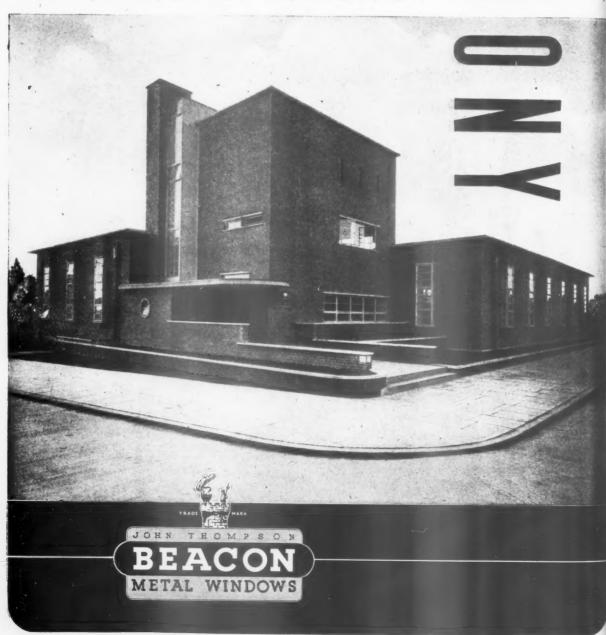
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London Office: Imperial House, Kingsway, London, W.C.2.

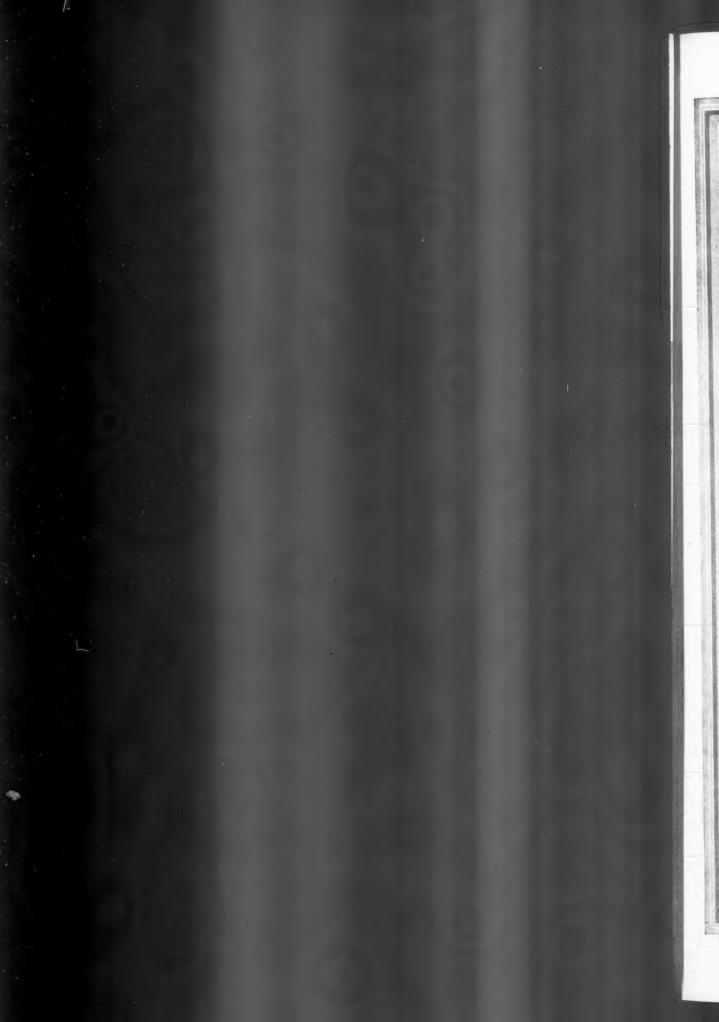
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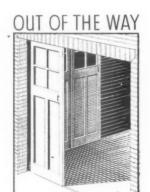
THAT IS THE QUESTION and when it comes to planning doors it needs extra careful thought—because there

extra careful thought—because there are few things more precious than space when you are working in confined quarters. A door that's hinged is a door that needs a lot of room; but with a sliding door it's different. If it's fitted with King Door Gear a touch of the hand takes it out of the way, gliding easily and quickly to nestle snugly against the wall, completely and unobstrusively out of the way.

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

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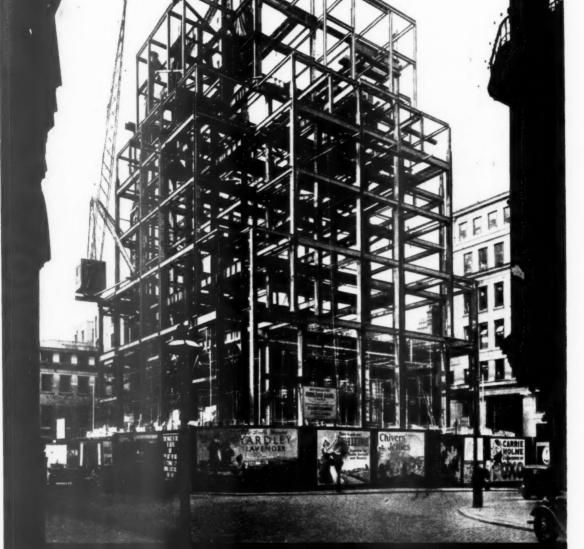
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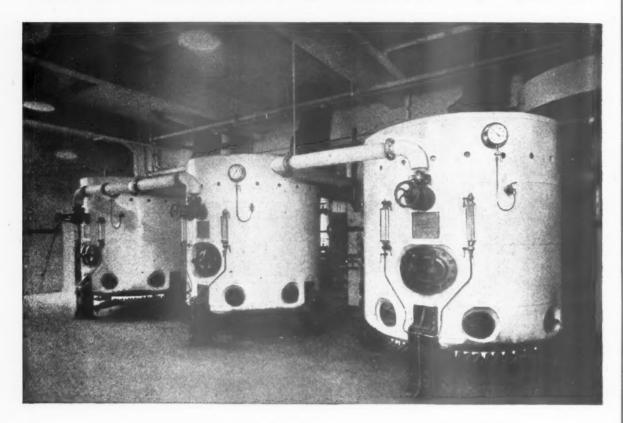
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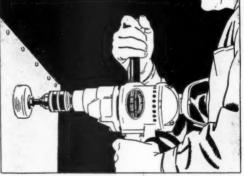


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In the modern building, windows, roof-lights and top-hung ventilators are simply, neatly, and efficiently operated by the ARENS CONTROL.

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



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An installation by

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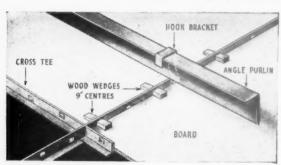
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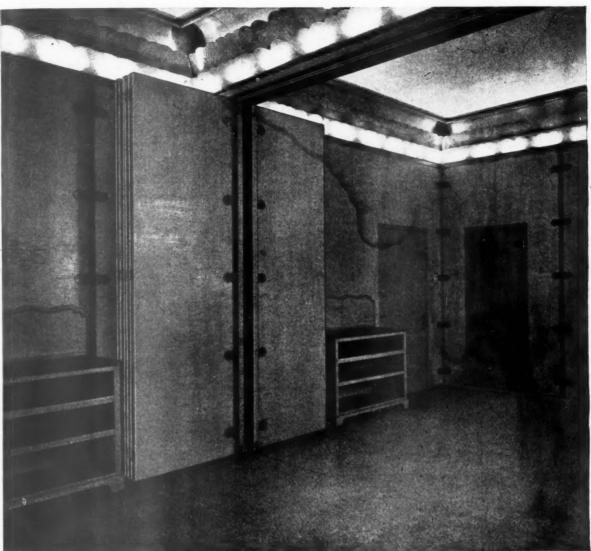
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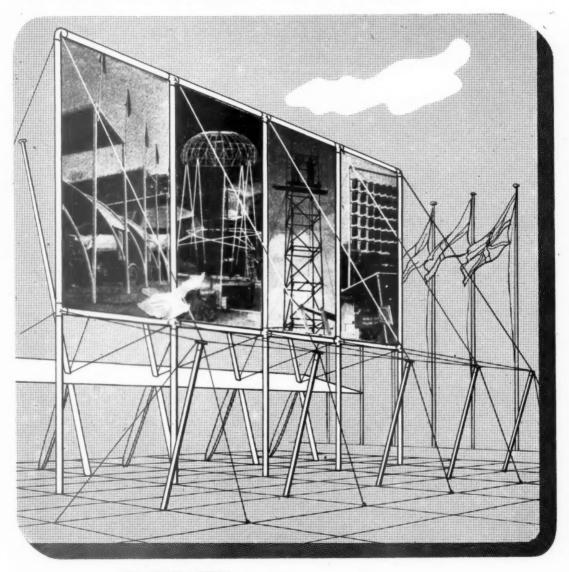
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C. W Insula ated A veyors IAAS. Maxy MARS Jarvis In common with every other periodical this Journal is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that 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



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

DIARY FOR MARCH APRIL AND MAY

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.

BIRMINGHAM. Country Life and Country Needs. Exhibition. At Barrow's Stores. (Sponsor, BIAE.)

(sponsor, BIAE.)

MAR. 22-26

L. A. Jordon, Director of the Research Association of British Paint, Colour and Varnish Manufacturers. Paint and Applied Finishes: Wartime Developments and Their Application to Design. At the Royal Birmingham Society of Artists, New Street, Birmingham, 2. (Sponsor, DIA, Birmingham Branch.) 5.30 p.m.

MAR. 26

GLASGOW. Exhibition of Timber House Designs. At the National Gallery of Scotland, Princes Street, Edinburgh. The exhibition consists of photographs, drawings and some models of designs submitted for the Timber House Competition held by the Timber Development Association. There are about thirty-five sets of plans, etc., including the three prizewinning designs, six commended and a number of other interesting entries. The object of the competition was to put forward designs for a pair of semi-detached houses, 900 sq. ft., for a family of two adults and three children; three bedrooms to be provided. Competitors were invited to submit their own ideas as to type of construction to be used, and their attention was drawn to the following aspects:—(a) Ease, speed and economy of production and erection. (b) Efficiency in the use of timber and other materials which might be used. (c) Low maintenance cost.

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

MAR. 22-Ap. 7

L ONDON. R. M. Wynne-Edwards.
Building Plant. Architectural Science
Board Lecture. At the RIBA, 66, Portland
Place, W.1. (Sponsor, RIBA.) 5.30 p.m.

C. W. Glover. Acoustics and the Sound Insulation of Buildings. At the Incorporated Association of Architects and Surveyors, 75, Eaton Place, S.W.1. (Sponsor, IAAS.) 2.30 p.m. Mar. 24

Maxwell Fry. Planning in West Africa. MARS Group Public Lecture. In The Henry Jarvis Hall, RIBA, 66, Portland Place, W.1. (Sponsor, MARS Group.) 7.15 p.m. MAR. 26 Thomas Sharp. Planning a Cathedral City. At 28, King Street, Covent Garden. W.C.2. Chairman, H. G. Strauss, M.P. (Sponsor, TCPA.) 1.15 p.m. Ap. 5

F. J. Osborn. The Garden City Idea in 1945. At Caxton Hall, Caxton Street, Westminster, S.W.1. (Sponsor, TPI.) 6 p.m.

C. Roland-Woods. The Work of the Codes of Practice Committees. At 66, Portland Place, W.1. (Sponsor, RIBA). 6 p.m. Ap. 10

A. Trystan Edwards. Sunlight and Sanitation in Relation to the Planning of Building. At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. Chairman, A. C. Bossom, M.P. (Sponsor, Chadwick Trust.) 2.30 p.m. Ap. 10

F. A. Mercer, Editor of "Art and Industry." The Industrial Design Consultant. At the Royal Society of Arts, John Adam Street, W.C.2. (Sponsor, RSA.) 1.45 p.m. Ap. 11

'Sir Edward Appleton, K.C.B. The Work of the Department of Scientific and Industrial Research. At the Royal Society of Arts, John Adam Street, W.C.2. (Sponsor, RSA.) 1.45 p.m. Ap. 18

R. C. Bevan, of the Building Research Station, Fire Grading in Building, Architectural Science Board Lecture. At the RIBA, 66, Portland Place, W.1. (Sponsor, RIBA.) 5.30 p.m.

