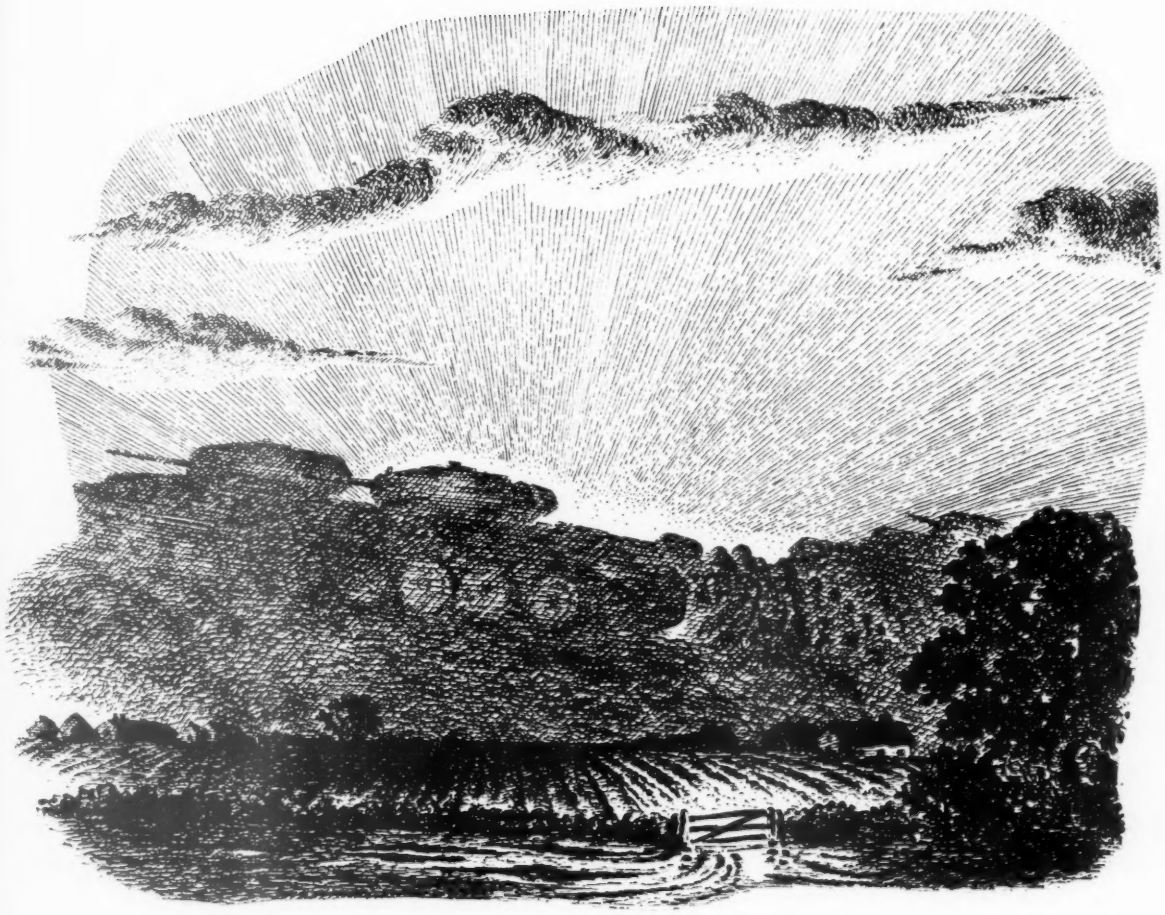

"And as to Peace . . ."

Behind the clouds the light grows ever brighter. Those who devise today the structure of tomorrow find in the rising dawn new inspiration. Prominent among them are the Architect and the Builder, in whose concerted plans we have shared so largely in the past . . . . . and shall doubtless share in the future.

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Alphabetical Index to Advertisers

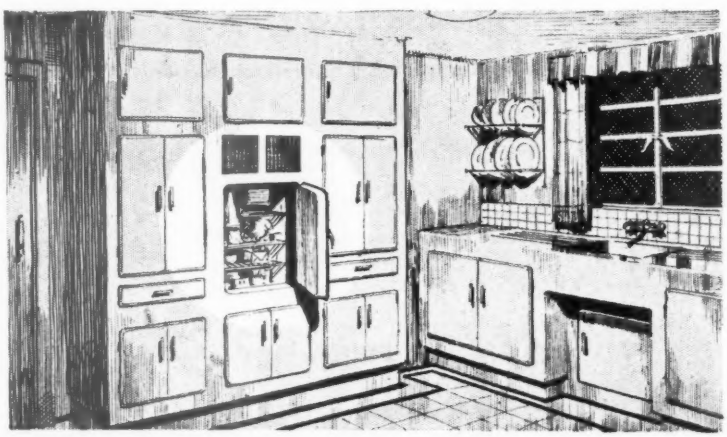
For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational Legal Notices, Miscellaneous, Property and Land Sales—*see* pages xl and xlii.

A hunting they will go...

And being a modern and intelligent young couple it's "odds on" that they will choose a house with a built-in refrigerator, a fair-sized refrigerator too, capable of safeguarding not merely their own food but that of the family to come.

The Prestcold model suggested below is presented as an ideal all-purpose model for homes of moderate size. It would hold sufficient perishable food for four people and be arranged for fitting at waist height to avoid backaching stooping.

From war-gained experience in making the most economical use of vital materials Prestcold engineers will hope to produce this model at a surprisingly low price in view of the following special advantages it offers:-



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

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

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

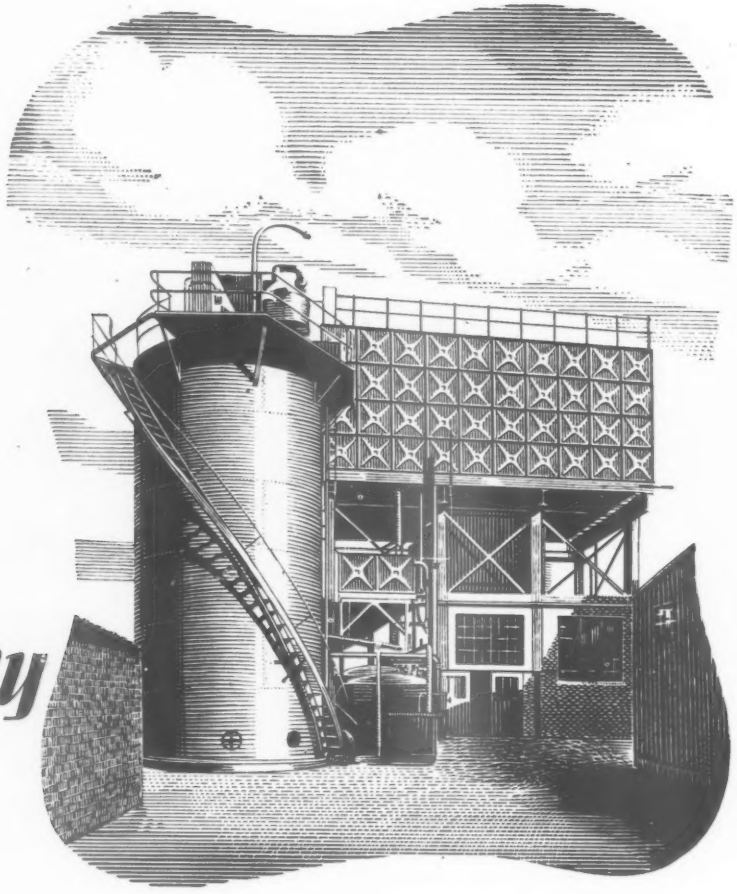
Height adaptable by varying position of supporting frames.

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

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

PRESTCOLD *Refrigeration*

A PRODUCT OF THE PRESSED STEEL COMPANY LIMITED



for every storage need there's a . . .

Braithwaite Pressed Steel Tanks are in use all over the World. Built up from standard unit sections, they can be erected at ground level or on supporting structures to suit any site however restricted or difficult of access. For further details you are invited to apply for a copy of the latest Braithwaite Pressed Steel Tank Brochure.

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Providing refrigerators in houses or flats on the same basis as baths, sinks and other essential fittings, is a definite social trend ; and it will add yet one more item of consideration for Architects and Housing Authorities.

In the matter of performance, there is little to choose between one refrigerator and another, but when questions of size ; whether built-in or free-standing ; whether electrically, gas or even oil operated arise, there is a wide range.

Can the Institute help ? The average individual has little variety of experience; there is but one refrigerator in his or her house and one only. But the Institute has tried out and tested a fairly large number of different types and sizes, suitable for differing conditions. And any advice the Institute gives is based on practical usage.

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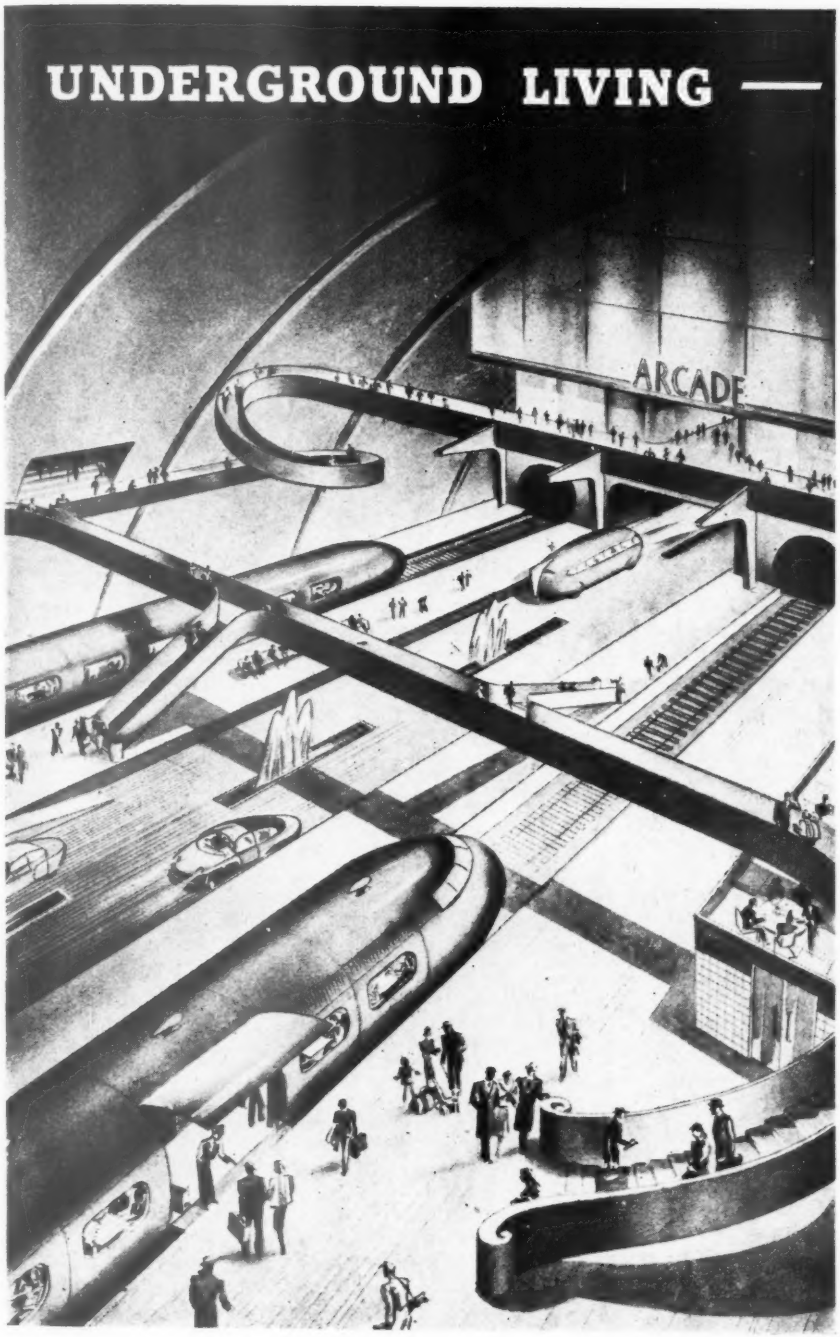

ONE OF THE BIG THINGS ?

We do not know.

It may come to this, that Man in the future may for his urban existence revert to a troglodyte civilisation, either to protect himself from enemies or to relieve the congestion of city life and travel.

If he does, the "conditioned comfort" down below will depend upon principles of science and engineering which Brightside have studied and are practising for the present comfort of Man here above the surface, in home, factory and public building.

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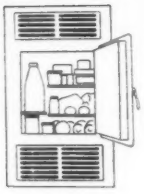

For the post-war house . . . . . .

The M.15 Electrolux Refrigerator can be built into a kitchen fitment at any height, or fitted in under the draining board, that is, at floor level. It can be seen at The Building Centre, London, and in many experimental post-war houses and kitchens. Write for our "Better Kitchens" leaflet.

Is noiseless and without moving parts.

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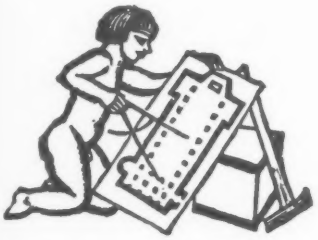
In common with every other periodical this JOURNAL *is rationed to a small part of its peacetime needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee that he will get a copy of the* JOURNAL. *Newsagents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



DIARY FOR 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.