Professor J. D. Bernal. The Social Relations of Science. Trueman Wood Lecture. At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. (Sponsor, RSA.) 1.45 p.m. May 16

Christian Barman. Design in Modern Transport. At the Royal Society of Arts, John Adam Street, Adelphi, W.C.2. The lecture will be illustrated by lantern siides. Chairman, T. E. Thomas, General Manager, London Passenger Transport (Sponsor, RSA.) 1.45 p.m. June 6

Dr. J. M. Mackintosh. Social Medicine and Town Planning. At the Town and Country Planning Association, 28. King Street, Covent Garden, W.C.2. Chairman, Dr. Norman Macfadyen. (Sponsor, TCPA.) 1.15 p.m.

WALLASEY. The English Town: Its Continuity and Development. Exhibition. At the Education Department, Wallasey, Cheshire. (Sponsor, TCPA.) Ap. 14-28

NEWS

No. 2617.	MARCH	VOL.	
News			217
Bombed Buildings Al	oroad—	·V	218
This Week's Leading			219
Astragal's Notes and	Горісѕ		220
Letters from Readers			221
The Liverpool Bunga	low		222
Physical Planning Su		ent:	
Irish Planning Exh	nibition		223
Touring Army Equi	pment	Ex-	
hibition			227
Information Centre			232
Societies and Instituti	ons		233
Prices			xliv
Though no feature in	the Jo	URNA	L is

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.

A second edition of the War Damage Commission's PRACTICE NOTES has now been published, completely revised and up-to-date. All section-references have been made to conform with the 1943 Act, and among important alterations are those dealing with the determination of the kind of payment, the classification of developed hereditaments, and the assessment of proper cost. A new note details the procedure adopted for notifying claimants of the Commission's decision, whether a damaged property is, or is not, a total loss. Practice Notes is obtainable from H.M. Stationery Office, or through the booksellers, price 9d.

Letchworth Housing Committee proposes to build four hundred HOUSES AT FIFTEEN SHILLINGS weekly rent.

Four hundred new houses, at a weekly rent of 15s., are proposed by Letchworth Housing Committee as soon as labour and materials are available. The land has been acquired, says Mr. Fred Nott, chairman of the housing committee, and a panel of four architects appointed. A plan for the houses has been drawn up, on the principle of the Duplex house at Northolt. This is a two-flat house, which can be converted into one house. This design was particularly commended by the Minister of Health at a conference of local authorities. It is hoped to provide all the houses with the type of package kitchen exhibited at the Gas Industry's Kitchen Planning Exhibition in London. If this is not possible, Mr. Nott says, we will have standard units arranged to give a uniform working level. One side of the kitchen will have the gas cooker, gas copper, sink and refrigerator, while on the other side there will be a larder, china cupboard, and working table.

Suggestion for an Expanding House First Basic Plan, previously shown. -Further development of First Basic Plan. STAIRS Development of First Basic Plan showing addition of second floor. Alternative developments of Second Basic Plan.

> 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 livingroom 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 withs 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. This drawing shows two possible developments of each of the minimum house plans. Basic Plan 1 is shown with a bedroom added on the level and as an alternative on the upper floor. Here an independent staircase unit's inserted in the living-room by removing the panels in the walls of hall and living-room; the space below being either enclosed as cupboards or left open to the living-room. The bathroom remains on the ground floor.

Alternative positions for the addition of a bedroom are shown for Basic Plan 2. These alternative plans allow for great variation in site planning to suit different orientations.

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From AN ARCHITECT'S Commonplace Book

TERRESTIAL FOLLY: PLANNING FOR EROS. [From The Clubs of the Georgian Rakes by Louis C. Jones (Columbia University Press).] Gardening went through many phases in the eighteenth century, but at the time when gardens at West Wycombe Park were being expanded Hogarth's theories of curves were dominant, and Dashwood wished to be in the mode. If curves were in fashion, why not lay out an entire garden in the shape of a woman? In the gardens he built temples, many of which are still to be seen about the Park, though the indecent temple Wilkes described has long since been destroyed. By building a dam across the River Wye, Dashwood was able to make a little lake with an islet in the centre of it, where he built another classical building which the present Lord Dashwood calls the Music Room. There was about it all nothing grand or sublime, but it had an atmosphere of humorous pleasantry, an air that only its owner could have given it. If it was too crowded with gimcracks, if there was none of the grandeur of Stowe, there was at least that same element which made Strawberry Hill and Pope's Place at Twickenham interesting: it displayed the character of its owner, his good nature, his humour, his interest in the classic past, his love of the outré, his refusal to take life too seriously.

Until 1908 the Prime Ministers of Great Britain BATHED IN A TUB. Prime Ministers of Britain up to 1908, when they took a bath at No. 10, Downing Street, had to use a tub. Mr. Alexander Walkden made this statement when a Standing Committee of the House of Commons began consideration of the Government's Water Bill. It was not until Mr. Asquith went to No. 10 that our Prime Ministers had baths with hot and cold water, declared Mr. Walkden. Now we want baths in houses for every workman and his wife and children as a right. Mr. Walkden was moving an amendment to provide for the setting up of a national water authority, with power to carry out the policy laid down by the Minister, and approved by the House of Commons. Mr. Willink, Minister of Health, argued that the setting up of the proposed national authority would be disastrous to the Bill because the wording was so vague and the general conception which lay behind 'it was so obscure that the whole matter would need reconsideration. The amendment was negatived.

During April two ARCHI-TECTURAL SCIENCE BOARD LECTURES are to be held at the RIBA. They are as follows: Wednesday, April 18, 530 p.m., Building Plant, by Mr. R. M. Wynne-Edwards, 1. Past.—A brief review of the historical background showing the interdependence of building processes and plant and how this affected the architect: (a) plant as inseparable from processes; (b) plant as labour saving. 2. Present.—A review of plant and processes available for: (a) material making; (b) foundations and site levelling; (c) superstructure; (d) finishing. 3. Future.—The trend towards mechanization: (a) its economic cause; (b) what it entails. 4. Relationship between the architect and this development. 5. Suggestions as to steps that might be taken. Wednesday, April 25, 1945, at 5.30, Fire Grading in Building, by Mr. R. C. Bevan, of the Building Research Station. The subject of the Fire Grading of Buildings is at present under review by a Joint Committee of the Building Research Station and the Fire Offices Committee. It is concerned generally with the provision of fire precautions in buildings in relation to the fire hazard arising from the occupancy of the building and its construction. The subject covers a very wide field and bears on many aspects of building design and construction. The lecture will deal with the broad outlines of the subject in relation to the various occu-

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pancies and to the construction and internal planning of buildings, and will touch briefly on those aspects which concern the external spread of fire.

During four years' air raids on the City of London ONE THIRD OF THE BUILD-INGS WERE DESTROYED.

How the City of London suffered from hostile air raids between the opening of the war and the end of February, 1944, is set forth in a report of the Civil Defence Committee submitted to the Common Council. The sirens sounded on 715 occasions; 415 warnings being given during the last five months of 1940. No fewer than 417 high-explosive bombs of varying sizes were dropped in the City, together with 13 parachute mines, 24 oil bombs, and many thousands of incendiary bombs, resulting in the destruction of buildings covering an area of approximately 164 acres out of the 460 acres of built-up land in the City. Few buildings in the City have escaped damage of some description, and 40 City churches and 20 livery companies' halls have been destroyed or damaged. Among other buildings affected were Guildhall, the Bank of England, St. Bartholomew's Hospital, the General Post Office, Central Telegraph Office, Port of London Authority Building, Liverpool Street, Fenchurch Street, and Holborn Viaduct railway stations, two railway bridges, London, Southwark, and Tower Bridges and the Tower of London, many buildings in the Temple, Smithfield Market, the Central Criminal Court, and all four City police stations.

West Ham has established a BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

**

The following extracts from the West Ham Council's Post War Reconstruction Committee's Report have been adopted by the Council: "That there be established a 'Borough Architect and Planning Officer's Department,' the same to be independent of the Borough Engineer's Department." "That this independent Department be under the direct control of an officer to be designated the 'Borough Architect and Planning Officer,' and that Mr. Thomas E. North be appointed to the position." Previously, whilst Mr. North was the Planning Officer and acted as such with an independent department, he was, for architectural matters, responsible to the Borough Engineer.

The Minister of Town and Country Planning has consented to LIMESTONE QUARRYINGATA BEAUTY SPOT in Staffordshire.

SPOT in Staffordshire. Despite protests by local residents, the Staffordshire County Council, the Council for the Preservation of Rural England, and many other organizations, quarrying for limestone and shale for cement, is to be carried on at Couldon Lowe, in the Cheadle rural district of Staffordshire. The Minister of Town and Country Planning, Mr. W. S. Morrison, has consented to the project subject to the following conditions: The winning and working of minerals and the disposal of quarry waste to be in accordance with an operational programme and plans approved by the Minister. Trees to be planted where possible over all quarry waste and dust and smoke to be controlled.

An Association, representing the manufacturers of fibre building boards in Great Britain, has been registered under the title: BUILDING BOARD MANUFACTURERS' ASSOCIATION of Great Britain.

An official announcement from the Association states: Although the title of the association states: Although the title of the association is new, the organization has existed for a number of years past, in the form of a Section of the Board Makers of the Paper Makers' Association. Whilst this latter organization had functioned most usefully and satisfactorily, representing British interests both in negotiations with Government Departments and in matters of mutual concern of the Member Companies, it was felt that the time had come to give the organization a title identifying it more closely with the nature and object of its activities. As the Building Board Manufacturers' Association, it will be immediately identifiable by the trades with which it is interested, and to which it is interested, and to which it is interest to establish direct contact with the body which can speak authoritatively for the home producers of fibre building boards. It will also facilitate the work of the association in the dissemination of information as to the value and uses, as well as the best method of applying fibre building boards. All communications, which will be welcome, should be addressed to the Secretary, Building Board Manufacturers' Association of Great Britain, Ltd., Melbourne House, Aldwych, London, W.C.2.



Bombed Buildings Abroad - V

Another ancient building of Northern France badly damaged during the invasion is the XIth century church of Rocquancourt with its typical round arches,

dog-tooth mouldings and square tower. Père Le Normand can be seen pointing out a feature of his church to Private Lorrain, of Ottawa.

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Mr. Scipal the Moseen of TERATTRA.

He succe During r chief-ofchairman and com repairs in An official British delegation has arrived in Stockholm TO INSPECT SWEDISH PREFABRICATED HOUSES.

An official British delegation—Mr. A. W. Kenyon and Mr. C. C. W. Goodale, representing the Ministry of Works, and Mr. R. H. Matthew, of the Health Department of Scotland, says a correspondent of The Times, has arrived in Stockholm to inspect Swedish prefabricated wooden houses. To confer with the British visitors, Swedish manufacturers formed a committee headed by the managing director of the Swedish Export Association, Mr. Torsten Vinell.

On March 13 Mr. Cyril Douglas Spragg was APPOINTED SECRETARY OF THE RIBA. He has been Acting Secretary since the retirement of Sir Ian MacAlister in December 1943 and had been Assistant Secretary from 1926 to 1943.

Mr. S. F. S. Hearder, principal assistant secretary to the Ministry of Health, has been appointed DIRECTOR OF THE NATIONAL FEDERATION OF BUILDING TRADES EMPLOYERS. He succeeds Sir Jonah Walker-Smith, M.P. During recent months Mr. Hearder has been chief-of-staff to Sir Malcolm Trustram Eve, chairman of the War Damage Commission, and commander in chief of bomb-damage

repairs in London.

COLLEGIATE LIFE

THE words of Dean Inge have for years impressed the public through the pages of the Evening Standard. He so dislikes the realities his intellect discloses to him that he has achieved the reputation of a degree of gloom through which little light has ever been known to filter. Dr. Inge's words would surely make the very reverse impression were we able to view with him that side of the picture which he ignores. "We are in the midst of a social revolution quite as drastic as, the rebellion of the French against Louis XVI," he writes. The thought stimulates his regret for the life of the great country house which "has now passed away for ever . . . these great houses, next to our cathedrals and parish churches, are the most beautiful things that we have to show . . . " This is, indeed, only part of the truth, for in no country of the world are there shrines of family life to equal them; designed with such dignity and so perfectly set. The German schloss, the French chateau and the Italian villa can none of them vie with the proud and intimate atmosphere of the English country home.

The Dean's plea for the incorporation of these deserted mansions into the future life of this country, compels attention and "The Dark Ages" he reminds us, "were not abnormally religious, but they were extremely uncomfortable and dangerous," and arising out of this he predicts that the necessity to escape from worry and anxiety, though not necessarily from useful work, will bring about a return to monastic or collegiate life; that the receipt of bare necessities in return for the agricultural and domestic work necessary for the upkeep of the community will enable groups of people to live a life of seclusion in which they may devote themselves to study or scientific research. Within the ranks of cultured society he sees the people who will be glad to fill the new communities which, he blandly points out, "need not be celibate." He quotes America as an example of a country with the lack of a cultural background such as was provided for us by the colleges and monasteries of the middle ages: professorships, he finds, are most difficult to fill in the USA owing to the very few scholars who continue their studies on leaving the universities.

The architect is touched directly by two implications of this argument. First, it is absolutely necessary for the architectural profession to maintain a vital cultural continuity within itself in order that architecture may live and develop as a conscious art. Second, the profession is irrevocably bound to do all in its power to retain for the general benefit our country houses—those great examples of our architectural inheritance.

At the present time it is not a wealthy profession; wealthy, that is, in great exponents of the art. Soon it must be put to the test and upon its products the cultural future of this country will largely rest. Already architecture has become a necessity once more; already the greatest clientele of all time

is awaiting the creation of a new domestic inheritance in which the house, the school and the community centre must be made to serve the mind and the body more completely. This opening out of practical opportunity exposes the need which must be filled by any profession amongst the arts; the facility for study and reflection upon which an intellect must feed. What has the profession to offer? Is it not possible for such a house as Dr. Inge describes to be made available for the architectural profession? Such a permanent home for seclusion and study might develop into a great collegiate centre where architects could spend holidays (when such luxuries are permitted in the future), contributing by their labour to its upkeep amd enjoying its secluded architectural charm, while the great underlying and ever widening facts of architectural culture and development are stored for their reading and study in its library. It is a fascinating possibility.



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CHECK UP THE FACTS

Now that the Government's emergency housing programme has been drastically cut, it is difficult to believe Mr. Sandys' assurance that no reduction in the number of dwellings to be built in the first two years is contemplated. Let us hope that in the Commons debate this week he will be able to give strong evidence that at least half-a-million houses in two years is not just a mirage.

It must be confessed that the news that now not many Portals are to be made, was not altogether bad. The bungalow was ill-considered, however sound the original idea of temporary house. By far the most satisfactory feature was the kitchen-bathroom unit, and it is fortunate that it at least will

survive the debacle and be included in "less highly prefabricated" houses.

The Portal has the disadvantage of being temporary by name but permanent by nature—the bugbear of housing authorities and town-planners alike, ten years being just the wrong length of life, too long from one point of view and too short from another.

The figure of 500,000 houses it is proposed to build in two years is only an estimate. No census of housing accommodation has yet been made in this country comparable, for instance, to that recently made in America. Nor is the total number and size of families requiring homes accurately known, and no survey has been made to find out when and where the demand for houses is likely to be most acute, and to what extent existing dwellings could be increased by conversion.

The information is needed by housing authorities and planners alike. It will take time to collect. Cannot a start be made at once? We are working without sufficient factual knowledge, of a kind which only the Government can provide.

THE CASE FOR CONVERSION

Conversion hasn't yet been seriously enough discussed as a means of meeting the immediate post-war crisis. Local Authorities have been given power to requisition and convert to meet local war-time emergencies. But the powers are merely permissive, and appear to have been little used except

in extreme cases or when conversion has been an attractive proposition from a long-term point of view.

Now there is a good argument for maintaining these powers and making full use of them in the immediate postwar period as a short-term expedient. In this way a large amount of accommodation could be made available with little effort, and without prejudicing future plans. The same guarantees could be given as for the Portal houses but with more certainty, the converted houses being already time-expired.

Large-scale systematic conversion would require large-scale public acquisition and control. Public acquisition of obsolete property is an issue which will have to be faced sooner or later in any case. Old houses never die. They simply have to be cleared away—generally at public expense. Can't they meanwhile, properly converted and refurbished, be made to render one last service to the public?

LONDON REPAIRS

The second number of the enterprising London Repairs Bulletin is to hand. This emergency broadsheet makes stark reading. Three-quarters of a million homes were caught by the doodles of last summer. Optimistic Mr. Sandys promises that these shall be made "tolerably comfortable" by the 31st of this month.

The men are being blamed for the But since the emergency started they have been working a 62-hour week. These long hours may cure for a fortnight, but they will kill in a month. This is the ninth month, and it is high time the hours were revised. Half a day a week and Sunday working may be easy money for youths and boys who snatch a chance for overtime, but what is the use of tiring out the older men, who form a high proportion of the London gangs, so that their repair output dwindles to nothing? The so-called low morale of the repair workers is in direct proportion to the high target of daily energy, which is unreasonable in the human circumstances. Lower the hours to raise the output.

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The men want to get the job done. Genuine blacklegs and slackers are rated very high at 10 per cent, of the London labourers at the present time. If there is any cynicism, it is restricted mainly to the older few, and is a hangover from pre-war insecurity. A few straight facts about the stupendous building job facing the nation in the post war years should soon ease fears in this direction. Here is another chance for the Bulletin.

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Causes of delay are more complex than this, and need to be precisely and speedily examined. Apart from the backbone of older men, now rapidly tiring, there are large numbers of totally inexperienced recruits, youths, and boys. Unskilled labourers expert at digging up best farmland for the Air Ministry have been roped in to restore 18th century glazing bars. There is a dearth of good foremen to control and drive and train them.

Little Hitlers in the Local Authorities have been notoriously tactless and overbearing with contractors, and this has not been counterbalanced by overwhelming efficiency in their administration. Mr. Sandys has succeeded in reducing the absurd timber licence lag from four months to ten days. Bravo, Mr. Sandys, but this is still not enough. The expression Bottlenecks conceals a multitude of other weaknesses, human and mechanical, which should be ruthlessly reported and exposed, in Committee and in further issues of the Bulletin. How many facts are being withheld from the Minister for dubious reasons?

Some of these facts will come to light of themselves in Mr. Hicks' new Central Committee of workers and directives, an institution on the Moscow model, which deserves the highest praise and encouragement. Let its findings and discussions be summarized and released weekly to the public. It is to be hoped that Mr. Hicks will forthwith produce a detailed and commonsense statement of faults in the repair machine which could be righted at once. A quartet of impartial investigators, working overtime for a week, could nail many of these vague difficulties into a clean-cut public statement which would help to clear the air-and the débris.

Meanwhile the London Repairs Bulletin is a useful gesture, but if it is to reach the men; a more striking layout is needed. An experienced journalist should be loan-leased from a national daily. Other possibilities are The competition between London's Nine Giant Repair Teams should be immediately dramatized in the press and on the radio. Let there be a handsome Bomb Damage Bonus for every man in the winning team, with Output Medals for the exceptional workers. But even the best propaganda will be a flash in the pan without a much more precise survey from the centre of the problems of the moment, with action based upon it. We look to Mr. Hicks.

PRE-LAST-WAR

The recent death of Charles Canning Winmill, at the age of 80, has answered, for me, a question to which I have long wanted to know the answer; for I learn from an obituary notice that Winmill was the architect of the LCC fire station in Lancaster Grove, Hampstead.

That building is worth seeing; and being within a stone's throw of Swiss Cottage station is an eligible target for Londoners with a Sunday afternoon to It is a brick building completed during the last war, and obviously designed with special regard to the susceptibilities of the "highclass residential area" in which it is It is really charmingly composed, and fits its triangular site in the most ingenious and picturesque way. Particularly pleasing is the honeycomb brick tower.

Lancaster Grove is not the only prelast-war fire station which has my admiration. There is one in Euston Road, opposite St. Pancras Church, which reaches much the same high This, I believe, was the standard. work of Herbert Cooper, who also died quite recently. The official architect for both buildings will have been the LCC's chief architect, W. E. Riley; but it is only at this late hour that the real personalities behind these buildings emerge.

ASTRAGAL



LETTERS

7. M. McLachlan, L/Cpl. RE

Protective Architecture

SIR,-" Abandon hope all ye who work for peace, or if you dare to hope prepare now for the worst "—so John Gloag in his article on Protective Architecture.

"Architecture is the physical manifesta-tion of the spirit of an age." How often have we heard it. Is then the spirit of this age that of the tortoise, who when trouble impends retires his soft body behind the protective shell? Jungle laws gives to force and to cunning their inheritance; the gentler animals must have recourse to shields of equal cunning, camouflage, deception, if they are to live. Have we intelligent men possessed of many high-sounding words— art, culture, civilization—advanced one step from the jungle? Yes, surely, a thousand; we have made more full, varied, and complex the possibilities of experience in life, we have built better than we knew-but so

say the Atheists.

Let us be humble. If it is God who has given us all these things and a sense of responsibility for them, then two things, what we must do and what we can become, seem consequent. One, the sense of responsibility must be driven far deeper into our consciousness than it has been, by means of an enlightened education means of an enlightened education (paradox, this educating, drawing out what is best in us to drive into us that our whole life is a trust). Second, man being a God-made creature (not as some would persuade, vice versa), then he is open to a change of heart and of nature, and he will respond to that which brings hope, and expresses love of beauty and faith in human life, when it is manifest in his surround-

ings Although, as regards the future, we do not know and must judge from equivalent causes and effects in the past, we are often wrong in such judgment; and I contend that a conviction, that future wars cannot be avoided, greatly contributes to their advent. Such a conviction premises a material out-look on the universe, and sees no greater mind or spirit than the human. know whether Mr. Gloag is an atheist. But I know that he has thrown out a challenge to all architects who profess with any warmth and sincerity the Christian faith.