DERBY. *Homes to Live In Exhibition.* At the School Museum. (Sponsor, BIAE) MAR. 2-APRIL

HULL. *Display of Films on Various Industries in which Design plays an Important Part.* At the College of Arts and Crafts, Hull. (Sponsor, Group for the Encouragement of the Arts and Civic Design). 3.30 p.m. and 6 p.m. MAR. 22

LONDON. *Etchings, Engravings and Drawings Exhibition.* By Fellows and Associates of the Royal Society of Painter-Etchers and Engravers. At RWS. Galleries, 10 a.m. to 5 p.m. Saturdays 10 a.m. to 1 p.m. MAR. 2-9

Design in Daily Life Exhibition. At Heal's, 196, Tottenham Court Road, W.1. (Sponsor, BIAE.) Weekdays, 9 a.m. to 5 p.m. Saturdays, 9 a.m. to 1 p.m. MAR. 2-11

The Present Discovers the Past Exhibition. At the Geffrye Museum, Kingsland Road, E.2. Photographic exhibition arranged by the Institute of Archœology and distributed by CEMA. The exhibition shows how an understanding of the problems of modern life can be helped by seeing something of the difficulties of everyday existence in the past. Ancient and modern agriculture, domestic life, materials, tools, roads and instruments of war are compared, scientific methods of excavation are described and the concluding section deals with the part played by the State and by the public in this connection. Daily, 10 a.m. to 4.30 p.m., excluding Sundays and Mondays. MAR. 2-11

Sir William Halcrow. *The Natural Resources of Great Britain.* Lecture 3. *Hydro-Electric Power.* At Royal Society of Arts, John Adam Street, Adelphi, W.C.2. 1.45 p.m. MAR. 6

Ronald Horton. *Children's Art in Wartime.* At AIA, 84 Charlotte Street, W.1. 7.30 p.m. MAR. 8

Film Evening. Films selected by Paul Rotha, who will give an informal talk. At 34-36, Bedford Square, W.C.1. 6 p.m. (Sponsor AA). MAR. 14

Quantity Surveyors Meeting. General meeting of Members of the Chartered Surveyors' Institution, qualified as quantity surveyors. At 12, Great George Street, Westminster, S.W.1. Subject for discussion introduced by Alfred Harris (Member of the Quantity Surveyors' Committee) *Post-War Problems for the Quantity Surveyor.* 4.30 p.m. MAR. 15

P. Schiller. *An Analysis of the Load on a Modern Electricity Supply System.* At Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. 5 p.m. MAR. 16

Professor C. H. Reilly. *Planning London.* At AIA, 84 Charlotte Street, W.1. 7.30 p.m. MAR. 29

Prefabrication. At an informal meeting at the RIBA on April 4, at 5.30 p.m. G. A. Jellicoe will open a discussion on *Prefabrication.* He will be followed by Richard Sheppard and A. Pott, of the Building Research Station. The meeting will then be open for general discussion. APRIL 4

Reconditioning England Exhibition. At St. Martin's School of Art, 109, Charing Cross Road, W.C.2., by fourteen societies interested in the preservation of beautiful and historical buildings. The exhibition is intended to show how many of these buildings have been reconditioned so that their external appearance is not spoilt but their internal arrangements altered to suit some form of modern use. Lectures are to be given in the afternoons. APRIL 8-22

Dr. L. Reeve. *Factors Controlling the Weldability of Steel.* At Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, Institute of Welding.) 6 p.m. APRIL 12

AA Nomination of Officers and Council for Session 1944-5. At ordinary general meeting at 34-36, Bedford Square, W.C.1. 6 p.m. APRIL 18

W. N. C. Clinch and F. Lynn. *The Design and Performance of Domestic Electric Appliances.* At the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. 5 p.m. MAY 4

LUTON. *Rebuilding Britain Exhibition.* At the Museum. (Sponsor, BIAE) MAR. 2-11

MANCHESTER. *Film Show on Reconstruction.* Organized by the Manchester Branch of the ABT. In the Lecture Theatre of the Central Library, Manchester. The films to be shown are *The City* and *When We Build Again.* Admission free. 6.30 p.m. MAR. 9

WORTHING. *Town and Country Life in the Reign of King George III: Exhibition.* At the Public Art Gallery. (Sponsor, CEMA.) MAR. 2-4

NEWS

THURSDAY, MARCH 2, 1944
No. 2562. VOL. 99

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.

MOS announces that the Director of Woodworking has drawn up a scheme TO CONSERVE SUFFICIENT CAPACITY IN THE WOODWORKING INDUSTRY.

The scheme has been devised to ensure that sufficient capacity is conserved to meet the requirements of the Supply Ministries and other Government departments and for essential civilian needs (e.g. food packaging), and that these requirements are met with the greatest economy of labour, plant and premises. To achieve this the director is preparing a list of firms which will be recommended for Government contracts and important sub-contractors and for essential civilian needs. The director, in consultation with the Government departments directly or indirectly concerned, will arrange, as far as possible, for the provision of suitable safeguards for the labour, plant and premises of these firms. The list of approved firms will not be published, but any firm can discover whether it is on the list by asking the Director of Woodworking, Portland House, Tothill Street, Westminster, London, S.W.1. Any main contractor who wishes to place a sub-contract with a particular woodworking firm can similarly ascertain from the director whether that firm is on the list. The foregoing arrangements will not apply to the following classes of undertakings, for which other arrangements are in existence: Firms designated by the Board of Trade for the manufacture of utility furniture; shops producing woodwork ancillary to the main production of the firm (e.g. in the case of shipbuilders, builders and contractors, engineering firms, etc.); sawmills engaged wholly in the production of the raw material. The scheme will take effect on April 1, and enquiries of the Directorate should not be made before that date.

from AN ARCHITECT'S *Commonplace Book*

OPENING THE WAY TO THE NEW ARCHITECTURE IN 1881. [*From* Lectures on Architecture *by E. Viollet le Duc.*] Nothing but the confusion of ideas existing in modern times, and a long succession of false teaching, could have brought about the chaotic state of things and the inconsistencies presented by our buildings of the present day. It is none the less certain that from this transitional phase there will be evolved architectural methods proper to our age and social condition. . . . If we will consent to regard the works of the past as belonging to the past—as steps by which we must pass if we would attain to the knowledge of what is appropriate to our own social condition ; if we proceed by way of analysis, and not by that of unreflecting imitation . . . we shall have opened the way and shall ourselves be able to pursue it.

★

First we must PREPARE FOR AN EMERGENCY PERIOD, when we shall have neither the building labour, nor the conventional building materials, fully to meet the urgent demand for houses, said Lord Woolton.

Lord Woolton, Minister of Reconstruction, was speaking at Manchester. Continuing he said : Some of this demand must be met by factory-made houses, using a variety of materials, publicly-owned and licensed for a short time only, and, as labour becomes available, they will give place to permanent houses. But we must not wait until the war ends before we make our plans for the layout and development of permanent building by public authorities of houses to be let at weekly rentals. We are taking every practical measure that is now possible to get on with the job, and I hope that further evidence of this will soon be announced. Lord Woolton said he and his colleagues were meeting almost daily, and were far advanced in their discussions on the method of securing land for development of urban areas, as well as the location of industry and social insurance.

It is proposed to build a WORLD FASHION CENTRE AT NEW YORK, with a helicopter landing space on the roof.

To be erected as a war memorial, the cost of the proposed centre is estimated at over £25,000,000. Drafted by the Mayor's Committee of 53 members, the scheme also includes a municipal auditorium, opera house and buildings for music and industrial arts.

On February 23, Mr. Wallace Barr, of Messrs. Cellon Ltd., and his wife, were KILLED BY ENEMY ACTION at their residence in the Home Counties. Their son, who is in the Air Force, was also injured and is in hospital, but is expected to be all right again in about ten days.

The first annual luncheon of the COMMERCIAL ELECTRIC REFRIGERATION ASSOCIATION was held in London last week.

Mr. E. G. Batt, the Independent Chairman, said : In its short life the CERA has made a satisfactory start and already done useful work. With a membership already numbering some 220, it can consider any problems affecting the industry, whether it be manufacture, distribution or service. Professor Sir Jack Drummond, Chief Scientific Adviser of MOF, was the guest of honour. He declared : In helping to feed the nation more adequately than hitherto and making possible a more general consumption of health-giving foods, refrigeration after the war is going to be of enormous importance, not only in domestic refrigeration but in refrigerated transport.

★★

The Lord President of the Council has granted the RIBA Council's request for permission to hold the COUNCIL ELECTION in 1944.

Last week fifty members of the CANADIAN FORCES ATTENDED A WEEK'S COURSE AT THE UNIVERSITY OF LEEDS.

The course included a visit to the Quarry Hill Flats, under the direction of Mr. R. A. H. Livett, Director of Housing of the City of Leeds, and a visit to the Leeds School of Architecture and Planning, under the direction of Mr. J. S. Allen, head of the school. Mr. Livett explained the planning and designing of the Quarry Hill flats, the methods of construction and the services provided. At the School of Architecture, Mr. Allen gave a talk entitled *Three Yorkshire Towns—their origin, their present and their future.* He explained the successive changes in living which had taken place in England and related these changes to the architecture of each age. The Canadians were keenly interested in the analysis of the modern industrial town and the talk was followed by questions on town planning and housing both in Canada and Great Britain. The visitors were then shown an exhibition of models and drawings prepared in the school and the discussion on the lecture was continued amongst small groups of visitors and students. This is one of a series of visits being arranged by the University.

Between March and June last RIBA PRISONER OF WAR EXAMINATIONS have been held in four German camps.

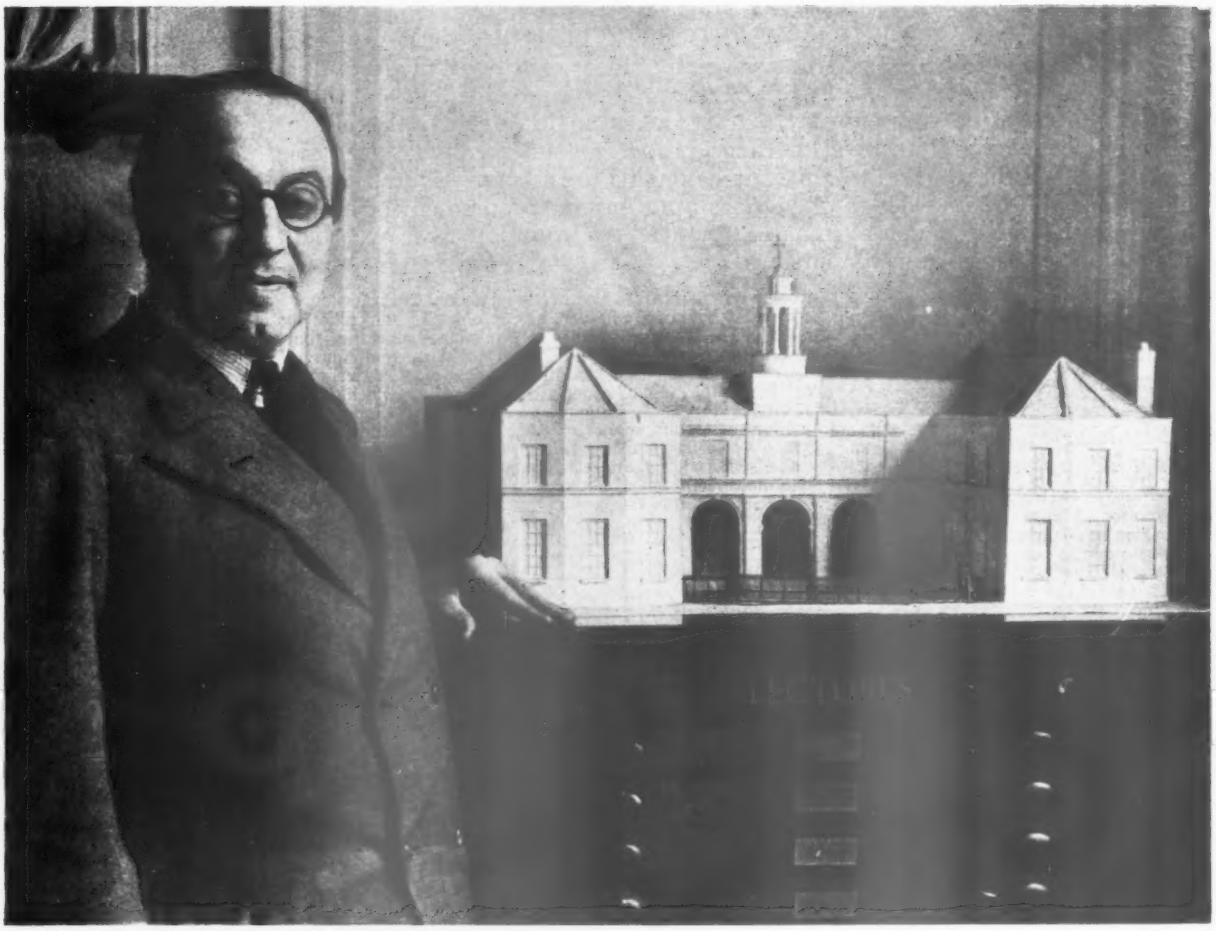
In the early part of 1943 arrangements were made, with the help of the British Red Cross Society and St. John War Organization, for holding the RIBA Intermediate and Final Examinations in a number of Prisoner of War camps in Germany. As a special concession the candidates were permitted to take any or all of the subjects of the Intermediate Examination and of the Final Examination with the exception of Design and Professional Practice. In spite of the many difficulties the examinations were successfully held in four of the camps between March and June. The following is a list of the successful candidates with the subjects in which they passed in parentheses. *Intermediate Examination.*—Oflag IX A/H : Captain R. G. Bateson. Oflag VII B : Lieut. J. G. Johnson, Lieut. S. E. Nicholas, Lieut. David O. Searle. Stalag 383 : Cpl. Kenneth E. Foster, Cpl. John S. Madew. Stalag Luft III : F/O. John D. Cordwell, F/O. H. W. Pickstone (all the above passed whole examination) ; F/Lieut. G. M. Fuller (history of architecture, calculations of simple structural members) ; F/O. Thos. E. P. Ramsay (history of architecture, design, constructional design). *Final Examination.*—Oflag VII B. : Lieut. P. L. Hansen Bay, 2nd Lieut. Edward J. Scollay, Lieut. J. C. O. Stansfield (all passed in general construction, theory of structures, hygiene, specifications and the properties and uses of building materials). Stalag Luft III : F/O. Frank S. Knight (hygiene), F/Lieut. Anthony L. Parsons (hygiene, specifications and the properties and uses of building materials), F/O. William R. Samson (hygiene, specifications and the properties and uses of building materials). Most of the men concerned have received books to help them with their studies through the special Prisoner of War Scheme which is being run by the RIBA in co-operation with the British Red Cross and St. John War Organization. Details of this scheme have been published in the JOURNAL from time to time.

Mr. A. B. Knapp-Fisher, formerly Professor of Architecture at the Royal College of Art, has received the temporary appointment of SECRETARY OF THE ROYAL FINE ART COMMISSION.

★

MOH is asking local authorities to PREPARE SITES FOR HOUSING NOW.

The grouping of sites in sufficient numbers to form an area adequate for the purposes of a contract is an essential factor of the scheme. The preliminary arrangements necessary to enable the authority to take advantage of the scheme are given in circulars issued to local authorities by the Ministry. They are the formation of appropriate groups of local authorities, the ownership of and right of entry on land which is to be used, and the preparation of lay-outs in sufficient detail to enable work to be started. The Minister is advised that, to obtain the best results, an area for a contract should include sites sufficient for, say, 2,000 houses, within a radius of, say, 30 miles, and that no individual site of less than five acres should be included. Sites, whether already in the possession of the



Professor A. E. Richardson, R.A.

Three new Royal Academicians—Mr. Charles Cundall, an official war artist ; Professor A. E. Richardson, Professor of Architecture in London University ; and Mr. Alfred F. Hardiman, the sculptor, best known for his Haig Memorial in Whitehall—were elected at a general assembly of Academicians and Associates held the week before last. Professor Richardson has been an ARA since 1936, and is celebrated as perhaps the chief supporter of the 18th century in the 20th. At his Georgian home at Ampthill he is said to wear knee-breeches, buckled shoes and a periwig. Last year the Georgian Group, under his chairmanship, advocated a return to the architectural principles of the 18th century when the time for rebuilding comes. This statement of policy led to the resignation of Professor C. H. Reilly, who expressed no desire to be connected with the Group "now that it proposes to encourage reproductions or forgeries" of the 18th century. Most of Professor Richardson's work has been done in conjunction with Mr. C. L. Gill. It includes Moorgate Hall, Finsbury Pavement ; Southampton Hall, Holborn ; the façade of Regent Street Polytechnic, and the Jockey Club, Newmarket, a model of which is seen in the photograph. He is a member of the Royal Fine Art Commission, and of the Diocesan Advisory Committees of St. Albans, Ely and Southwark, and was consulting editor of this JOURNAL just after the last war. His recreations are drawing, travel and research.

authority or to be acquired may be included to the extent to which the authority contemplate that they will be used for the erection of houses within the first two years after the war. Where land is to be acquired, the local planning authority and the Regional Planning Officer of MOTCP should be consulted at the outset. When arrangements for grouping have been settled it will be necessary to prepare and obtain approval of the lay-out plans of the sites. The order of development should be determined with due regard to the claim of food production, the possibilities of obtaining entry upon the land and of preparing the lay-out. The authorities should work in co-operation under their selected leader and should make all practicable arrangements for pooling the technical staff available. A time-table for the ordered development of the sites should be worked out and the arrangements for preparing lay-outs related to this time-table. Unless sites can be made available as they are required for the orderly progress of these large contracts, the scheme will break down. Subject to the need for considering the interests of allotment holders it is essential that local authorities should make quite certain that each site included in the scheme will be available on the date agreed with the contractor. The water, gas and electricity undertakings should be approached on the basis that trenching or ducting undertaken on their behalf should be carried out by the main contractor. The actual laying of mains should normally be done by the undertakings themselves. Lay-out plans for the individual sites should be agreed with the local planning authority and then submitted in duplicate to Ministry of Health through the Senior Regional Officer. In planning lay-outs regard should be had to the probable development of surrounding areas.

★

Building societies must be prepared to play their part in the provision of HOUSES FOR LETTING, said Mr. R. Bruce Wycherley, Chairman of the Building Societies Association.

Mr. Bruce Wycherley was addressing the Midland Association of Building Societies at Birmingham. He pointed out that building societies could not finally clarify their plans or act upon their intentions until they know Government policy with regard to the Barlow, Scott and Uthwatt Reports. He said : The other day Lord Woolton divided the post-war era into three periods. First, the transition period in which public demand would most certainly exceed supply ; second, a period

during which supply would be catching up with demand; and third, a time when the demand for consumer goods might be satisfied and it would be necessary to stimulate works involving the expenditure of capital. Each of these three periods will have for the building societies of the country its own dangers and its own opportunities for service. In the first, which I should describe as the demand period, we must be ready to play our part in the provision of houses for letting. That means a development of a side of our business which we have always regarded as secondary. It will, I am convinced, have to take first place during the early post-war years. We must see to it that it is used by us wisely in the national interest, so that tenants may become home-owners. I should like to see a scheme whereby we could foster houses to let upon the footing that some part, however small, of the rent can be used as part of the purchase price in the case of those tenants who are desirous of buying. That is something which we can do and which no one else can do as effectively. In the second period, which I should call the period of supply, we shall, if we play our part patriotically in the first period, find that our main business of supplying the owner-occupier with a good house will come back to us in full, and it may be overwhelming, measure. What may happen after that in Lord Woolton's third period, which he calls the period of danger, I do not know, but I would venture to remind you that in the dark days of 1930-31, when unemployment was at its worst, the policy of wise spending and wise lending initiated by the building societies of this country was one of the major causes which enabled this country, earlier than all others, towards recovery from the industrial slump. See Astragal's note on page 166.

★

Until the Government makes known its attitude on the Barlow and Uthwatt Reports the CITY OF LONDON PLAN WILL NOT BE PUBLISHED.
The City of London Improvements and Town Planning Committee is of opinion that to publish the plan now would be to invite speculators to buy up sites with the hope of reselling at a vastly increased price.

Last week, Squadron Leader C. Beresford Marshall was KILLED IN LONDON during an air raid.
A partner in Marshall and Tweedy, architects, of Newcastle and London, he designed the Silver Jubilee House presented to King George V. by Royal Warrant Holders' Association, Viceroy Court, Regent's Park, N.W., and other blocks of flats. During the last war he served in France, at 17 being the youngest officer in the 50th Division. He was 45 years of age.

Substantial progress has been made towards the establishment of the CHAIR OF BUILDING AT CAMBRIDGE UNIVERSITY.
After the report of a University committee set up to consider the question, the vice-chancellor, Dr. T. S. Hale, has notified Mr. H. C. Harland, president of LMBA, that approval has been given for the continuation of discussions. Something like £250,000 will be required to cover the endowment of a chair, the establishment of a school of building and the provision of lectureships and facilities for research. See Astragal's note on page 166.

STANDARDIZATION AND TRADE ASSOCIATIONS

USUALLY, a Trade Association is formed to promote the interests of its members. By grouping, firms seek to protect themselves against internal competition within their respective industries, and against the incursion of non-members into their markets. The general effect has been to establish ranges of products which are standard in cost, but not standard in performance and dimensions.

The standardization of performance and dimensions is very much in the air to-day. Manufacturers themselves are sometimes reluctant to adopt standard dimensions and patterns, if such adoption involves an expensive altering or scrapping of their plant, or if they regard themselves as producers of certain unique lines. An additional problem is that of the firm, a large proportion of whose business consists of replacement orders. Moreover, many enterprising inventors fear that standards may freeze production and handicap new developments. There is an idea, too, that standards may represent permissible minima of performance which could be exploited by pirate competitors.

Nevertheless, the standardization of dimensions and patterns in our day has been proceeding apace, stimulated, no doubt, by the forces sometimes described as Economic Demand. From across the Atlantic have come visions of a new world of wealth and prosperity apparently founded upon the mass-production of standard goods. The public, in fact, has begun to realise that standardization means more to buy, in better quality and at lower cost. The war is showing how a modern industrialised nation can build standard merchantmen at the rate of one per day and standard aircraft at the rate of one every five minutes. And so, in 1942, the Ministry of Works set up a Standards Committee "to study the application in building of standard plan elements, specifications and building components and methods of prefabrication, with the particular object of ensuring economy in the use of material in the post-war period, simplified and speedier procedure and construction, and wherever possible, improved quality and design."

What part is being played in these developments by Trade Associations? We read that in the United States in 1941 there were 3,000 national and interstate trade associations, of which 450 were engaged in standardization and simplification in one form or another. Have we any such parallel activity in England? The answer is that we have up to a point, but it is difficult to assess the extent of it. One outstanding example of successful standardization is the metal window industry. An example of the failure to standardize is the hardware industry. The generally accepted method of promulgating an agreed standard is through the British Standards Institution. At first sight, it would seem that we could assess the extent of standardization in this country from the

published British Standard Specifications. Unfortunately this is not so. It by no means follows that an imposing list of BS Specifications relating to one industry means the achievement of a high degree of standardization in that industry. We have heard of one case—though admittedly not a typical one—of four firms, who enjoy a virtual monopoly in their field. They have secured four BS Specifications each of which covers the products only of one individual firm. Never has standardization had a greater opportunity than now. Much of the objection to standardization which pre-war manufacturers advanced no longer retains its force. Piles of unsold, obsolescent stock no longer clutter their warehouses; even plant is sometimes out of repair, or blitzed out of existence altogether, and needs to be replaced. Far from restricting research and invention, standardization can often be the means of fruitful new developments. But these hopes cannot be realised unless Trade Associations play their proper part, and to do this they require full support from their members. Backed by Government, public and industry, standardization should not only benefit manufacturers but should bring better times for all.

The Architects' Journal
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NOTES & TOPICS

TO BE LET OR SOLD?

The building societies are now reconciled to developing a side of their business which has hitherto been regarded as secondary to their chief job of financing homes for purchase. Said Mr. R. Bruce Wycherley, chairman of the Building Societies Association, last week: "In the first (of Lord Woolton's three post-war periods), which I should describe as the demand period, we must be ready to play our part in the provision of houses for letting."

★

A complaint often levelled against building societies is that many people who, for financial or other reasons, would prefer to rent a home, are too often compelled to acquire a home of their own through a building society, owing to lack of suitable rentable premises. As a *Times* leader of February 24 declares very sensibly, "Dogmatic support for occupier-ownership is as much to be deplored as doctrinaire opposition to it," and goes on to point out the arguments against home-ownership—the low state of repair of so many houses resulting from the insecurity and poverty of their owners, its check on mobility of labour, and the confronting of the owner in the event of the call for a change of work-place with unemployment on one side or long, tiring journeys to and from work on the other. This latter trouble could, of course, be solved by sound community planning and control of location of industry. Here, we come up against the official silence on the Scottwattlow Trinity, for whose breaking the building societies, like so many others, are anxiously waiting.

★

Exactly how the societies will enter this new field of house letting in a big way has yet to be defined. But, whether or no the ties of house-ownership will in the future be generally desired or desirable, Mr. Wycherley has made it clear that the societies still consider the fostering of home-ownership as their first function, and the letting of houses only as an unavoidable short-term policy. They hope that tenants will later become owners, and that "if we play our part patriotically in the first period," reward in a profitable paradise occupied exclusively by one-day-if-you're-lucky-owner-occupiers "will come back to us in full, and it may be in overwhelming, measure."

CAMBRIDGE CHAIR OF BUILDING

A Committee of the National Federation of Building Trades Employers has been set up to discuss with Cambridge University the proposed Professorship of Building which was mentioned on this page of the A.J. for January 27. There seems good reason to hope that this time all difficulties may be overcome.

★

One says "this time" because the idea is not a new one. For many years the need for such a development has been felt by leaders of the industry and a definite scheme was examined in 1929, but at that time the obstacles were too great. A renewed proposal last autumn disclosed a very general feeling in the industry that circumstances were favourable for—indeed that they demanded—success. Mr. E. C. Holloway, President of IOB, Mr. A. H. Adamson and Major Leslie Shingleton, Past-Presidents of LMBA and Mr. Harland, President of LMBA, held meetings with the Vice-Chancellor and Dr. Pickthorn and Professor Hill, the M.P.'s for the University. Preliminary agreement was reached, and the setting up of the NFBTE Committee has followed.

★

One of the most interesting suggestions which will be considered is that students of the three related studies of architecture, engineering and building should, for their first year, have a common syllabus. This is a turn towards both Continental practice, and the closer integration of all branches of the industry which has made great progress on large war-building schemes. It also, one hopes, carries with it the implication that all three courses will be of

Honours standard. This is a crucial point. The School is bound to be small for the first 5-10 years of its life—an annual intake of 30 students has been mentioned. It is therefore necessary for staff and students to be the best that the industry can provide or attract. Any other policy would be fatal to the aims which presumably underlie the whole proposal ; indeed one can say truthfully that any money spent on providing for an ordinary degree course in building will be money thrown down a drain. No specious arguments about beginning modestly should move the building industry's representatives on this by a hair's breadth.

POETS' CORNER

THE LAY OF THE TYBURN

Lars Porsena, of Lambeth,
By the Nine Elms he swore,
That the lost River Tyburn
Should suffer wrong no more.
Upon Hay Hill he swore it,
The least of all the Hills ;
And the *élite* of Curzon Street
Came with pneumatic drills.
Across Green Park they tunnelled
By the Porter's Resting-post,
Where fog on misty mornings
Betrays the Tyburn's ghost ;
And soon the tide down Brick Street
Its way began to feel
Where once the Burn would briskly turn
A marble-cutter's wheel.
Through Mayfair on they thundered
And sang like birds in spring
When on a house in Brook Street
They met a mooring-ring.
And northward still and northward
The legions tunnelled on
Along that ancient towing-path
The Lane of Marylebone.
Onward they drove in raptures
Their journey wellnigh done,
Till in the dark through Regents' Park
They saw the River run.
Then gaily shooting rapids
Lars Porsena and Co
With joyous screams in quinquiremes
To Vauxhall Bridge did go.
" Hail to the Inner Circle !
Hail to the Dials Seven !
Hail to the Street of Liverpool
And the route of Bus 11 !
To-morrow with entrenching tools
And bathing suits complete
Come all who will to Ludgate Hill :
We'll excavate the Fleet ! "

Peggy Pollard

POST-WAR CAR DESIGNS

Since the *Architectural Review* tackled the subject of post-war motor-car design last August, people in the motor industry have been pontificating on the same subject. Sir Miles Thomas, of the Nuffield group, pointed out that the first post-war cars would of necessity be very similar to the last pre-war cars ; big changes couldn't come until later, because " there is no basic experimentation going on."

★

Across the Atlantic, C. F. Kettering, whom the *Motor* described as ' famous research engineer of General Motors,' said more or less the same thing, with this apparently embittered addition : " The wishful thinking columnists and industrial designers cannot alter the realist picture, since the motor-car producers have neither the time nor the men nor the materials with which to develop anything different or radical until the war is over."