My present status forbids that I raise here the deeply controversial issue of pacifist

THE LIVERPOOL BUNGALOW



Above are the two alternative plans for temporary bungalows designed for Liverpool by its City Architect and Director of Housing, L. H. Keay, to economize in road frontage, especially on sites available in high density areas. They can be built in pairs at 24 ft. centres as against the 40 ft. and 33 ft. centres required respectively by the Government's wide and narrow frontage types. The ceiling height of the living room and inner bedroom is 8 ft., and of the other rooms, 7 ft. 6 in. A model of Type A has been erected for exhibition in Church Street, Liverpool, more to demonstrate planning and equipment than construction. The Liverpool Housing Committee has approved four types of sectional and demountable construction and tenders vary between £547 and £652, the higher prices being for bungalows largely built of steel. The approval of MOH has been sought to enter into contracts for the supply

of bungalows of each of the four types and a decision is still awaited. Floors are of dark red jointless and polished asphalte. All kitchen fittings have been specially designed and are made in steel. The kitchen contains an electric wash boiler and portable wringer. A Ure back-to-back grate heated from the living-room fire heats the living room, cooks in the kitchen, heats the domestic hot water and acts as a controllable convector heater for both bedrooms by means of an under-floor duct conveying heated air under pressure from an electric fan housed in the meter cupboard. The fresh air supply is filtered. This system is used for the first time and can be extended by special branches to which apparatus can be attached, such as hair-drier, bed warmer and vapour bath. Cooking can also be done on an electric cooker, and water heated by an immersion heater. (Scale of plans is \frac{1}{8}" to 1' 0").

against militarist. I quarrel here only with the spirit of defeat inherent in Mr. Gloag's article. I have been surprised indeed that so few have taken him up in the columns of the Journal, and it seems to underline the contemporary spiritual ebb (I find three letters between November 16 and January 4). The realist says "human nature is imperfect." True. But he sees no further than humanity. Neither do I believe that "a new heaven and a new earth . . . will arise in spendour from . . . the 2nd world war." But I believe that if the spirit and the resolve to crush those factors which lead to war are in our people and in the victorious peoples, and chiefly in those who hold office or wield power, after this war, then further warfare may be held

down as criminals are in the organized state. And as the state finds need of a goal by way of protection, could we not trace in the international field those criminal forces which lead to war and gaol them likewise? Then, as in the state, the private citizen would not have to bar up his windows or retire to the depths.

windows or retire to the depths.

Lethal weapons such as rockets and flying bombs should increase that sense of responsibility I have mentioned, of those who control them. Only if they do not will such forces "change the whole character of civilization." What is protection against a bomb of the greatest penetration? Only some several yards of hard rock. Mr. Gloag's fantastic implication, from his advice to the official mind "to co-ordinate

simple facts about life and death," is that people be housed, permanently, under several yards' thickness of hard rock—or at least that a dungeon-like repetition of every town exist, a very skeleton in the cellar. Death in life. But Mr. Gloag contemplates it in all seriousness, and perhaps were I also convinced of human incorrigibility, I should be logically forced to the same conclusion.

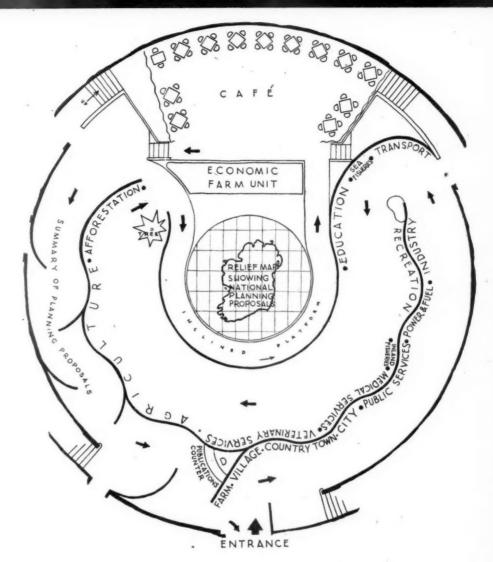
But I have wider convictions, and with your correspondent, Edward D. Mills, I shall try to work in a more positive way for a world of mutual understanding and trust, and to Hell with suspicion, intrigue, secrecy and—War.

J. M. MCLACHLAN L/Cpl. RE 1

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PHYSICAL PLANNING SUPPLEMENT



exhibition planning

An exhibition showing the implications and advantages of national planning in Ireland was held in Dublin last year. In the following article Noel Moffett, B.Arch., A.R.I.B.A., A.M.T.P.I., and Reginald Malcolmson, A.R.I.B.A. describe the exhibition, which is now touring the provincial centres in Ireland.

Unlike England, physical development in Ireland has not advanced very far, and a general acceptance of the idea of a national plan is more likely than in England where the physical environment is more highly organized. The exhibition tried to show what national planning involved, and what benefits could be drawn from integrated planning of the nation's material resources. General principles of planning were illustrated by showing the dependence of the biggest unit on the smallest unit, that is to say, the intimate relationship between the farm and the village, the village and the

country town, country town and the city, the city and the

whole nation.

The physical planning of Ireland was considered as a whole irrespective of political frontiers, the inference being that the necessity for co-ordination of planning activity transcended purely political frontiers, and called for co-operation in the regional, national and international spheres. This was made possible largely by the co-operation of the Ulster Planning Group, who had already held two exhibitions in the North of Ireland, on Housing, and the Re-planning of Belfast.

The main part of the exhibition was in the Round Room of the Mansion House (see plan above). There were fifteen sections, each of which was given a typical colour which dominated all the title headings, lettering and direction

arrows. They were: INTRODUCTION TYPICAL COLOUR

Village Vermilion Country Town Pink Dark Red City Public Services Mauve





Above are the Power and Fuel and Industry, sections of the Irish National Planning Exhibition. (For position see plan on previous page). In each instance the visual message was emphasized rather than the literary. To link the subjects a photograph was used on the last screen of each section symbolizing the subject; issuing from it were photographs illustrating dependent or associated branches of national planning, with an arrow pointing from the photograph which illustrated the subject dealt with by the following section. Below is one of the plywood-faced screen units.

Power and Fuel Gold Industry ... Purple Transport ... Silver Dark Blue Sea Fisheries Education ... White Leisure Orange Inland Fisheries Pale Blue Red and White Health Veterinary Services Pale Green The Land ... Emerald Green Timber Brown

Simplification of titles and presentation was aimed at, the visual message being preferred wherever possible to the literary, as it was considered desirable to encourage the æsthetic appeal of physical planning in a country which tends to over-emphasize the literary, in preference to the visual, arts. A typical photograph was used in each section which symbolized that section, and on the final screen of, say, Inland Fisheries—to take one example—this typical photograph was linked to the typical photographs of dependent or associated branches of national planning; this, in the case of Inland Fisheries would be: Leisure, the Land, Timber, and Health, the last-named photograph having an arrow pointing to the Health section which followed next in the sequence of screens.

Simplification of titles meant the use of words such as Timber, Health and the Land, rather than Afforestation, Medical Services and Agriculture, as being more intimate and reassuring to the average non-technical spectator.

The following is a brief summary of the layout of the various sections:—

VILLAGE AND COUNTRY TOWN. Lack of social amenities has caused the depopulation of rural areas known as "the drift from the land." It was suggested that this could be stopped by the vitalizing of rural life through the provision of parish halls, community centres, and well-planned villages and towns, with avoidance of through traffic motor routes.

CITY. Emphasized: 1. The planning of cities in the past. 2. The need for the eradication of slums. 3. The type of parks and childrens' playgrounds which should be provided. 4. How smoke abatement can be achieved by electrified industry. 5. How road accidents can be decreased by the rationalization of transport.

PUBLIC SERVICES. Advocated adequate public utilities—sewage disposal, water supply, fire-fighting, electricity, in all the rural centres of population. A large scale map of Ireland, showing the present conditions in the country towns and villages, revealed surprising inadequacies in the larger country towns.

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PHOTOGRAPH

TYPICAL
PHOTOGRAPH

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PHOTOGRAPH

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TYPICAL
SCREEN UNIT

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farmir grid, t the mi petitor we mi rural indust a farr POWER AND FUEL. A power link diagram showed the connection between water power, electrification and industry, on the one hand, and peat and the rural economy on the other. A chart demonstrated how the water power and peat fuel resources of Ireland far exceed present needs. A map indicated the location of the main bog land, the coal seams, and the existing power stations.

INDUSTRY. Here the opening statement read "Intelligent, trained, healthy man-power plus the use of our natural resources, is the only basis for the rational expansion of our industries." The advantages in terms of human value from a planned industry were stressed, and a chart indicated present major industries, as well as possible future additional developments, such as plastics, chemical extraction of nitrogen from the air-climate, precision instruments, cellulose and fertilizers.

TRANSPORT. The change in systems of transport, necessitating a change in road-planning, was demonstrated by montages illustrating chaos and order. An' historical sequence demonstrated the evolution of transport vehicles on road, rail, sea and air. A large scale map showed a replanned road system and existing and future air ports.

SEA FISHERIES. The major fishing ports of Ireland were shown on a large map, and the primitive origins of the industry, were indicated by a model curragh as still used in the islands of the western seaboard. The principal suggestions made were: 1. A well-equipped fishing fleet of motor vessels.

2. Refrigeration plant and packing and canning depots at the principal ports for rapid handling and distribution of the catch.

EDUCATION. Here the age groups were demonstrated and their various needs from Nursery Schools up to Colleges for Adult Education. Models of schools showed how modern design for sunlight and air was essential for the mental and physical well-being of all ages.

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LEISURE. Black silhouette figures of plywood represented the age groups—children, young adults, middle-aged, and the aged. Drawings and models indicated what type of leisure-planning each group required. A model of Portmarnock, Co. Dublin, a popular seaside resort, showed how it might be developed as a holiday centre.

INLAND FISHERIES. Fishing resources were demonstrated in diagram form and with actual fresh-water fishes in a glass tank. Advocated as essential was the establishment of a fresh-water biological research station.

HEALTH. The chief causes of the high incidence of disease in Ireland were given as malnutrition and bad housing; further irritants were inadequate insurance and diagnosis. An appeal for better housing was made, and it was stated that every city and town should have its own diagnostic centre, a design for a typical centre was shown. It was stated that the clearance of slums could be speeded up by the erection of pre-fabricated houses and flats.

VETERINARY SERVICES. The co-operation of the farming community with the veterinary services in improving the nation's livestock was strongly urged. Research stations should be built and properly equipped at suitable centres.

THE LAND. The principal source of Ireland's wealth is in farming. A map of the world in coloured wire on a mesh grid, to Mercator's projection, pointed out Ireland's rôle in the markets of the world, as either a co-operator or a competitor, with the inevitable conclusion that "In either case we must plan." Schemes for revitalizing agriculture included rural electrification, care of livestock, provision of rural industries, and the rational planning of farms. A model of a farm showed how modern planning could bring efficiency

and increased output to the land. Wider educational and recreational facilities for farm workers was suggested.

TIMBER. The final section was prefaced by a demonstration of how arterial drainage could help forestry. Comparative charts showed the forest areas in Ireland in relation to those of other European countries. A strong appeal was made for re-afforestation on a big scale. Possible industries based on wood products were listed, such as: artificial silk, plastics and newsprint. Samples of all the woods grown in Ireland were exhibited, and a collection of objects in everyday use made from these woods was on view. A small spruce tree terminated this section.