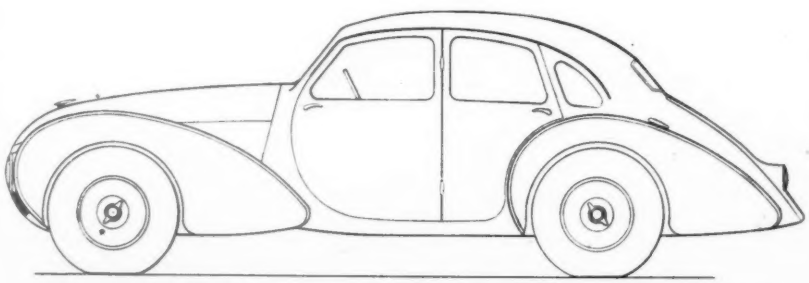
★

Meanwhile, one of the directors of Aston-Martin has shown me a sketch of his firm's idea of a post-war car—and moreover has allowed it to be reproduced with the proviso that it is a purely hypothetical design, as his firm, too, is fully occupied with war production. This design for nineteen - forty - something breaks away entirely from the squarish radiator leading via a high bonnet to a low sports body typical of pre-war Aston-Martin designs.

★

Is there, incidentally, any technical reason why car engines should still be in the front, or are they there merely because as Mr. Hartland Thomas suggested in his recent lecture at the RIBA, " The motor-car is still the horseless carriage : the ghost of a horse still trots in front of the driver." ?

ASTRAGAL.



A hypothetical design for a post-war car by Messrs. Aston-Martin. See Astragal's note.

LETTERS

Bernard Lowe
Mrs. Marianne Walter, A.R.I.B.A.
Kenneth C. Scarff, L.R.I.B.A.
I. L. James, L.R.I.B.A.

Rural Houses

SIR,—I am glad Mr. M. W. Jones criticized my letter on rural houses because his remarks emphasize the fundamental problem which an architect must face in building cottages for farm workers.

Mr. Jones does not think a farm worker's job is consistently dirty. I suggest he should try 12 months' practical experience instead of merely occupying a cottage intended for a man engaged on the work.

In rehousing city slum people we no longer say, Don't give them baths: they will only use them for coal. I know that the more intelligent farm worker does have a bath after dirty work, just as the more civilized miner uses pithead baths, and I can produce many women witnesses who dislike the bathroom upstairs for this reason. I see no objection to putting a w.c. on the first floor, and by all means give a parlour if you can afford it, but not at the expense of the kitchen, and why make more work for the housewife by placing the sink in another room. The latter is reminiscent of pre-1914 planning.

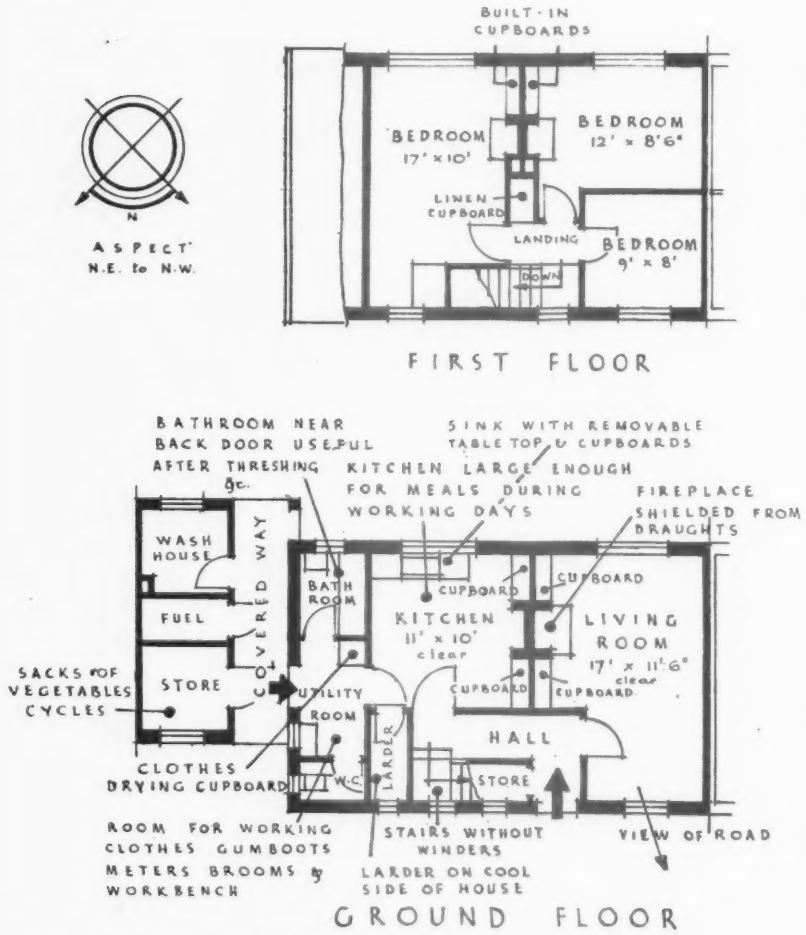
On the questions of larders and fuel stores, I leave your readers to judge for themselves.

BERNARD LOWE

Wallsend

SIR,—After the attack by Mr. M. W. Jones on Mr. Bernard Lowe's excellent plan for rural cottages, I feel some words of defence are called for. Mr. M. W. Jones claims superior qualifications on the grounds that he has " lived in an agricultural worker's cottage for 16 years . . . " and that " it is evident that two years' sojourn in the country is not enough." May I point out to Mr. Jones that he, as well as I, know some people who have lived in houses and in towns for 60 or 70 years and are yet not qualified to advise on either ?

(1) *Bathroom downstairs.*—I contend Mr. B. Lowe is perfectly right in putting the bathroom downstairs. It serves, amongst other things,



Plans of houses for rural workers, by Bernard Lowe. See letters from Bernard Lowe, Mrs. Marienne Walter and Kenneth C. Scarff.

for frequent washing of small, daily washed articles of infants for which neither sink nor copper is suitable, as well as frequent washing of the infants themselves. They are bathed—the cooking being watched at the same time—and when being put to bed their dirty things need not be carried through the whole house first. Mr. Jones writes that his country friends won't be induced to bathe more often than once a week—surely one factor in this attitude is the fact that the kitchen sink is downstairs and the bathroom upstairs.

(2) *W.C. downstairs.*—Here again Mr. Lowe is right. An infant needs its mother's help up to the age of 4, and it needs it roughly seven times (or more) a day. Has Mr. Jones ever tried to prepare a meal and clean a house while having two infants under 4 on his hands? If so, he will see my point.

(3) *Slop-sink.*—This advantage is offset—as Mr. Jones rightly observes—by occasional illness. It seems therefore that Mr. Lowe's plan would be improved by the small but necessary item of a tap and slop-sink on the first floor.

(4) *The kitchen-living-room complex* deserves an article by itself and can only be touched on in a letter. I take it Mr. Lowe's plan was inspired by the Housing Centre plan. At occasions of illustrated lectures to women, I have asked about 40 to 50 Yorkshire country housewives for their views on the Housing Centre arrangement (comparing it with other plans) and without exception it was thought to be admirable. It does offer privacy if wanted (Mr. Jones thinks it does not) since the kitchen is a small living-room in itself. (I should actually prefer it slightly larger.) Mr. Jones's criticism of the living-room fire can also very easily be met by putting in a back-to-back type range which is very popular.

As it happens I have lived for more than 16 years in the country-side (altogether in four different countries) and despite the marked hesitation of the peasant to adopt new habits, I can assure Mr. Jones that the production, for instance, of shining, coloured sanitary ware has brought about surprising changes in the habits of quite remote Balkan peasants within few years.

(MRS.) MARIANNE WALTER

Sheffield

SIR,—I endorse the criticism made by Mr. W. M. Jones. Having actually lived with all classes and conditions of people—from farm workers, labourers and tradesmen, to professional gentry—I agree with him how necessary it is for an architect intimately to understand the customs, habits and ways of living in various walks of life. Only by this understanding can the architect design and plan with any degree of thoroughness so that these varying standards can be sensibly (and not extravagantly) raised.

In Mr. Lowe's worker's cottage, the living room, approximately 12 ft. by 17 ft., extends from back to front of the cottage, it has two doors and one side is planned as a passage from the front door to the kitchen or scullery. Such a living room will be most uncomfortable, will give neither warmth nor peace, and the walk through from the front door to the scullery wastes 51 sq. ft. (17 ft. by 3 ft.) of floor space. Imagine a modern living room like that for husband and wife and four children?

A parlour, however small, is most desirable. The lack of one, as Mr. Jones states, drives the young members of the family to the adjacent hedge or barn to do their courting. The lack of one also gives no refuge for elders to smoke and have forty winks. A parlour not only overcomes these difficulties, but, and this is most important, it can be used as a bedroom for an aged relative unable to negotiate a staircase. For this reason and to save the wife a lot of running up and down stairs the bathroom should be on the ground floor, at the foot of the stairs, and should contain a soiled-clothes cupboard or bin. On the first floor should be a w.c. with an adjacent sink, in which the slop utensils can be washed and thoroughly cleansed. An external ground floor one is also most necessary.

It is hoped that this age, having redesigned and rebuilt cottages for agricultural workers, will give the suburban dweller a measure of modern thought in the replanning of his villa, such as the provision of a draught proof lobby or porch to front and back doors, and a kitchen or kitchenette that does not also serve as a passage to the back door.

KENNETH C. SCARFF

Colchester

Prefabrication

SIR,—Some years ago the *Architectural Record* reported that President Roosevelt in a talk with Mr. Walter Chrysler, the motor-car magnate, asked him how much it would cost to produce a cheap automobile, one costing about 600 dollars under mass production methods, if the car were built piece by piece in a machine shop. Mr. Chrysler estimated the cost at about 3,500 dollars. Mr. Roosevelt then pointed out that all house construction is still done by the machine shop method and home owners go without the benefit of the economies of mass production.

This observation is of particular interest to-day in this country where rather timid approaches are being made towards the subject of prefabrication and mass production in an effort to help solve the grim problem of industrial housing.

It is contended by many that to construct houses by the old hand-made method of assembling hundreds of thousands of small parts together on sites exposed to the vagaries and delays of the English climate is outmoded and outdated, and that when a great number of units are wanted in the shortest possible time at the lowest possible cost, science has found no other way than machine mass production. The problem, indeed, is too great that there should be but one road to the answer.

So it is permissible to assume that some form of modified mass production either of kitchens, bathrooms or sectional assembly units is going to be considered by many alert, progressive communities, and already Coventry has come forward with experimental houses on these lines. It seems to me that in a small country like England, if the subject is going to be considered at all, it should be on a national and not a parochial scale. If several authorities are each going to design and experiment on their own without any collaboration, there will be enormous duplication of effort, with the result that when put into practice there will not be enough units of any one particular product made to justify mass production methods and the setting up of the necessary plant.

A national competition for the design of different types of industrial houses, embodying mass production and prefabrication principles, would seem an interesting approach, and would tend to attract the best and most progressive brains to a subject which desperately needs them.

I. L. JAMES.

Liverpool.

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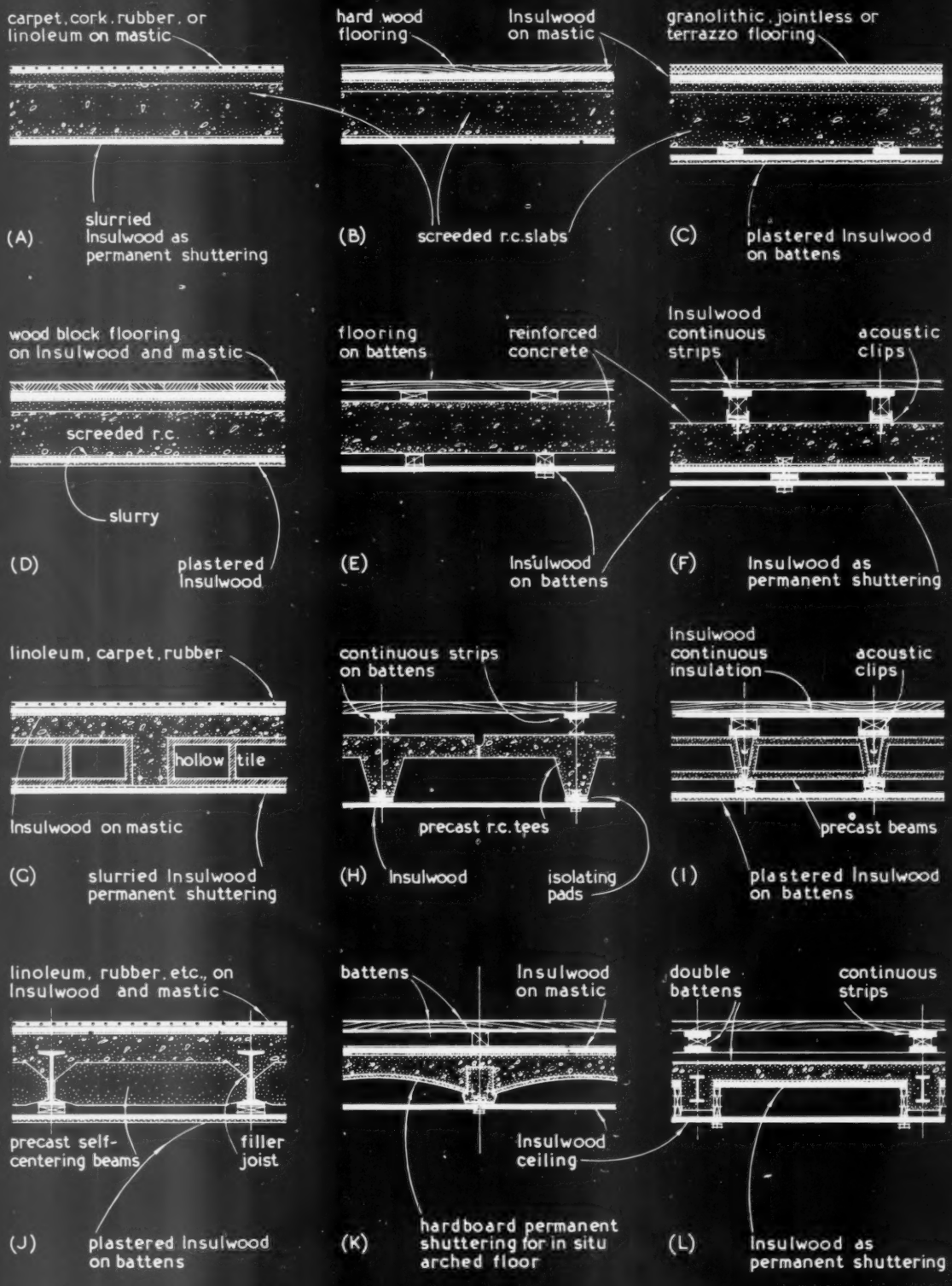
CONSTRUCTION OF TYPICAL SOUND-INSULATING SOLID FLOORS.



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INFORMATION SHEET: FIBRE BUILDING BOARDS 17: SOUND-INSULATING FLOORS (2).
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INFORMATION SHEET

• 931 •

BUILDING BOARDS

No. 17

Subject : Sound Transmission Reduction. Structural Detailing : Floors 2.

General :

This Sheet is the second of a group giving examples of structural detailing for sound transmission reduction, and illustrates typical solid floors.

For information on the principles of sound transmission reduction by structural discontinuity, see Sound Transmission Reduction by Structural Isolation : Sheets Nos. 12, 13, 14 and 15 of this series. ½ in. Insulwood is used both as a sound absorbing and isolating medium, in the constructions illustrated.

Sound Transmission Reduction :

A reduction in the amount of sound transmitted by an insulating barrier may be effected : (*a*) by reflecting the sound back to the source ; (b) by providing for the absorption of the sound energy within the barrier ; or (c) by preventing by structural discontinuity, the sound vibrations in the side of the barrier adjacent to the source, being transmitted to the " quiet " side and setting in vibration that air in contact with the " quiet " side.

A measure of Sound Insulation may therefore be effected either by confining the sound to the source, or by absorbing it within the structure separating the source from the " quiet cell."

In designing for sound transmission reduction it is essential to consider buildings *as a whole*. No degree of efficiency in the detailing of—say an internal partition between two rooms—would appreciably reduce the amount of sound transmitted by walls or floors continuous with the two rooms.

The diagrams illustrated on this and other Sheets of the group are primarily intended to indicate solutions to the type of practical structural problem which arises. The above principles are exploited in varying degree, in the examples illustrated, but the efficiency of any *detailing alone*, will not result in 100 per cent. sound insulation. Further, the insulating properties of any given barrier must necessarily vary with the predominant frequency, and amplitude of the sound against which insulation is desired.

Insulwood :

This board belongs to the low-density range, and has a sound absorption coefficient of 0.26 at 512 cycles per second.

The waterproofing process undergone by the board during manufacture ensures both a dry medium, and the rejection of any atmospheric moisture.

The material can be left in its natural state, or distempered, painted, enamelled, coated with plaster, or paper, etc. It may be used as an underlay and as a permanent shuttering to concrete.

Sizes, weight and other physical properties are given in previous Sheets of this series.

Detailing and Application :

The constructions illustrated suggest methods of overcoming the technical detailing problems which occur. For further information on fixing Insulwood under various circumstances, see Pimco systems of metal ceiling and partition fixing, Sheets Nos. 854, 858, 861, 864, 868, 872, 879, 884 ; and other Sheets of this series.

Previous Sheets :

Previous Sheets of this series on wallboards are Nos, 893. 895, 896, 898, 900, 902, 904, 909, 911, 912, 913, 916, 920, 923, 926 and 928.

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PHYSICAL PLANNING

THE JOBS TO BE DONE

The many ministries connected with physical planning have so far successfully avoided handling its most difficult problem child, the location of industry. It is a subject that immediately raises all the vital and controversial factors that the smaller problems so successfully screen. It is in its most complex and important aspect an economic problem, and one for which we must agree on some plan of campaign before we can get on with the rest of the job. O. W. Roskill emphasizes in this article the economic factors affecting the location of industry upon which some official decision must be given before the planning ball can start rolling.

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The Job

O. W. Roskill whose article on the Location of Industry is published this week is an M.A., and a B.Sc. (Oxon). He was laboratory assistant to Dr. Bergius, inventor of the coal hydrogenation process. Imperial Chemical Industries (Intelligence Department) 1929-31. Senior partner O. W. Roskill, Industrial Consultants (1931-). Seconded to Ministry of Economic Warfare, 1939-41. He is author of numerous papers on industrial economics and allied subjects.

WE MUST SURVEY AND PLAN THE LOCATION OF INDUSTRY

by O. W. Roskill

The location of industry is not a single problem but has proved a focusing point for a number of large-scale and intractable economic problems of which the following are examples.

(i) The location of a particular works must first be considered from the point of view of the individual industrialist. It is sometimes forgotten when discussing the subject that the location of industry begins when an industrialist decides to erect or expand a works. Often enough the choice of location is largely fortuitous, a standard example being Mr. William Morris in his bicycle shop in Holywell, Oxford, who probably did not choose Oxford (or Cowley) as being locations peculiarly well suited to the requirements of his business. He lived and worked there and it was natural to him that his business should be established there, and not in South Wales. The importance of this aspect can scarcely be overstressed even in times such as these when the average size of industrial undertakings is gradually increasing. All too often those who are outside industry tend to think of industry as being composed of I.C.I., Levers, United Steel, Associated Electrical Industries and a few other such giants, forgetting that prior to the war one-third of the total number of persons employed in factories worked in factories employing less than 100 persons. Well over two-thirds worked in factories employing less than 500 persons—and a factory employing 500 persons is not a big one, even on peace-time standards. In 1936 there were only 519 factories in the country employing over 1,000 persons. It is probably true to say that until recently at any rate it was rare for an industrialist starting a new works to consider carefully all the factors affecting its location and to choose carefully the best of several alternative locations. While such influences have perhaps been overstressed, there is no doubt from many practical examples that factories have often been established in the London area, for instance, because the industrialist concerned wished to have the social amenities of London life open to him. Social environment is closely bound up with industrial location. Some of the factors affecting location from the point of view of the individual industrialist are discussed below.

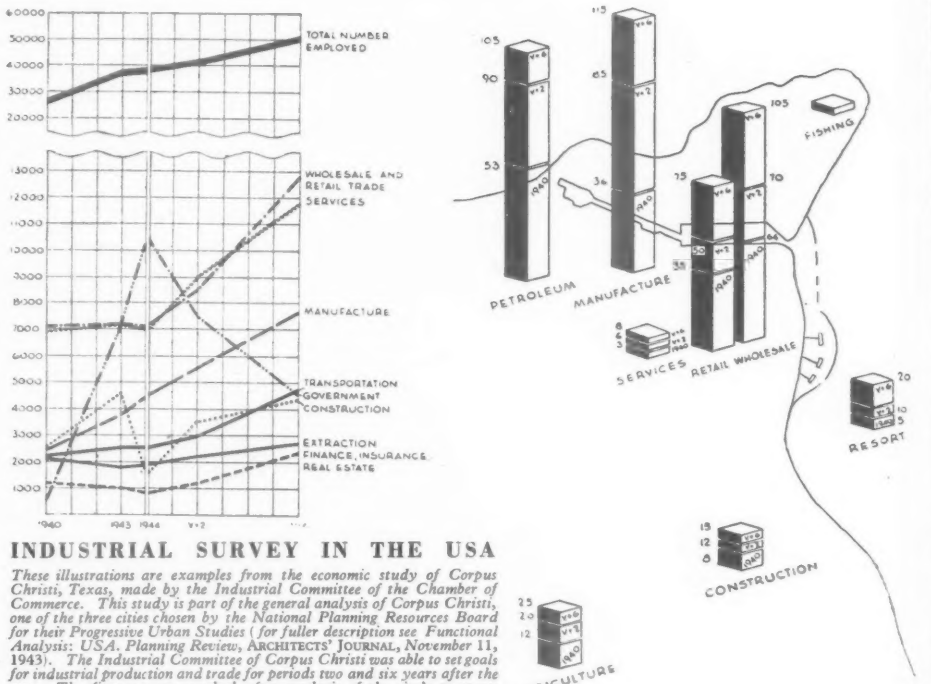
(ii) That the State has an interest in the location of industry has only recently come to be recognized. In December, 1931, which is when the vast literature of this now well documented subject seems to have begun, it was necessary to explain that for a number of reasons there was a drift of industry to the South which was resulting in grave social problems in certain parts of the country where employment was at an exceptionally high level. It seemed clear then

that Government action would be necessary to deal with this problem. The regional approach was in fact more a social than an industrial one, and, for instance, Mr. Peter Scott's Brynmawr Experiment on subsistence production was primarily an *ad hoc* effort to cope with the appalling social decay, and only later became linked up with wider problems of industrial location. It was becoming clear, however, that *laisser-faire* was leading to congestion in certain areas from excessive industrial development—instance the pre-war reports of the London Passenger Transport Board—while in other areas permanent unemployment at a high level was resulting from complete stagnation of new industrial growth. It was against this background that the Special Areas (Development and Improvement) Act was passed in 1934 in order to make a start with a policy of social reconstruction in some of the worst hit districts. Some further reference is made later to the whole question of social costs in industry but it may be pointed out here that the taxpayer and ratepayer are at present in the long run responsible for the social services which have to be provided in rapidly developing industrial areas and which have become redundant in derelict areas. The State, in other words, has a very big interest in the maintenance of a proper balance of industrial growth.

(iii) But there is another point of view, also concerning the State, of a more constructive rather than regulatory nature. This concerns the proper use of land, natural and industrial resources of the country. Here it is possible to turn for ideas to the USA where the National Resources Board has done immensely valuable work. In this country very little factual information has been collected and even less progress made in the direction of getting it used. Some exceptions are the Land Utilization Survey, the Coal Resources Survey of the Fuel Research Board, the Inland Water Survey, the Geological Survey (nearly always out of date through stinting of funds for this all-important work). In any case such work is generally looked on from the point of view of natural resources rather than the point of view of industrial resources as a whole, a curious mistake when the factors affecting the location of a works are examined—in many cases linkages with other industries play a much more important part than do natural resources. This is quite evident when it is considered that the extractive industries comprise only a comparatively small proportion of the total industrial production of the country. The importance of industrial surveys has been recognized in the depressed areas, and some immensely valuable work has been done. While examples may be invidious, special reference may be made to the work of Professor G. H. J. Daysh in Cumberland and the North East Coast, and Professor H. A. Marquand in South Wales, and to that of the Scottish National Development Committee. Industry is constantly changing—much more rapidly than some economists are inclined to recognize, and it is of the utmost importance that survey work of this kind should be kept constantly up to date and made available to industry in general in a form in which it can be used. It is very understandable that despondency should be expressed at the apparent prospect of the Government using further surveys as an excuse for inaction, a point recently made by Lord Ridley in connection with the new series of surveys started by the Board of Trade, but this does not lessen the importance of the survey work. It is difficult to see, however, why it should be confined to the former Special Areas, and indeed Nuffield College have attempted to cover the whole country, though the results of these surveys are not available to industry. Some far-sighted Members of Parliament, too, have organized surveys of their constituencies, though limitation of funds has generally restricted their scope. This again, in passing, is a comment on much recent survey work, that its value is greatly reduced unless it is conducted by persons with a knowledge of industry and is made available to industry. Security measures are no longer a valid excuse save in exceptional cases, and even if the USA is further from the firing line, a lesson might be learned from the recent lifting of the ban on the publication of much useful industrial information.

industry and the town planner

(iv) The relation between town and country planning and industrial location is a very delicate subject. The majority of people connected with town and country planning have, broadly speaking, a background of architectural education (with a smaller number of geographers). It is true that some institutions have made a great effort to broaden the basis of the former, instance the pre-war work of the School for Planning and Research for National Development. While the case is clear for State concern with the location of individual works, it is necessary to enter a caution against the location of individual works being controlled by town planners with little knowledge of industry. It is, for instance, possible to envisage a broad decision that a new works for domestic hardware manufacture should go to one of the Special Areas and not be allowed to establish itself in the Birmingham area, the traditional location for the industry. It is in the first place most important that such a decision should not be taken without the closest possible investigation of the competitive position of such a works *vis-à-vis* those around Birmingham. In some cases there is no doubt that a works could be as economic in a Special Area. In others (where for instance the linkages with other industries have a greater influence on costs) this may not be the case. More important still, however, a works must be given the greatest possible freedom of choice as regards the area to which it goes (e.g., any of the four principal Special Areas) and as regards detailed siting within the chosen area. Cases are known—even quite recently



INDUSTRIAL SURVEY IN THE USA

These illustrations are examples from the economic study of Corpus Christi, Texas, made by the Industrial Committee of the Chamber of Commerce. This study is part of the general analysis of Corpus Christi, one of the three cities chosen by the National Planning Resources Board for their Progressive Urban Studies (for fuller description see Functional Analysis: USA. Planning Review, ARCHITECTS' JOURNAL, *November 11, 1943). The Industrial Committee of Corpus Christi was able to set goals for industrial production and trade for periods two and six years after the war. The figures were reached after analysis of the city's prospects viewed in relation to resources and its competitive position regionally and nationally.* (New Pencil Points, *August*, 1943.)

—where attempts have been made to induce a new works to move into existing premises in a particular area, which, though quite good premises, may not be well suited to its requirements. Such attempts are going to benefit neither the company concerned nor the State.

Some stress has been laid on the dangers of excessive control of industrial location by town planners since that seems to be a direction in which events might move. There is little need to emphasize the vital importance of ensuring through the town planning machinery that brickworks are no longer erected within a few yards of ancient monuments nor tanneries emitting noxious smells in the centre of a residential district.

industry and regionalism

(v) Finally, the whole question of industrial location is closely linked with that of regionalism. It is difficult to see how any practical steps can be taken without involving also the overhaul of local government areas and machinery and the widespread introduction of the concept of regions which has, of course, had a big stimulus during the war (Civil Defence Regions; regional offices of the Supply Ministries, etc.). It is unnecessary to enumerate many examples of this. It has long been recognized that water supplies must be handled on a regional basis if proper conservation and utilization measures are to be planned. Water supplies are a more important natural resource, and a more important factor affecting location than is commonly recognized (they are of vital importance in siting paper mills and electricity generating stations, for instance, and location of power stations has an important influence on the location of industry generally —witness the big power-using units round the main generating stations).

Reports on the post-war reconstruction of the gas and electricity supply industries give clear indication of regional outlook in the case of the former and in some sections at least of the latter industry. There seems to be no way of dealing with the problem of amenities and national parks except on a regional basis, and this is an aspect affecting industrial location which receives perhaps more stress than it deserves owing to the strength of feeling on the part of every citizen who loves a piece of country, whether it be in the Lake District, the Highlands or North Wales, and views with alarm the incursions of industrial development.