From the last section a ramp led up to an observation platform, from which the public looked down on to a large plywood relief map of Ireland painted in bright colours. This illustrated the major planning proposals put forward on the various screens, and formed the climax of the exhibition

Taking the view that eventually the railway system would become obsolete, a system of national motorways was suggested by red lines connecting the principal centres of population. These motor ways would be dual-track routes by-passing towns and cities, and built for high-speed.

A switch panel enabled a commentator to illustrate further proposals by a series of coloured lights so that by pressing a switch cities and towns were illuminated in the form of white flash bulbs, enabling the spectator to observe their relation to the national highways network. The cities of Dublin, Belfast and Cork were indicated by miniature diagram models, lit from below, illustrating the principal features of the town plans for these cities. Power stations, existing and proposed, were represented by model electric pylons lit by flash bulbs. Hospitals were indicated by red and white lights, health centres by red lights, and major fishing ports by blue lights. Holiday camp sites were marked by green lights. Youth hostels were symbolized by conventional huts painted orange. External transport links by sea and air with Europe and America were shown by model ships placed on the principal shipping routes, small aeroplanes on the map indicating the sites of existing and proposed aerodromes and seaplane bases. Generally, existing features were indicated by a pale colour, proposed features by a stronger tone of the same colour.

At regular intervals every day a microphone commentary on the aspects of national planning displayed on the relief map was given. This attracted much public interest and enthusiasm.

The spectator leaving the main display in the Round Room was confronted by a large mirror on which, painted in red letters, was the caption: "AND HERE IS THE MAN TO DO IT," designed to impress on the layman that planning is impossible in a democracy without the co-operation of the people.

To reinforce the statement of planning principles contained in the main exhibition, an annexe to the Round Room contained examples of actual planning schemes in operation or projected. These included the Abercrombie plan for Dublin, and the town plans of Cork and Limerick, the work of the Ordnance Survey, and the work of local authorities in rural areas

A series of film shows, lectures and discussions on planning subjects, continued throughout the exhibition, 15,000 people attended the exhibition, including large parties of school children, for whom a prize essay competition on national planning was held.

The exhibition was opened by the head of the Government, Mr. de Valera, and was attended by members of the Government, the diplomatic corps, and important figures in public life. Interest in the exhibition was widespread.

The exhibition was shown at the Royal Dublin Society. It is now touring the provincial centres in order to bring home to the people the need for their co-operation in the achievement of a national plan.

PLANNERS

SHEFFIELD GREEN BELT

The scheme for a green belt was approved by Sheffield City Council in 1938 and has since that time been an integral part of the general development plan. Public acquisition of land has proceeded successfully and many private individuals have given additional land. Although, in the approved scheme, the boundary between the residential areas and the agricultural reservation has been quite clearly defined, the latter is frequently in danger through the granting of permission for piecemeal and unco-ordinated development, usually by housing, but sometimes, especially in the north of the city, by industry.

times, especially in the north of the city, by industry. This situation is becoming so critical that the Sheffield and Peak District branch of the CPRE has published a shilling pamphlet, Sheffield's Green Belt, compiled by Wallace Hunt, A.R.I.B.A., A.M.T.P.I., which explains the position and suggests remedies. The importance

is stressed first, of defining and fixing the exact boundaries of the green belt and secondly, of ensuring that land already acquired for the green belt should not be diverted to other uses, whatever pressure may be brought to bear.

So far as temporary housing

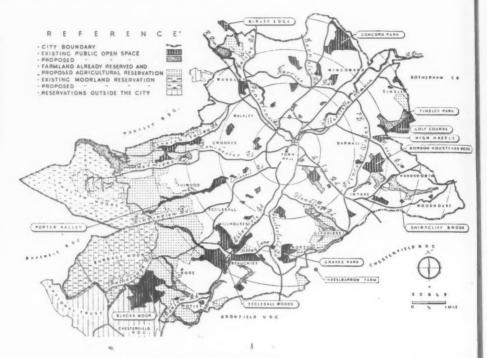
so far as temporary housing is concerned, the committee believes the idea that public parks and other open spaces

can satisfactorily be used for temporary housing to be a delusion. "Temporary houses may perhaps be demolished at the end of their estimated ten years of life, but the access roads and full complement of services, including drainage and street lighting, will last for many more years, and it would be a waste of public money to rip all these up and returf and

replant the site in order to restore it to its former use." Finally the committee believes the outstanding merit of the green belt scheme is that it takes full advantage in an economical way of the natural features of Sheffield and the peculiarities of her growth. "It is not dictated by any abstract conception of the ideal town."

Right is a map of Sheffield showing the scheme to preserve a green belt, approved by the City Council on June I, 1938, with additional areas since acquired in confirmation of

this policy.



PLANNER'S

QUIZ

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

There are, therefore, two questions ; what do the symbols denote in the map 01 the left? and from what published sources was the information taken?

Answer in the next Planner's Scrapbook.

THE ANSWER TO THE LAST PROBLEM

4. The symbols in this map of FARMLAND are shown below. The information was taken from Land Utilization Survey One inch to One mile maps and County Reports, "The Land of Britain," edited by L. Dudley Stamp.

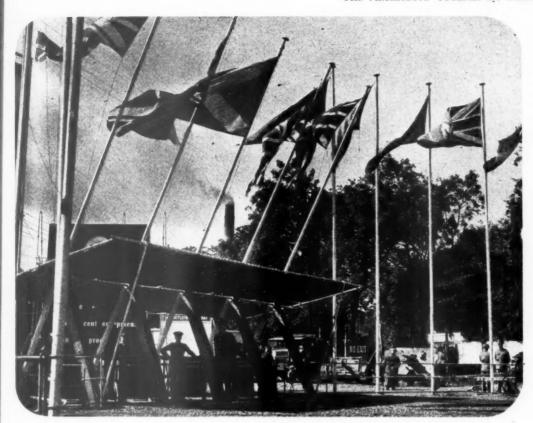


SCALE OF MILES









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Left, the entrance and turnstiles; details of construction are shown on the following page. Below, banners carried on 40-ft. high framework of 4-in.tubing braced with wire ropes.

TOURING ARMY EQUIPMENT E X H I B I T I O N

PRODUCED BY THE MINISTRY OF INFORMATION



The touring version of the Army Exhibition was produced for the War Office, following the successful exhibition held on the John Lewis site in Oxford Street, where 1,300,000 Londoners saw 150,000 items of Army equipment in three

months. It was decided to tour the exhibition to Birmingham, Manchester, Glasgow and Cardiff in a considerably larger form, to include the heavy equipment it was not possible to show in London owing to lack of space. In order to complete these four shows between April and October of last year, it was only possible to allow a four-weeks' interval for dismantling, transporting, and reerection, and, as the exhibition covered an area of 3 acres and had to include 25 pavilions, the design problems involved were considerable.

The method of construction finally adopted was a development of the steel tube and wire technique used in camouflage screening. This technique combined with canvas coverings, lent itself ad-

mirably to the type of construction required for a touring exhibition; all the materials packed into a small space for transport and were not readily damaged. Where possible, ordinary tubular scaffolding was used, but in many cases the character and function of the design demanded the use of a far larger size of tubing than the 2 in. diameter scaffold tube. For ease of assembly and dismantling the usual methods of joining such tubes (screwed tubing and tapped sockets) was abandoned and plain-ended tubing was used in conjunction with normal fittings which had their threads reamered out. Pointed set screws were fitted, which, on being tightened up, bit into the tube. No slipping of this form of joint was experienced, in spite of the fact that at Birmingham the pavilions had to stand up to a wind speed of 64 m.p.h. In order to economize in materials as much as possible all tensional stresses were dealt with by wire and wire ropes, these also being used for diagonal panel bracing to relieve the joints of heavy local stresses. The anchorages for these ropes had to be set in concrete, owing to the fact that two of the sites were on blitzed areas consisting of basements filled in with rubble, which made any form of stake anchorage impracticable.

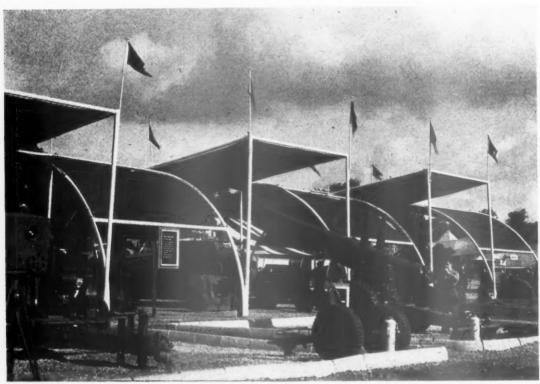
The ends of the ropes themselves

were fixed with bulldog clips to allow for variation in length on different sites without cutting. Rigging screws were fitted for final adjustments, in cases where long lengths of rope were used, such as the guys to the tubes carrying the banners at the entrance. These were pre-stressed to prevent excessive whip in the tubular structure due to the stretch of the ropes when under load. A wind speed of 60 m.p.h. was calculated for and allowance made for sudden loads caused by the sudden flapping of canvas covering. In spite of the fact

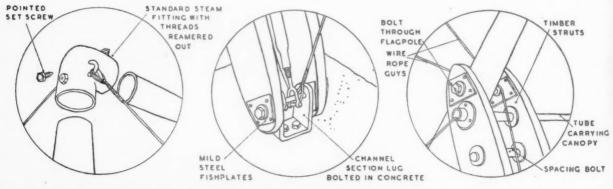
that the exhibition was probably the largest ever to tour this country, 20 men erected the steelwork for the whole job in less than a fortnight.

The attendance for the four shows of the tour reached a total of over two million.

Steel structures, pavilions and exhibition layouts were designed by Richard Levin. The Consulting Engineer was John Lansdell. Both were under the direction of Misha Black (Principal Exhibition Architect to the Ministry of Information). Contractors for all steelwork were M. & E. Equipment.

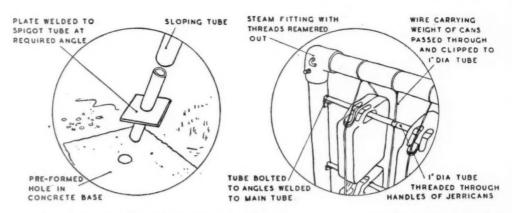


Above, the Gun Pavilion with canvas canopies over guns facing in alternate directions, formed of single $3\frac{1}{2}$ -in. curved tubing bolted together at points of intersection, making a series of half-arches linked at the centre. Below, details of the entrance unit shown on the preceding page.

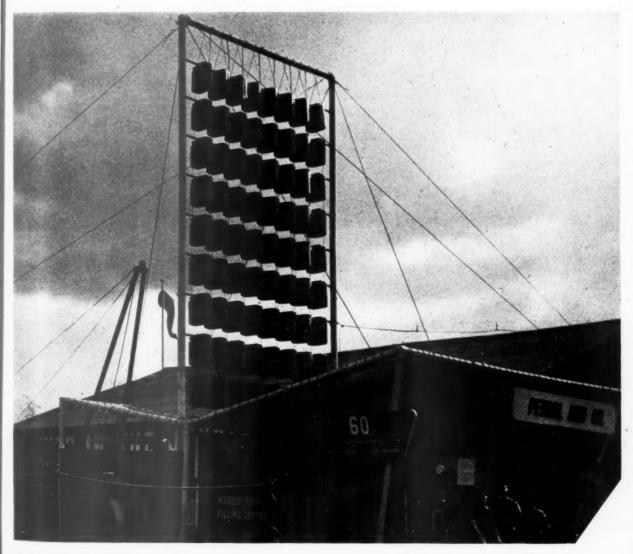


ARMY EQUIPMENT EXHIBITION

PR



Below, the Petrol Tower, a 30-ft. high display of 4-gallon Jerricans, showing the amount of petrol that keeps an Armoured Division on the move for $2\frac{1}{2}$ minutes. Above, details of the Petrol Tower.