Reference has been made to the factors governing the choice of location. Before enumerating some of the more important of these, it may be well to stress the fact that only in comparatively few cases do industrialists have to set out to consider the location of a works.

the location of industry

The main factors affecting location are raw materials, labour, siting and services, access to market, and finance. Raw materials, as already mentioned, do not necessarily mean natural raw materials. The proportion of the total industrial output which reaches the ultimate consumer in the form in which it leaves the works is relatively small. The product of one works is the raw material of another, and hence the importance of the investigation of linkages between one industry and another which was started in the PEP report on "Location of Industry in Great Britain" (March, 1939) and has been carried further by Professor P. Sargant Florence. The important point is the total cost of all raw materials delivered to the works, and reliability and quality must, of course, be considered along with cost. Labour is a less important influence in locating industry than was formerly the case, mainly because the whole trend in industry has been away from large-scale use of craft labour. The psychological outlook of labour may be a matter of great importance in certain areas where the attitude has, unjustly perhaps, come to be regarded as unreasonable, whether because of the outlook of the men themselves or their Union leaders. This may well be a result of years of friction for which the men are certainly not alone to blame and a visiting of the sins of their fathers. At the same time many good employers have had unfortunate experiences.

The factors of siting and services vary widely in nature. The obvious physical ones of subsidence, flooding, subsoil, climate are, or should be, always considered by the engineers responsible for siting and construction; accessibility by road, rail or sea is often a major consideration; ready availability of transport and utility services is often very important, partly because of the time and trouble necessary to bring them to a site not already served. This is one of the principal arguments in favour of trading estates which offer good services ready for use. In a certain number of industries using large quantities of fuel or power the proximity of coal mines, cheap gas, e.g. coke oven gas, and cheap electricity may be governing factors. Sometimes ability to discharge effluent is essential.

The importance of markets is very great and is one of the factors which has operated against some of the Special Areas and, on the other hand, has tempted some of the latter in the direction of a narrow economic nationalism. "Why," they argue, "should we buy boots and shoes from Leicester or Northampton when we could have our own factory here?" Both this and the transport factor mentioned under services are closely connected with the whole railway rates structure and indeed this is another of the intractable large-scale problems closely connected with industrial location. To change the railway rates structure for reasons connected with location of industry might seem far fetched, yet without radical changes it is difficult to see the implementation of some sound recommendations which have been made.

As regards finance, it is only necessary to say that industry tends to go where there is money, and in the pre-war decades money was in the South, partly the snowball effect of the progressive and lighter industries developing in the South far more rapidly than the North, and partly because after the last war many North Country manufacturers sold out, pocketed their war profits and retired to Bournemouth. The Nuffield Trust, the Special Areas Reconstruction Association and Treasury Fund have all done magnificent work in reversing this tendency. Some merchant banks (particularly the smaller ones who have not considered it a blot on their escutcheon to be connected with the financing of British industry instead of the more respectable occupation of financing South American Governments and providing acceptance facilities for international trade) have also done good work, but it is a comment on industrial finance facilities available before the war that it is believed that the first two of these associations have shown a favourable balance on their activities despite the fact that they were established with the sole purpose of aiding the areas in question. The Nuffield Trust has recently given the surplus of £300,000 to King Edward's Hospital Fund.

the Barlow report

It is scarcely possible to review here the findings of the Barlow Report (Royal Commission on the Geographical Distribution of the Industrial Population) issued in March, 1940. This consisted in effect of a report and three sets of recommendations, those of the majority, those of the minority and the reservations by the majority. The National Industrial Board envisaged by the majority seems in retrospect somewhat timid and slow moving. The functions of this Board were to collect information, to carry out research into the location of industry, to advise the Government, local authorities and industry about the problems of industrial location and to undertake publicity. The Board was also to have powers from the outset to veto any industrial developments in London and the Home Counties. The sequence of operations involved suggested making haste rather slowly. After the Royal Commission (which took its first evidence in 1937) Parliament was to create a National Industrial Board, the Board was to consider its functions and then ask for further powers which, having been granted by Parliament, would enable it to begin its task. The views of the minority report in favour of the control of the National Board by a Minister of Cabinet rank, with power to schedule prohibited areas for new industrial development and encourage desirable locations by grant or loan, seem to come closer to the work at present being done by the Board of Trade and the Ministry of Town and Country Planning, though it remains to be seen whether the Location of Industry Order will be con-

tinued in its present form after the war. Nor is there any clear indication of which of the two alternatives — inducement or control—for influencing location will in fact be adopted. In the event a compromise may result and both be used to some extent. Like the Scott Report, which along with those of Barlow and Uthwatt are under consideration by the Government, the Barlow Report may be found to have been of greater value in fact-finding and in collecting evidence and information than in its proposals. Cases where the findings of a Royal Commission have been implemented are rare enough in any case and the lack of unanimity in the present instance makes implementation no easier. The war, too, has changed the circumstances in which the recommendations were made.

research and development

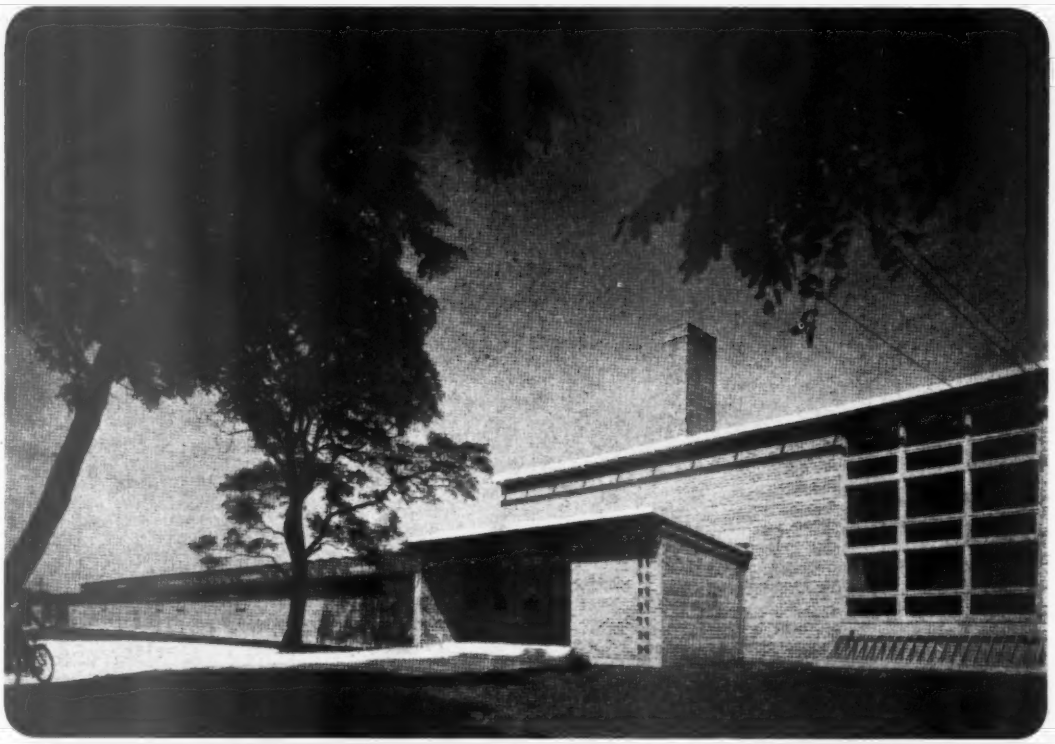
Another very wide problem closely interlinked with that of industrial location is the problem of industrial flexibility, which goes right to the bottom of industrial structure and political thought. A great many of the troubles of the Special Areas have been due to a high degree of dependence of the area on one or two industries followed by the decline of these industries—whether from causes outside or within their control. Naturally the industries concerned tend to regard the causes as outside their control and in the case of cotton, for instance, it is difficult to take an entirely different view. In the case of coal it is probable that the industry could have done much more by its own efforts had it recognized the problems and their possible lines of solution early enough. Nor is it at all certain how far the steel industry in this country is efficient judged on the highest international standards. Hitherto, when the fortunes of an industry have declined, the tendency has been to consider every possible method of bolstering them up through the whole gamut of tariffs, subsidies, redundancy schemes, minimum prices and reduction of wages. The emphasis on the contrary should be on the most rapid possible method of cutting our losses from the national point of view, and putting the industry on to the scale of production justified by the demand for its products. This is closely connected with the problem of the closed shop which cannot possibly be discussed here. Before it is possible to bring about the rapid and organized reduction of the capacity in an industry it is necessary to ensure control of entrants. Every industry tends to want a closed shop, and control of entrants should be permitted only in extreme cases for limited periods and with close Government control of profits and prices. But it is not enough to enable the depressed areas to get rid of the millstone of semi-derelict industries which hangs round their necks. An energetic research and development policy is also necessary. It would scarcely be thought from the enormous output of literature on research which has been characteristic of the last couple of years that any new slants would be possible, but the only consideration which has been given to research in the interests of a region is the plan for South Wales reconstruction put forward by Mr. W. C. Devereux. Research in the interests of a region must cover both the technical and economic fields, and not only must the economics be sound for the industry and sound for the region, but they must also be related to the economic position of the country as a whole. Thus, for example, Mr. Devereux's plan envisages the production of alumina from shale in South Wales. Technically there is no question as to the possibility of this process although it is comparatively new. No company would be likely to try it out unless they were in the position of wishing, for whatever reason, to make themselves independent of supplies of imported bauxite or unless they had particularly good reasons for supposing the cost to be below that of imported bauxite. It is by no means certain that the cost would be below that of imported bauxite although recently the process has been put into operation on a commercial scale in America and the results should throw light on this point. But there may be very good reasons from the regional point of view for investigating the economics of the process and trying it out. This does not, of course, mean the advocacy of economic nationalism or that the process should be operated even if it has a higher cost than other processes (except perhaps as part of a national policy to reduce the use of imported raw materials in the event of the difference being marginal). It does, however, mean that the economics of many processes remain in doubt until they are first investigated with the greatest possible care and secondly tried out in practice; and this might never happen without research and development undertaken in the interests of a region as such. Examples of this kind could be multiplied. There is in this country no well-defined maker of very heavy engineering plant such as very large presses, rolling-mill plant, forging plant, extrusion plant, etc., of the type made by the firm of Demag of Duisburg. To start such an undertaking in this country would be a big step to take and it is unlikely that any existing engineering concern would purposely go out to compete with Demag. On the other hand it is the type of work which would be well suited to the industrial economy of the N.E. coast and it might well be worth while for research from the regional point of view to be carried out on the subject. Nor does research necessarily mean men in white coats with test tubes, nor yet back door questioners about the morning paper read or the type of toothbrush used by the housewife. There is a big gap between the valuable regional surveys which have already been referred to and the existing industry of the region. It is to be hoped that more work of the kind started by Mr. Devereux will be undertaken. It has already been pointed out that while some of the Special Areas have benefited by the war—this is probably the case with South Wales—others may even have suffered. Thus the N.E. coast got few of the new Government factories early in the war owing to the danger from bombs, and areas where there are big filling factories which are certain to be shut down after the war, will not have derived much long-term benefit from them. A large part of the problem remains and plans must be made.

trading estates

It is not possible to enter into a discussion of trading estates and their influence in attracting new industries. There are undoubtedly many smaller industries and some larger ones where the existence of ready-for-use facilities and even standardized buildings on lease is a major attraction. As Professor Holford has shown, there is scope for the architect here in studying the requirements for different types of factory and supplying them. In West Cumberland, although there is the Solway Trading Estate at Maryport, Mr. J. J. Adams has tended towards the view that money is best laid out in developing good industrial sites which need not necessarily be in close proximity to one another. This may be particularly the case in an area like West Cumberland, with a long belt of coast line much of which has been industrialized. There are, of course, many different types of trading estate. Apart from the main Government-financed estates at Team Valley, North Hillingdon, Treforest and Solway, and some of the smaller Government estates such as Pallion and St. Helens Auckland, there are the private enterprise estates like Slough and Trafford Park and those which have been less consciously planned such as Park Royal. There are also estates connected with town planning schemes such as Welwyn and Letchworth. In general, however, centres of population should be planned around the industrial sites where the population is to work rather than making a garden city and attracting industry to it, though the latter will always be possible to some extent in the case of industries which are not tied to any particular location.

social and economic factors

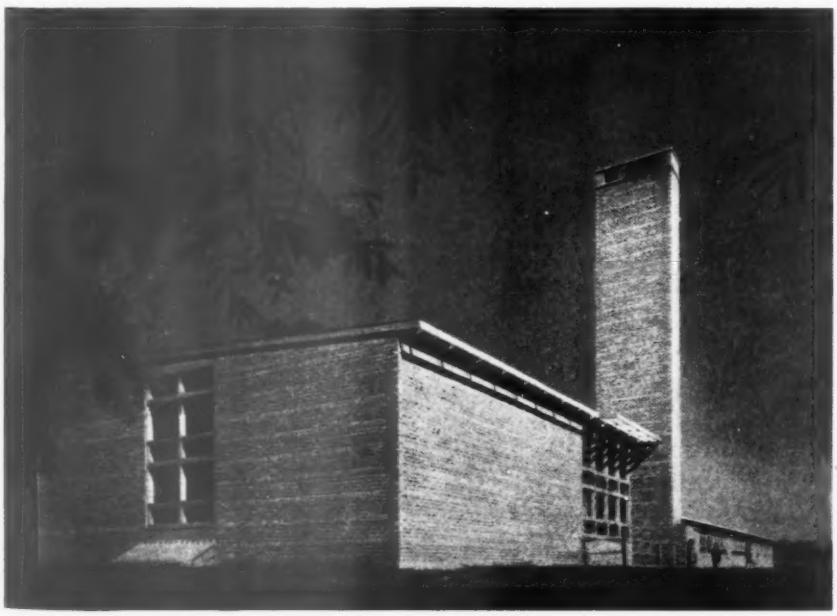
It is true that in the past industrialists have been inclined to turn a blind eye to the social implications and results of their activities. There have always been exceptions to this and equally there will always in every walk of life be people who are insensitive to the impact of their actions on others. But in the main the social responsibilities of industry are becoming better understood. The problems of industrial location are partly social problems but with the increasing stress laid on the latter it is important not to lose sight of the economic factors affecting location.



SCHOOL

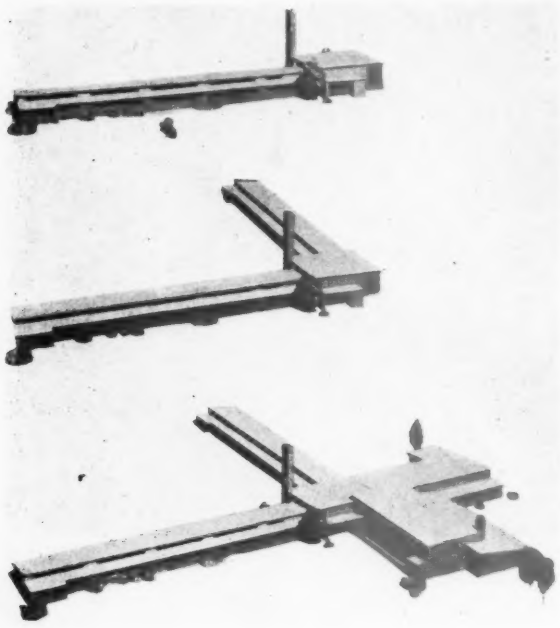
AT GLENVIEW, ILLINOIS

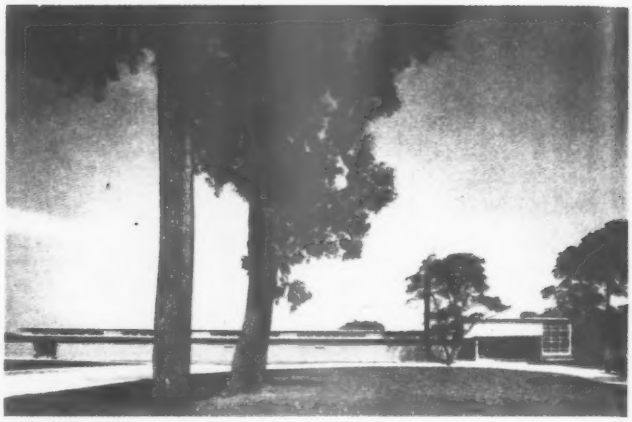
DESIGNED BY PERKINS, WHEELER AND WILL

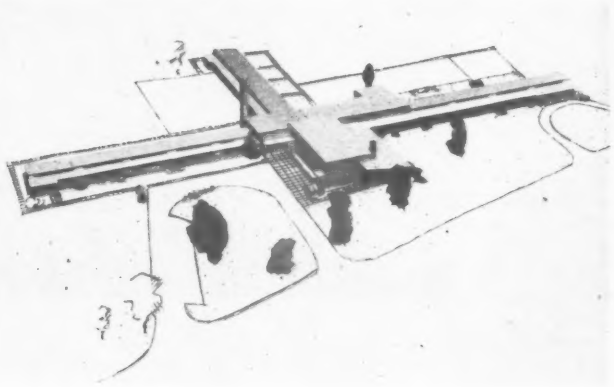


A short time ago a school survey, made for the local Board of Education, indicated the advisability of consolidating districts and providing new facilities. This school is part of the long range plan. The war, which in so many cases has prevented the implementation of such planning, here provided a stimulus for realizing it. The result, according to *New Pencil Points*, from which the accompanying illustrations are reproduced, is a school meeting many of the desires of advanced educators: extremely high level natural lighting, bilateral and glare free; classrooms with auxiliary units designed for efficient but unobtrusive supervision; a one-storey layout, which helps to reduce first costs; carefully thought out heating and ventilating; gay use of colour; and freedom for class seating arrangements—to mention a few. All materials that could be

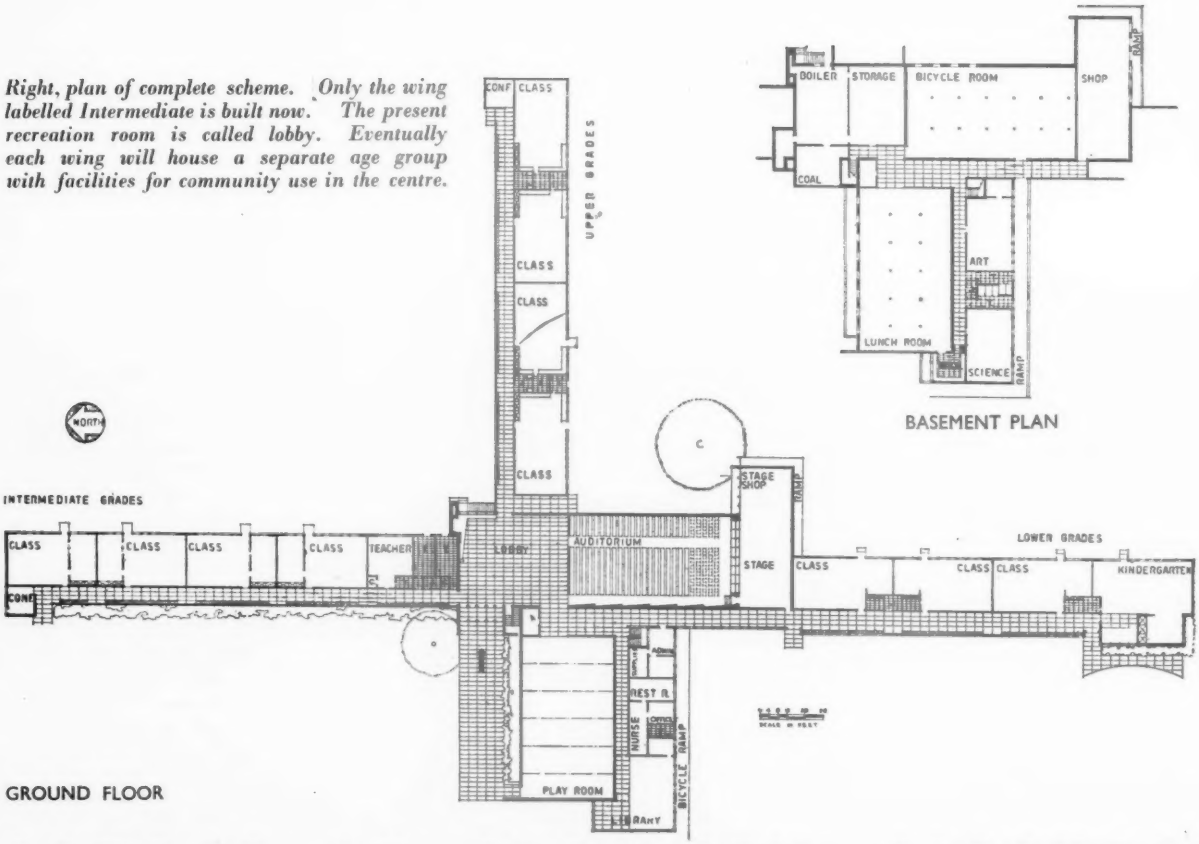
Below and right, models of the four stages through which the school is expected to go. As experience accumulates, details of design, or even the complete scheme, are subject to modification ; but the groundwork has thus been laid for a development which is reasonable in the light of Glenview's predictable future. Centre right, a view of the entrance front so far erected.







Right, plan of complete scheme. Only the wing labelled Intermediate is built now. The present recreation room is called lobby. Eventually each wing will house a separate age group with facilities for community use in the centre.



SCHOOL AT GLENVIEW, ILLINOIS

used from a previous school, demolished in the district, were incorporated in the new one. The brick is new; it is reddish brown in colour, and is left unsurfaced on the interior. Asphalt tile, slightly darker, covers the concrete floors. Interior partitions are wood, left nearly a natural colour; they are to be used as a tacking place for exhibits.

It should be noted that when this building was designed lumber was plentiful, and a design to conserve critical materials made use of it instead of steel.

The material situation was, of course, a matter of concern to the architects. But they did not permit it to become an insurmountable hurdle. The school had to be built; it had to be good, for it was part of a well-organized permanent scheme. So the necessity for using wood became merely another factor to be used to advantage in design, along with such requisites as planning for the minimum which could house a growing community's needs, providing for later expansion, and fitting the building to the School Board's purse.

The recreation room (above and below) is so designed that when the school is expanded it can become a community living-room, serving as a library, social room and recreation centre. It illustrates several ideas used in one form or other throughout the school. For instance, the ceiling, painted a clear yellow white for reflectivity is visually carried through the windows under the eaves; windows extend up between the ceiling beams to admit maximum light; curtains terminate at top transom bar; and the facia boards on the ends of the rafter outrigger not only cover the gutterless eaves edge but act as a sunshade for the uncurtained top of the window when the sun is low. This wing is oriented east and west.

INFORMATION CENTRE

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

PHYSICAL PLANNING

1391 USA Town Survey

MINNESOTA TOWN PLANS FOR PEACE. (*The Reader's Digest, February*, 1944.) Inventory of post-war needs prepared by citizens of Albert Lea, town of 13,000 in South Minnesota.

This sample survey was suggested by the Committee for Economic Policy of the United States Chamber of Commerce.

The plan's committeemen first found out how many workers the 11 local industries would need when they reverted to peacetime production. This information was given to every shoe merchant, hardware dealer or other employer in Albert Lea. Thus these men were enabled to calculate their own post-war employment needs.

Housewives completed forms stating not what they hoped to buy after the war but what they definitely would buy and how they meant to pay for it—through current earnings, credit, or savings.

Farmers throughout Albert Lea's trading area were asked by mail what improvements and expenditures they contemplated.

The results of the surveys were tabulated by professional statisticians and analysed by professors from the University of Minnesota's School of Business.

It appeared that about 600 new jobs would be needed ; but, now that the leading furniture dealer knows that 2,154 families wish to buy furniture immediately after the war, he will take on three or four more men than he had planned : as 2,296 new cars are wanted the automobile agency will need more mechanics and salesmen than he'd estimated : as 592 families want to build new homes the building contractor will have to double his construction team.

The plan cost Albert Lea less than 150 dollars. It can be copied by almost any community up to 30,000 population. With minor revisions it is applicable to cities of any size.

The problem of post-war jobs is of the utmost importance. Big business alone cannot provide them ; 90 per cent. of the 2,000,000 employers in America employ less than eight persons. In Great Britain the proportion is about 60 per cent.

1392 WAHC Housing Report

THE YOUNGER WOMEN'S NEEDS IN FUTURE HOUSING. (*Report from the Women's Advisory Housing Council*, 1943, 2*s.* 6*d.*) Analysis of 2,000 questionnaires on housing completed by women in the Forces and in factories.

Half wanted to live in a suburb or small town ; 30 per cent. country ; 17 per cent. large town. Half wanted a house ; 33 per cent. a bungalow ; 14 per cent. a flat.

The following amenities are listed in order of their stated importance :—

Maternity and Child Welfare Clinic.
Health Centre.
Playing Grounds and Open Spaces.
Places of Worship.
Community Centre.
Cinema.
Nursery Schools.
Communal Laundry.
Communal Restaurant.

Two-thirds of the married women preferred a kitchenette, a medium-size living-room and a sitting-room. Only 11 per cent. preferred a large kitchen with room for meals and a sitting-room. Over half the single women preferred a kitchenette, bathroom and bed-sitting-room to a kitchenette, bathroom, living-room and small bedroom.

Over half wanted electricity for cooking ; 37 per cent. gas ; 3 per cent. coal. Nearly half wanted coal fires for heating ; 15 per cent. central heating, the rest very mixed.

The following common inconveniences are listed in the stated order of importance :—

W.C. in the bathroom.
No hot water.
Small windows.
Steep, dark or narrow stairs.
Outside W.C's.
Draughts and dampness.
Small rooms and too small kitchens.
Sinks too high or low.
Inadequate electric points.
Low or sloping ceilings.

The following major improvements are listed in the stated order of importance :—

Bigger windows.
Built-in cupboards.
Refrigerators.
Gardens.
Electric washing machines and vacuum cleaners.
Constant hot water.
Rounded corners.
Telephones.
Tiled kitchens.
Service hatch.
Planned kitchens.
More storage space.

The first requirements of a home were said to be peace, comfort and privacy.

STRUCTURE

1393 Timber Arches

LONG SPAN ARCHES FOR MODIFICATION CENTRE. (*Engineering News Record, October* 21, 1943, *pp.* 632-635. *New Pencil Points, November*, 1943, *pp.* 64-66.) Laminated timber arches of 177 ft. and 157 ft. 6 in. span used in hangars.

Some of the longest laminated timber arches ever erected have been installed at a Midwest airbase modification centre. Arches of 177 ft. span at 10 ft. centres were used in two hangars and of 157 ft. 6 in. span in six hangars. The arches were delivered in three sections of about equal length and assembled on the ground. To raise a full 177 ft. arch, which has a rise of 57 ft. above floor level, a truck crane and a crawler crane, both with 75 ft. booms, worked together. In an eight-hour day the two cranes erected two to four arches complete with bracing.

1394 Steel Tubes

STEEL TUBES FOR STRUCTURAL WORK. (*Tubewrights, Brook House, Park Lane, London, W.*1.) Specifications and data.