PRODUCED BY THE MINISTRY OF INFORMA



ARMY EQUIPMENT EXHIBITION

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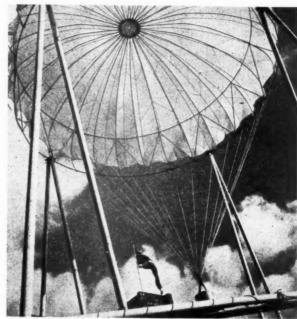
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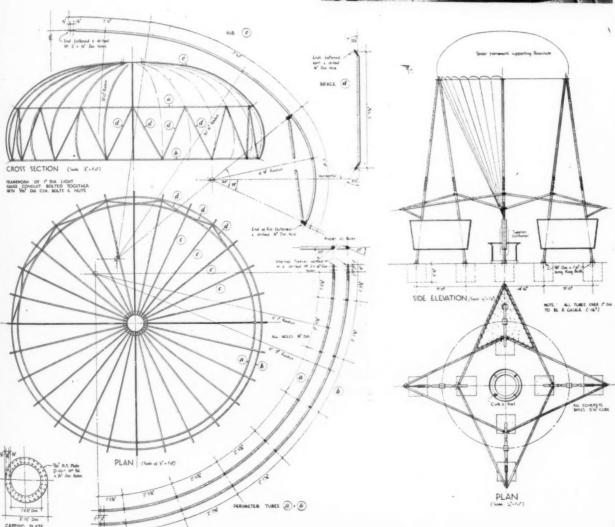
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PRO

On the facing page, the Parachute Tower, a 24-ft. diameter spider framework, carrying a parachute canopy, made up of 1-in. electric conduit, with ribs joined together by two tubular rings, and bracing tubes forming a tube truss, which allows the frame to be supported at four points only. The whole construction weighed less than 300 lb., and was assembled on the ground, hoisted on top of a closed tower ladder which was raised just above the height of the A frames. These were then erected and the spider lowered into position. Right, another view of the Tower. Below, constructional details.





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CENTRE INFORMATION

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

PHYSICAL PLANNING

EDUCATION FOR PLANNING. Konrad Wittmann. (Pencil Points, May, 1944.) Many Committees working on post-war plans, results being orgies of figures. Artistic or spiritual issues hardly permitted. Traditional training of architect does not equip him for task ahead. Suggestions for new type of training.

Suggestions for new type of training.

Most architectural schools begin their design instruction with small buildings, proceeding step by step to more complicated structures. The student learns to design "from the inside-out." The opposite sequence should be taken, starting with town and country planning: "Let the student see, even in his first term, the larger framework of his calling, and let him realize early enough that, although he is fulfilling the requests of his individual client. featize early enough that, atthough he is fulfilling the requests of his individual client, his work, his building is eventually to become part of a public, a national, performance. Let him find his philosophical basis first, and give him time to discuss, to broaden, to mature his ideas—which will make every design, even for the simplest house a much have acceptable and the house a much have a prochamble. house, a much more exciting and valuable enterprise, because it is seen as part of a large national pattern.

Australian Region

REGIONAL BOUNDARIES IN THE MURRAY VALLEY. Macdonald Holmes. (The Australian Geographer, 1944.) Three States meet in River Murray Valley in Australia. Yet should be one region for planning purposes. more logical divisions. Maps show

A region is a going concern marked out on the earth.

The human imprint of farms, irrigation channels and town plans set a seal upon the landscape. People congregate for shopping, schooling and hospitalization, etc., and put boundaries to their interests.

The whole sequence of development should be shown in detail on large-scale maps and exhibited in every shire, municipality or borough office so that the local people may see what they have created out of the wilderness and whither their efforts are tending.

1842

Housing and Planning

REBUILDING BRITAIN. Sir Ernest Simon. (Gollanz, 1945, 6s.) Knowledgeable and constructive analysis of housing position now and after last war. Not hopeful regarding planning.

1. Between the war 4,000,000 houses were built in 19 years; the total number of middle-class houses was increased by 75 per cent., but working-class houses by only 30 per cent.

2. It took 15 of the 19 years to work up

to an output of 350,000 houses a year.

3. The 20-year programme should be:— Stage 1.—A house for every family. The first one and a half million houses should be additional houses; during this period no houses should be pulled down if it can possibly be avoided. This stage should take

possibly be avoided. This stage should take about five years.

Stage 2.—Clear and replace the slums. Four million new houses to be built for slum clearance in ten years; the four million cleared houses to be pulled down. Stage 2 should be completed in sixteen years after the armistica. the armistice

Stage 3.-Clear and replace one and a half million obsolescent houses. This should take four years, completing the whole programme twenty years after the armistice. This should

4. For effective town and country planning five conditions are fundamental:—

(a) Suitable planning authorities, national, regional and local.

(b) Control of land in the national interest.
(c) Adequate finance.
(d) Proper national and local plans.

(e) The necessary driving force to see that the job is done.

STRUCTURE

Rebair

REPAIR OF DAMAGED BUILDINGS. Department of Scientific and Industrial Research, Building Research Station. (See A.J., February 8, 1945, p. 110.) Fourteen leaflets on various aspects of repair issued free of charge as help to planning from the frame to the center Cornelated Research Systematic Sequence of Students Students

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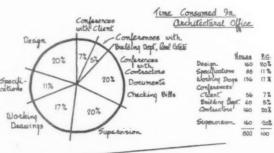
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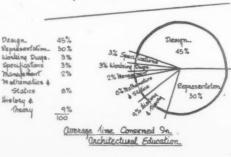
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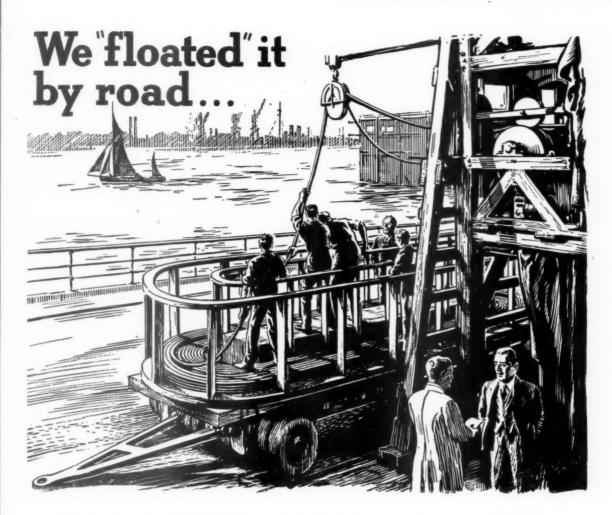
Household man Furniture Desi

DESIGN for beauti





Diagrams from Education for Planning. Above, the reversed sequence of training starting with town and country planning. Left, comparison of times taken on various subjects in the architectural office and in education. See No. 1840.



A long length of submarine cable was urgently required for the war effort. It had to be delivered to a site hundreds of miles from our Works. It was too heavy to go on a drum and shipment was not practicable. We mounted a sparwood tank on a low float which was specially commissioned for the job and the cable was coiled into this tank and delivered by road.

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1844

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a suital Tests h sistance all engaged on war damaged or neglected buildings.

No. 1. Introduction to the Repair Series. No. 2. Repair of Structural Steelwork Damaged by Fire.

of Paintwork 3. Restoration Wood.

4. Repairs to Stucco and Rendering. 5. Repairs to Asphalt and Felt Roofs. No. 6. Repairs to Timber Roofs and No.

Floors. 7. Restoration of Paintwork on Steel. 8. Removal of Oil and Smoke Stains No.

from Walls. 9. Eradication and Prevention of Dry No. Rot.

No. 10. Repair of Internal Plasterwork. No. 11. Redecoration of Walls Ceilings.

No. 12. Repairs to Brickwork. No. 13. Repair of Reinforced Concrete Columns Damaged by High Explosive.

No. 14. Repair of Multi-Storey Steel-Framed Buildings Damaged by High Explosive.

Wood Windows 1844

EJMA WINDOW BOOK. (The English Joinery Manufacturers' Association.) Book on EJMA standard wood casement windows, casement doors and frames. Also covers general principles of window arrangement.

This book is the first of a series giving information on EJMA Standard Joinery for the use of architects, builders, and others concerned with building. It is not confined to data on joinery products. An introductory article deals with general principles governing the arrangements of windows, such as daylight admission, sunlight admission, outward vision, ventilation, weather and draught resistance, heat and sound insulation, glazing, maintenance and cleaning of windows. This concise introduction will be very helpful for the choice of the proper size and arrangement of

In addition to the standard sizes of case ment windows and doors and assembly details, the booklet also gives fixing details

showing a variety of solutions.

As a result of research, EJMA has developed a method for calculating the dimen-

veloped a method for calculating the dimensions of windows so that they conform to multiples of any given brick size, and, at the same time, give equal pane widths and equal pane heights with glazing bars. The standard wood casement windows, casement doors and frames illustrated in this book have been accepted by the whole of the joinery manufacturing industry as the universal standard which will be manufacturing industry as the universal standard which will be manufactured throughout the country. They have been approved by MOW and adopted in BS 644, Pt, I, 1944.

in BS 644, Pt, I, 1944.

The sections employed in the construction of EJMA windows and doors are minimum in size, consistent with the purpose for which they serve. The EJMA window provides more than twice the daylight area per cub. ft. of timber than that given by the pre-war BSS window.

Wood Floors

WOOD FLOORING. (Timber Development Association.) Booklet on preparation, laying, finishing and properties of various types of wood floor-

The natural qualities of wood have always made it a popular flooring material. In recent years scientific research has provided accurate data to facilitate the selection of a suitable timber for any particular purpose.
Tests have been carried out by the Forest
Products' Research Laboratory on the resistance to abrasive traffic of most flooring

hardwoods, and the final pages of the booklet comprise a list of the better known timbers that can be recommended for wood block, strip, board and parquet flooring, showing their special features. A number of illustrations shows the very pleasing appearance of different wood floors.

Wood Doors

PANELLED AND GLAZED WOOD DOORS. BS 459, Pt. 1-1944. Standards Institution, 2s.) Designs, dimensions and construction of dowelled and morticed. tenoned panelled, and glazed wood doors for internal and external purposes, and garage doors.

LIGHTING

Store Lighting

POST-WAR REQUIREMENTS OF DEPART-MENT STORE LIGHTING. R. J. Chapin (Lighting and Lamps, September, 1944, p. 26). Colour of lighting, variety of types, e.g., full spectrum lamps, cool lighting, germicidal lamps. The following are the main points considered:

(a) Lighting should have a full spectrum. Colour matching is essential, and it is un-desirable to use two types of source to obtain the necessary colours.

(b) Cool lighting, which helps to reduce

fading and consequent wastage.

(c) Germicidal lamps, so that shoppers will not object to bringing children into the crowded shops.

The last point seems to be a particularly good one, though all are sensible.

Reference has been made previously in these columns to the increasing use of germicidal lamps in America.

QUESTIONS

and Answers

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

1848

I should be glad of some information regarding the completion of Form 520G., Application for Authorization of a Supply of Iron and Steel. I am uncertain of the distinction generally accepted between alloy steel and non-alloy steel and should be glad to know the different should be glad to know the different chemical compositions of both.

A The normal distinction between alloy and non-alloy steel, is that all steel containing more than the percentages of the materials given below is considered as an alloy steel, and that that containing less or none are considered as non-alloy

.40% of chrome or nickel. .10% of molybdenum, tungsten or vanadium.

10.00% of manganese.

If you have any difficulty in completing Form 520G we should advise you to write to Mr. H. B. Jacks, the Birmingham Liaison Officer, Iron and Steel Control, 263, Hagley Road, Edgbaston, Birmingham, 16.



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

NHTPC

H. U. Willink

March 2, at the conference of the National Housing and Town Planning Council. Review of the Government's SHORT-TERM HOUSING PLANS, by the Minister of Health, Mr. H. U. Willink.

H. U. Willink: The ten-year task that lies ahead of us will be the greatest undertaking in the history of housing. We are moving forward confidently to an era of improving standards of housing. The Housing Manual which was issued by the Government last year showed that the intention is that those standards shall improve. We are going to standards shall improve. We are going to have houses that are more roomy, more beautiful, and more appropriately designed to the needs of the families who live in them; houses that are more varied in size to meet those various needs. We look forward to the growing art and science of forward to the growing art and science of town and country planning to increase the sense of community which has not as yet been fully developed and, indeed, it may well be said, has been losing ground com-pared with the old days. We look forward to a better distribution of industry and housing—placing the homes of the people in better relation to their work; we have major problems alsed such as standards of

in better relation to their work; we have major problems ahead such as standards of density and the decongestion of our cities. How can all of us best help in this great housing crisis? In the field of housing we have frequently talked of the two-year period after the defeat of Germany. We are now almost in the position, I hope, when we can regard that two-year period as from now, and say we are facing our immediate task during the forthcoming weeks and months. I believe in seriously

facing the facts. It is essential in a matter of this importance that projects should not be based on false premises. It must not be overlooked that there will have been an almost complete interruption of housebuilding for six years when we start again. No one seriously challenges the statement that if every family is to have a separate home—and every family should—we need a million more than we have. That figure is arrived at by this calculation: that compared with 1939 we shall have in 1945 850,000 more family units wanting separate We have also had 200,000 houses homes. totally destroyed by the enemy. There are on a modest computation at least 100,000 slum houses. Against that total of 1,150,000 houses we can only set 150,000 houses built or completed since the outbreak of war.

As long ago as June of last year, before the flying bomb and other attacks, there were heavy arrears of unrepaired war dam-These were not distributed evenly over the country, a fact which creates difficulty. Since then, the flying-bomb attacks in Greater London and South-Eastern England have increased immensely that burden of war damage. Taking the damage up to September alone, and leaving on one side very slight damage and on the other damage so severe that it could not be tackled in the winter months, there were 719,000 houses to be repaired of those damaged up to that date. Since that date much new damage has been caused to houses in South-Eastern England.

As against a building industry 1 million strong in 1939, we have an industry to-day of 337,000 men. Beyond doubt a large proportion of that immensely reduced building force must now, and for some time ahead, be used, if it is to be most effectively used, to increase the number of habitable houses damaged by bombs. Our objective for these two years must be the greatest possible increase in the number of tolerable homes in the shortest possible time without compromising our permanent standards or pre judicing a return to them at the earliest moment. We must cause the minimum prejudice to good planning and to the best use of land in all respects. There are three tasks on which the Government and every-one interested in housing should concen-trate, so that the most skilful use is made of this greatly reduced building force. first, steps to increase that force at the earliest possible date; secondly, every possible preparation that can be made without employing building labour; and thirdly, seeking every device to make use of labour other than our small supply of building

We hope that at the end of 12 months after the war against Germany the building industry will have risen to 800,000 as the result of demobilisation, the special release of men needed for this most urgent of reconstruction work, and by the training of apprentices. But though that will be a very great achievement, let us mark that it means this: that the average number of operatives over those 12 months will be in the region of 500,000, only half the pre-war building industry, and at a time

when the industry is shaping itself anew after war-time dislocation.

Let us also bear in mind that in 1939 about 300,000 men were engaged on ordinary repairs and maintenance. We all know what arrears of maintenance and repairs have accumulated to-day. What is the Government's intention and target? In spite of these new blows, we have never shifted since our target was first announced. It is that in those first two years we should see to it that 300,000 houses of permanent, good type and character, should be built or in course of building. What matters to those who will be returning home is the number of houses built.

We place the utmost importance on bring-ing into operation as soon as possible pri-vate enterprise building. We realize fully

the immense contribution that private enterprise made between the wars; the economic effect on prices of the introduction of private enterprise; and that private enterprise owns sites, in many cases developed. There will be very many coming back from the war who will want to own their own house. Another factor will be the conversion of existing houses, an operation that may well form an important part of schemes in our large cities. I have appointed a special Sub-Committee to look into this question.

Then there is the reconditioning of rural cottages. Only this week I promised in the House that legislation would be introduced this session to amend the law and make

further reconditioning possible.

Regarding local authority housing there has never been a time-there never will be a time—when we shall more urgently need houses that can be allocated according to need. Temporary houses will not take the large family. I believe local authorities will do well to consider one idea—it is an idea and not design—which was mentioned in the Housing Manual and which has become known as the Duplex idea. supported by an eminent Sub-Committee, of the Central Housing Advisory Committee, of which Mr. Silkin, M.P. for Peckham, was chairman. Associated with him were a distinguished body of experts, among them Sir Harold Bellman and Mr among them Sir Harold Bellman and Mr. Keay, the City Architect of Liverpool. It may well be that whatever we do there will have to be sharing of houses. Local authorities may think it right—it will be for them to decide—to accept this plan of a temporary division of what will be in essence a permanent house of good stan-dard. The Minister of Works and I are considering further suggestions of how this idea can be adopted which will be issued to local authorities.

As regards preparations for permanent louses, 24,500 acres have been acquired by ocal authorities, available for 240,000 houses, local authorities. houses; layout plans have been prepared for 90,000 houses, of which 78,000 have been approved by my Department. Apart from sites already developed, contracts have been placed for roads and sewers covering 45,000 houses.

covering 45,000 houses. So far as actual building is concerned, we have only been able to make a start so small as hardly to deserve the name. has been confined to a few bomb-destroyed houses only, where labour happens to be available and where the cost is under £1,500. I cannot say more at this double peak of the war than that the Government hope to enable the resumption of per-manent house-building on a limited scale during 1945.

I must stress, however, that the preliminary preparations are uneven, taking the country as a whole. I would like to impress on all concerned that it is essential that every local authority should have sites ready and house plans made and approved for a reasonable instalment of their first year's programme. Only in this way will they be ready to go to tender and get ahead when we can give the word. It is more than likely, if we are to make the fullest use of available labour so as to get the maximum number of houses built, that we shall have to accept a very severe restriction of other

forms of work needing that labour.
The principle behind the temporary house programme is the need of producing homes with all possible speed, coupled with the maximum use of labour not normally used on housing. The aim is to achieve that with as little prejudice as possible to, the building of permanent houses. If the temporary houses are going to produce tens of thousands of homes in advance of the date on which homes can otherwise be provided, must not disregard that advantage or allow it to be outweighed by such considerations as the fact that they are uneconomic, that they create for every local authority a serious planning problem, and that they are the sort of houses which this Council or the Government would never normal times.

But this should be made clear. Whatever you may have seen in the press, it is the Government's firm intention to deliver to local authorities temporary houses up to the number that have been allocatedsomething over 100,000 in England and Wales—and as quickly as possible. The rate of delivery has been increased by the 30,000, for the promises of which we are so grateful to our American ally.

Sites for all these houses that have been allocated must be handed over ready for the Ministry of Works to deal with the foundations during this year and not at the end of this year. They must be handed over in a steady and increasing flow if the to the people. If this operation is to be properly planned, the Ministry of Works homes that are offered are to be available months before the houses are delivered. If the sites have first to be developed that means six months' work. I believe that there are still between 70,000 and 80,000 sites not yet developed. Broadly speaking, for deliveries up to August we shall have to depend on sites that are already developed. I have asked local authorities to give special attention to the acquisition of sites for these temporary houses. Suitable sites are those in built-up areas that have not been built on, slum clearance sites, bombed sites, sites originally intended for permanent housing either by the local authority or private enterprise, and, what are ideal sites, those which in due time might become open spaces but are threatened with permanent development.

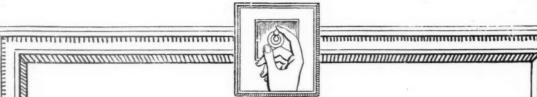
So far, sites for 60,000 temporary houses have been submitted to my Department and 46,000 have been approved, but only about 4,000 are at a stage in which they could be handed over to the Ministry of Works to do their part of the job. This is a duty of the first urgency for the fulfilment of which I can rely on local authorities. asking them to get every undeveloped site to the stage of tender not later than April, so that they may be ready to take advantage of the summer weather. The urgency with which the Government regard this work is shown by the fact that it is being given what is now H.Q. priority—the same priority that is given for the most important

operational work. It is clear that if by the application of new methods a programme wholly consisting of permanent houses would be so brought for-ward as to make it unnecessary to extend the temporary house programme beyond a year, this would be universally welcomed. The Minister of Works is throwing his great energy into this part of the under-Works is throwing his At his request I have invited the Local Authority Associations to appoint a technical Committee which will be at the disposal of Mr. Sandys so that he may have the benefit of local authority experience.

Regarding the question of using parks and open spaces as sites for temporary houses, do not regard as an argument in favour of using a public open space the fact that it had been used during the war emergency for a special purpose. The question of the use of public open spaces is now under consideration by the Government. The pre-sent position is that such spaces cannot be utilised for housing purposes without the approval of Parliament.

On the effect of different designs of houses on preparatory work, except in the case of one type allocated to certain local authorithe work to be undertaken by the authorities is the same in respect of all the types. Any necessary adjustment of the foundations will be carried out by the Ministry of Works. The variation of design does not affect, and need not delay, the contemporary the same type of the contemporary that the same type of the contemporary that the conte site preparations by local authorities.

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

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Roofing tiles Steel joists (basic sections ex mills) Lime greystone Sheet lead Iron rainwater goods and soil pipes White lead paint	+ 43.75 + 65 + 47.5 + 43.53 + 73.91 + 40.5 + 38.38	+ 43.75 + 65 + 47.5 + 43.53 + 65.22 + 40.5 + 38.38		
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of Wood & Metal

DOCKER BROTHERS LADYWOOD BIRMINGHAM 16

Home ... but what sort of reception?

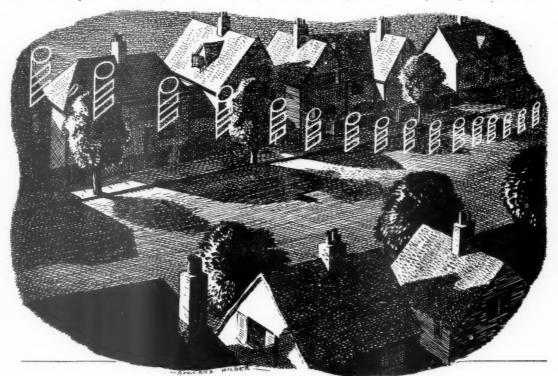


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MINISTRY OF HEALTH and MINISTRY OF WORKS—

HOUSING MANUAL 1944 (Technical Appendices — Page 9)

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MORTAR for brickwork should possess the following properties:—

(a) reasonably quick hardening;

(b) strength in moderation (preferably rather less than that of the bricks which it binds, and never more);

(c) good adhesion to bricks which may vary widely in suction;

(d) retention of plasticity during bricklaying;

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APPOINTMENT OF PLANNING CONSULTANT.

The above Committee is prepared to consider he appointment of a Planning Consultant. Any qualified person who wishes to be con-idered for the appointment should communicate with the undersigned on or before 15th April,

A. T. HERD, Clerk to the Committee.

City Chambers, Dundee. 8th March, 1945.

· CITY OF PORTSMOUTH.

CITY PLANNING AND RECONSTRUCTION DEPARTMENT.

Applications are invited for the following appointments in the Office of the City Planning Officer and Reconstruction Architect, engaged on the preparation and administration of statutory planning schemes for the Authority's administrative area, and plans for the reconstruction and future development of the City and its environs.

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Applicants are expected to

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(ii) hold Surveying and Planning qualifications, i.e., be Members of the Surveyors' Institute and/or Town Planning Institute, and to be experienced in Statutory Planning practice and in Interim Development administration.

The salary is £515, rising by annual increments of 3 at £20 and 1 at £25 to £600. Preference will be given to the holders of the appropriate professional qualifications.

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Preference will be given to the holders of the appropriate professional qualifications. (d) Grade B.

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The appointments will in every case be subject to the provisions of the Local Government Superannuation Act. 1937, and the successful applicants will be required to pass a medical examination. All appointments are subject to the Council's Sick Pay Regulations, a copy of which the successful candidates will be required to sign. All salaries are supplemented by a war bonus at the present time. All appointments will be terminable by one month's notice on either side. Applications, stating age, qualifications, experience, and position with regard to Military Service, together with the names of three responsible persons to whom reference may be made, must be delivered to the undersigned clearly marked "City Planning Appointment," not later than the 3rd April, 1945. Canvassing will be a disqualification.

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L. EDGAR STEPHENS, Clerk of the Council. Shire Hall, Warwick.

Shire Hall, Warwick. 6th March, 1945.

CANNOCK RURAL DISTRICT COUNCIL.

APPOINTMENT OF TEMPORARY ARCHITECTURAL ASSISTANT.

ARCHITECTURAL ASSISTANT.

Applications are invited for the position of Temporary Architectural Assistant for the preparation of layouts, design of houses, and all other duties, incidental to the preparation of this Council's Post-War Housing Programme. Candidates should be A.R.I.B.A. or Registered Architects, and preference will be given to applicants with previous experience in the preparation of schemes for the provision of Working Class Dwellings.

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A. D. DALLOW,

Clerk to the Council.

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Council Offices, Penkridge, Staffs. 9th March, 1945.

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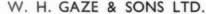
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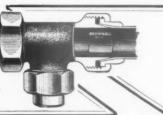
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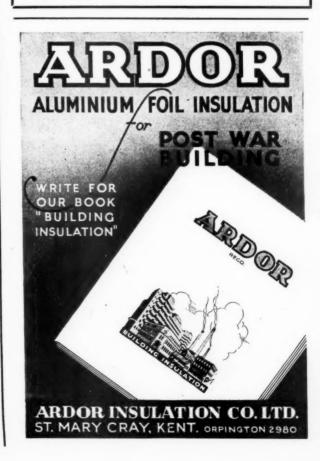
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Alphabetical Index to Advertisers

		tioui illucii to	1100	CICIOCIO			
	PAGE		PAGE	*** ** * * * * * * * * * * * * * * * * *	PAGE		
Adams, Robt. (Victor), Ltd		En-Tout-Cas Co., Ltd		Moler Products, Ltd	-		
Adams (Victor), Ltd., Robt	li	Esavian, Ltd	XXXV	Morris Singer Co	xlvi		
Aero Pipe & Glass Co., Ltd	xiv	Esse Cooker Co		Newman, Wm., & Sons, Ltd	1		
Aga Heat Ltd.		Etchells, Congdon & Muir, Ltd		Newsum, H., Sons & Co., Ltd			
Aluminium Union Ltd	-		XXXVIII	Nobles & Hoare, Ltd			
Anderson, C. F., & Sons Ltd	xxxiv	Expanded Metal Co., Ltd	liv	North Wales Slate Quarries Assoc	Xi I		
Anderson, D., & Son Ltd		Expandite Ltd.	-	Northern Aluminium Co., Ltd	x		
Architects' Benevolent Society	li	Flexo Plywood Industries, Ltd		Oliver, Wm., & Sons, Ltd	-		
Ardor Insulation Co., Ltd	liii	Fordham Pressings, Ltd	***	Paragon Glazing Co., Ltd	-		
Arens Controls, Ltd.	xxxii	Forrest, George, & Son, Ltd	xxiii	Parsons, C. H., Ltd.	31		
Arkinstall Brothers Ltd		Freeman, Joseph, Sons, & Co., Ltd	li.	Partridge, Wilson & Co., Ltd., J	xlix		
Ashley Accessories		Gaze, W. H., & Sons, Ltd	11	Pilkington Bros., Ltd	No		
Austin, F. (Leyton), Ltd		General Cable Mfrg. Co., Ltd	lv	Poles, Ltd. Powell Duffryn Co., Ltd.	liii		
Bailey, Sir W. H., & Co., Ltd		Gillett & Johnston, Ltd	11	Pressed Steel Co., Ltd.	xviii		
Baldwin, Son, & Co., Ltd Bartlett, G. F. E., & Son, Ltd	xix	Greenwoods & Airvac Ventilating Co.,		Prodorité, Ltd.	ix		
Bath Cabinet Makers & Aircraft, Ltd	xlix	Ltd.	Iv	Radiation, Ltd.			
Behr, A	AHA	Guest, Keen & Nettlefolds, Ltd	vii	Restall, Fredk., Ltd.	xlvi		
Benham & Sons, Ltd.	1	Haden, G. N., & Sons, Ltd.	XXX	Roberts, J. W., Ltd.	TIAI		
Benjamin Electric, Ltd.		Hammond & Champness, Ltd	277	Ross, S. Grahame, Ltd.			
Black & Decker, Ltd		Hard York, Ltd.	xlix	Ruberoid Co., Ltd	A		
Blackburn, Thomas, & Sons, Ltd		Hardtmuth, L. & C., Ltd	Alla	Rubery, Owen & Co., Ltd.	xxix		
Bolton Gate Co., Ltd		Harris & Sheldon, Ltd.	liii	Rustproof Metal Window Co., Ltd	XX		
Boulton & Paul, Ltd	xlix	Harvey, G. A., & Co. (London), Ltd	8661	Sadd, John, & Sons, Ltd.	AA		
Braithwaite & Co., Engineers, Ltd		Haywards, Ltd.		Sanders, Wm., & Co. (Wednesbury), Ltd.			
Bratt Colbran, Ltd	XXV	Helliwell & Co., Ltd.		Sankey, J. H., & Son, Ltd	XX		
Briggs, William, & Sons, Ltd	40.00	Henderson, P. C., Ltd		Sankey-Sheldon			
British Artid Plastics, Ltd		Henleys Telegraph Works Co., Ltd.,		Scaffolding (Gt. Britain), Ltd	-		
British Electrical Development Assoc	xliii	W. T.	xli	Sharman & Sons	lii II		
Brush Electrical Engineering Co., Ltd	xxvi	Higgs & Hill, Ltd	vi	Siegwart Fireproof Floor Co., Ltd			
British Ironfounders' Assoc		Hills, F., & Sons, Ltd	_	Silicate Paint Co	-		
British Reinforced Concrete Engineering		Hilton, James, & Son (Leigh), Ltd.	lv	Smiths' Fireproof Floors, Ltd	-		
Co., Ltd	xii & xiii	Holden & Brooke, Ltd	lii	Smith, Henry (Constructional Engineers),			
British Rola Ltd	-	Hope, Henry, & Sons, Ltd	-	Ltd	-		
British Trane Co., Ltd		Hunting Aerosurveys, Ltd		Southern Lime Association	xlvii		
Broadcast Relay Service, Ltd	xlv	Ilford, Ltd.	xviii	Steel & Gunton. Ltd	-		
Bromsgrove Guild Ltd.	xlviii	Imperial Chemical Industries, Ltd		Stott, James, & Co. (Engineers), Ltd			
Brown, Donald (Brownall), Ltd	lii	International Correspondence Schools		Sutcliffe, Speakman & Co., Ltd			
British Industructo Glass, Ltd		Jenkins, Robert. & Co., Ltd	-	Telephone Rentals, Ltd			
Bull Motors (E. R. & F. Turner) Ltd	11	Jenson & Nicholson, Ltd	****	Tentest Fibre Board Co., Ltd	-		
Burgess Products, Ltd	xlix	Johnston, Bros. (Contractors), Ltd	liii	Thompson Beacon Windows, Ltd., John	XXiv		
Cable Makers' Assoc.		Kautex Plastics, Ltd		Thornton, A. G., Ltd	200		
Callenders Cable & Construction Co., Ltd.		Ketton Portland Cement Works		Thorp, John B	lii		
Carrier Engineering Co., Ltd		King, Geo. W., Ltd.	xxvii	Tretol, Ltd. Trussed Concrete Steel Co., Ltd	terment 11		
Celotex, Ltd.		Lacrinoid Products, Ltd	iv	Tubular Furniture, Ltd	xxviii		
Chance Bros., Ltd.		Ltd.	X	Tudor Accumulator, Ltd			
Clarke, T., & Co., Ltd		Lloyds Boards, Ltd.	xlviii	Twisteel Reinforcement, Ltd			
Clarke & Vigilant Sprinklers, Ltd		Lockerbie & Wilkinson (Tipton), Ltd	Stviii	Uni-Seco Structures, Ltd	xvii		
Colt, W. H. (London) Ltd		London Brick Co., Ltd	-	United Steel Companies, Ltd	410		
Constructors, Ltd.		M. & E. Equipment (Construction), Ltd.	xxxvii	Universal Asbestos Mfg. Co., Ltd			
Copper Development Association		Main, R. & A., Ltd	xxxiii	Van Dorn Electric Tools	xxxi		
Crittall Manufacturing Co., Ltd	XV	Mallinson, William, & Sons, Ltd	xlii	Venesta, Ltd	xxxvi		
Crompton Parkinson, Ltd		Matthews & Yates, Ltd		Walker Crosweller & Co., Ltd	-		
Cutting, R. C., & Co., Ltd		McCall & Co. (Sheffield). Ltd	-	Wardle Engineering Co., Ltd	xlviii		
Davidson, C., & Sons, Ltd		McCarthy, M., & Sons, Ltd	lii	Warerite, Ltd			
Docker Brothers	xliv	McKechnie Bros., Ltd		Warwick Rim & Sectioning Co., Ltd	xxxvi		
Dunlop Rubber Co., Ltd		Mellowes & Co., Ltd	xlvii	Waxed-Papers, Ltd	. 1		
Eagle Pencil Co.	lv	Metropolitan-Vickers Electrical Co., Ltd.	lii	Wimpey, George, & Co., Ltd			
Ellison, George, Ltd.	lii	Midland Electric Mfrg. Co., Ltd	xvi	Wright Anderson & Co., Ltd	xxi		
English Joinery Manufacturers' Assoc.	viii	Mills Scaffold Co., Ltd	lvi	Zine Alloy Rust-Proofing Co., Ltd			
For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational, Legal Notices, Miscellaneous Property and Land Sales—see pages 1 and lii.							