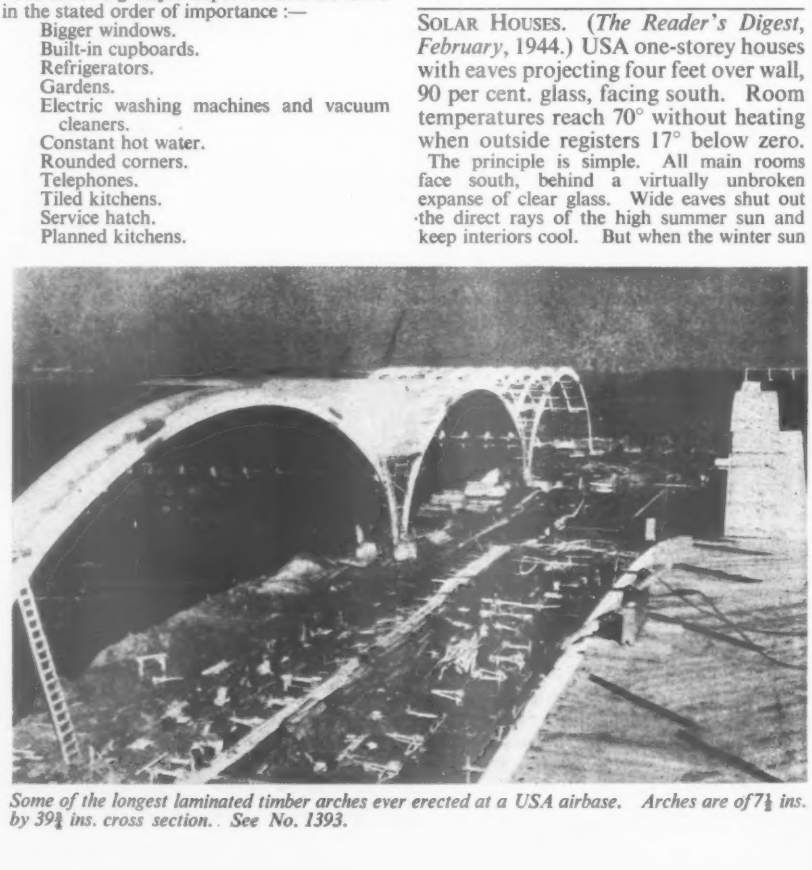
The proper use of steel tubes for structural and other fabrication purposes enables weight to be reduced without loss of strength, or greater strength to be obtained without increase in weight. Tubes are particularly suited for compression members.

The booklet contains tables and monograms giving the properties and crippling loads of tubular steel sections between 13/32 and 6½ in. diameter.

1395 USA Solar Houses

SOLAR HOUSES. (*The Reader's Digest, February*, 1944.) USA one-storey houses with eaves projecting four feet over wall, 90 per cent. glass, facing south. Room temperatures reach 70° without heating when outside registers 17° below zero.

The principle is simple. All main rooms face south, behind a virtually unbroken expanse of clear glass. Wide eaves shut out the direct rays of the high summer sun and keep interiors cool. But when the winter sun



Some of the longest laminated timber arches ever erected at a USA airbase. Arches are of 7½ ins. by 39¾ ins. cross section. See No. 1393.

swings low on the southern horizon, its beams slant in under the eaves and flood the house with heat and light.

More than half the winter days in Chicago and other Midwest cities are sunny—and even on cloudy days from 5 to 50 per cent. of the sun's heat penetrates the clouds.

Night losses of heat through the walls can be minimized by the use of Thermopane, a double or triple-glazed glass with a dehydrated air space, developed by the Libbey-Owens-Ford Glass Company. Such glass, incidentally, does not frost or fog with condensation.

By 1940 G. F. Keck had designed a dozen houses embodying these principles and, in co-operation with the glass company, the Illinois Institute of Technology initiated a full year's test of one of them.

Gas bills proved to be a third under an official prediction by Institute engineers. Various other advantages appeared. For instance: electric lights were not needed for two hours after neighbours switched theirs on.

1396 *Brick Walls and Wind*

RESISTANCE OF BRICK WALLS TO WIND. *H. A. Sweet.* (*Engineering News Record, October* 21, 1943, *pp.* 630-31. *Correspondence in E.N.R., November* 18, 1943, *pp.* 734-35.) Analysis of the stability of a 50 ft. high fire-wall that failed because of a 32 m.p.h. wind. Inadequacy of building codes.

A 50 ft. high brick firewall was destroyed by a wind of 32 mph. average velocity for a 5 min. interval. The wall was 16½ in. thick for 40 ft. and 12½ in. for the top 10 ft. It was an east-west cross wall in a 200 by 740 ft. one storey building. The wall was unbraced, and there were no pilasters but the ends were well bonded to the much thicker exterior walls. It had three moderate doorway openings at floor level. The workmanship in laying the brick for the wall was excellent.

The wind that caused the failure was from the south and when the damage occurred the exterior walls of the building were 95 per cent. complete, but the roof framing and decking were not erected, nor were the windows and doors for the south exterior wall in place.

The calculations showed that if the tensile strength of the brickwork is disregarded the wall would tip over under a uniformly distributed wind pressure of 4.2 lb./sq. ft. which corresponds to a wind of only 26 mph. velocity.

According to the New York City building code, the maximum unsupported height of any masonry wall during the period of construction shall be two storied or 26 ft. The author found that a wall of this height and 16½ in. uniform thickness could resist a wind pressure of 8.4 lb./sq. ft., corresponding to a velocity of 38 mph.

Many building codes limit the unsupported height of walls to twenty times the thickness of the wall. This provision is inadequate before the roof is installed, and such codes were probably prepared for completed buildings with the wall braced laterally by the roof and floors.

The height of a wall designed for a wind of 67 mph., which is equivalent to a wind pressure of 20 lb./sq. ft. should not be more than ten times the thickness. The author suggests that some deficiencies of workmanship should be taken into account and the height should be limited to eight or nine times the thickness. Building codes should include provisions to guide the engineer or contractor during construction of brick walls so that windstorm damage will not result.

In the correspondence, the objection is raised that, according to the author's suggestion, masonry walls of 12 in. or less in thickness would become theoretically unsafe or illegal for walls of 10 ft. height. Experience proves, however, that free standing walls 10 ft. or more in height made of 12 in. and, in some cases, 8 in. hollow masonry units do withstand winds running into gale velocities. The explanation seems to be that the author has disregarded the variation of wind velocity with height above surrounding ground. (The velocity of wind is measured at meteorological stations at a standard "effective" height, which is 33 ft. At ground level the velocity is only approximately 70 per cent. of that at 33 ft.).

QUESTIONS and Answers

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

1397 *Registration of Architects*

Reference back to Q. 1379. We wish to draw attention to an error which occurred in answer to a question about the requirements necessary for registration as an architect.

Any practising architect who was in practice before July 29, 1938 (or any architectural assistant who had had 7 years' experience on August 1, 1938), and who was in the Armed Forces of the Crown between January 1 and August 1, 1940, is entitled to apply for registration any time up to six months after his demobilization or discharge, and he does not require the signature of six members of one of the recognized bodies of the Council. That condition relates only to architects not in the Forces who failed to apply before the statutory closing date.

1398 *Prestressing*

Q *In your JOURNAL of May* 6, 1943, *appeared an article by Dr. Hajnal Kónyi, M.I.Struct.E., on prestressed reinforced concrete structures.*

I am interested in this kind of reinforced concrete construction, but being a foreigner in this country—a Polish refugee civil engineer—I do not know where and how to obtain some knowledge about this subject.

Could you suggest to me how to acquire both practical and theoretical particulars about this mode of construction?

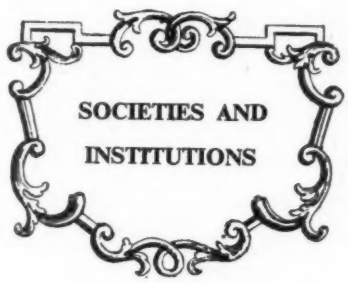
A Dr. Hajnal Kónyi's reply is as follows:—

The principles and application of pre-stressing are described in a book by E. Freyssinet, *Une Révolution dans les Techniques du Béton* (published 1936) and in a book by E. Hoyer, *Der Stahlsaitenbeton* (published 1938). I do not know, however, whether either of these books is available in a public library in this country. Articles on pre-stressing, giving formulæ, examples and test results are easily obtainable and I can recommend you the following publications:—

1. T. J. Gueritte: *Recent Developments of Pre-stressed Concrete Construction with Resulting Economy in the Use of Steel.* (*The Structural Engineer*, July, 1940, pp. 626-642).
2. T. J. Gueritte: *Further Data Concerning Pre-stressed Concrete. Comparison between Calculated Stresses and Stresses Registered during Test.* (*Journal of the Institution of Civil Engineers*, April, 1941, pp. 91-136).
3. Discussion on 2, Do. October, 1941, pp. 517-549.
4. Hermann Schorer: *Pre-stressed Concrete Design Principles and Reinforcing Units.* (*Journal of the American Concrete Institute*, June, 1943).
5. A. A. Paul: *The Use of Pre-cast Pre-stressed Concrete Beams in Bridge Deck Construction.* (*Journal of the Institution of Civil Engineers*, November, 1943, pp. 19-30).

The Journals mentioned are available in many technical libraries.

A book by Kurt Billig: *Pre-stressed Reinforced Concrete*, has recently been published in USA. (Published by F. Billig, 151-14. 85th Avenue, Jamaica, N.Y., price 5 dollars), I only know of this book from reviews.



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

AA

Debate on Land Nationalization

February 15, at 36, Bedford Square, W.C.1. Ordinary General Meeting of the Architectural Association. Evening arranged by the Students' Committee. Debate on IS NATIONALIZATION OF LAND INDISPENSABLE TO NATIONAL PLANNING? D. D. Harrison, A.R.I.B.A., proposed the motion. Miss A. MacKinnon, M.A., opposed it. Chairman: Dr. Dudley L. Stamp, B.A.

D. D. Harrison: With the growing complexity of civilization and urban development there is need for a greater responsibility on the part of landowners, and some attempts have been made by the Legislature to curb their almost complete irresponsibility. But it is important to realize that the whole of our town planning legislation has been and must be designed in a negative spirit in its attempts to control the property owner whose interests are directly opposed to those of the community. During

the past hundred years there has been no really first-class development excepting that of garden cities: normal development has resulted in chaotic towns. The restrictive legislation in which at present town planning consists comprises compulsory purchase: it recognizes that the community must have an overriding power to purchase land. When we speak of nationalizing the land we mean nationalizing rights in the land, and many rights have already been nationalized, including certain mineral rights. Under stress of war we have instituted the right of requisition; and this has been to a certain extent a policy of nationalization. We require two things from the land, that its development and use should be for the best advantage of the whole community, and secondly that any increment in its value should also be for the benefit of the whole community. The only way to attain these ends is for the community to obtain control of the freehold. The Uthwatt proposals are concerned largely with *nationalizing rights* in the land while attempting to evade *nationalization of the legal title*. In its three proposals the Uthwatt Committee has felt itself bound to advise the nationalization of the land in so far as there is to be any national planning, and this despite the fact that their report is specifically against the nationalization of the land.

A. MacKinnon: Those on my side of the House will give place to no one in deploring the system of individual ownership and comparatively unrestricted private use of and; and they will agree that planning for the future must be something different from what is on the Statute Book at the present time. It must be on a national basis and not local and piecemeal as to-day, and it must be such that claims by private individuals for compensation will not thwart planning authorities, central or local, in undertaking comprehensive planning. But to say that nationalization of the land is indispensable to national planning is a counsel of despair. The problems involved in searching out title, settling claims to compensation and valuing and revaluing individual interests would be formidable enough if we had time for them; but we have not the time. It is important that we shall be ready to seize the opportunity immediately hostilities end. If we wait until the issue of nationalization is settled we shall not at the end of the war have on the Statute Book the legislation necessary to enable us to undertake planning at once, and the pressure for building will be such that we shall not be able to impose necessary restrictions. Comprehensive architectural planning will go by the board.

Debate: A very long debate followed in which students and others took part, most of the speakers addressing themselves not to the motion before the meeting but to the question of the nationalization of the land as such. Among other offenders in this respect was Mr. Clough Williams-Ellis, who argued that the only test in such a matter as the nationalization of the land was whether it would promote the general public welfare. From the technical, economic and planning points of view there was no question but that public ownership was the thing; but if it was unacceptable to the people at large it would be a political impossibility to enforce it if we were to remain a democracy.

Mr. Arthur Collins (Director of the Abbey National Building Society) said that when considering the Barlow, Scott and Uthwatt reports, building societies wanted to know where, and when and how land was to be devoted in any part of the country to this, that or the other purpose. Secondly, they wanted to know the conclusions at which the Government arrived when settling the ownership and control of the development of land for building purposes. Thirdly, they wanted to know the decisions of the Government in the matters dealt with in the Scott report as to the area of land which was not urban. Of the people who acquired homes through building societies, nine out of every ten very strongly preferred freehold to leasehold.

Mr. John Slater asked if the nation was to insist upon ownership or be satisfied with control? We had suffered from control throughout the war. Fifty-three things were controlled and in forty-eight cases big business was in charge of the controlling Government Department. If we had control of the land vested interests would put private ownership over the public control.

Mr. Hilton Wright said the fundamental point was not whether nationalization was indispensable to planning, but for what form of planning it was indispensable? If planning meant the economic control of the country in the interests of big business, land nationalization was not indispensable, and a form of planning would be adopted which would see that the interests of large landowners were protected while at the same time the appearance of landownership was given to the public. If that was the case architects should be very careful when examining any claims for public control of land which did not depend on actual ownership, or they might find themselves supporting a movement which ultimately would have effects the reverse of what they wished.

Mr. Stanley Hamp asked if those who supported the motion meant that nationalization was necessary for the national plan, or necessary for the world? If they said it was necessary for the world he would say yes; but if they said it was necessary for the national plan and carrying it out quickly he would say no. He would vote to get on with the national plan as fast as possible.

Dr. Dudley Stamp said both sides had spoken of the cost of the nationalization of the land, but it ought not to cost anything. Buying the land on a valuation was not a matter of handing out money: the expropriated landowner would get bonds bearing interest representing what he had relinquished.

RIBA, IES

Discussion

January 18, at 66, Portland Place, W.1. Discussion at a joint meeting of the Royal Institute and the Illuminating Engineering Society on SCIENCE IN THE ART OF LIGHTING. Chief speakers: R. O. Ackerley, Past-President of the IES, and A. G. MacDonald, F.R.I.B.A., Chairman of the Architectural Science Board of the RIBA. Chairman: Percy Thomas, P.R.I.B.A.

A. G. MacDonald: I hope that this joint discussion may help to dissipate the architect's lurking fear that this thing called science is an enemy, carefully to be guarded against, and also the illuminating engineer's feeling that the architect is just one of those difficult people whom he has to put up with in his scheme of things. A good building relies finally on good art, but good art in building cannot be expressed in these days without a solid scientific basis of construction. There has recently been considerable quickening of public appreciation on the part that scientists can play in building. The building community has been as bad a sinner as any in its failure to understand the improvements which can be effected in collaboration with science. The RIBA realizes that science is something which has come to stay, and architects must seek to understand where science can help them and must learn that science seeks to be, not a dictator, but a handmaiden.

Artificial lighting is one of the most important considerations in the planning of a building. Here I am thinking not only of mansions but of the small cottage if it is lucky enough to be on the grid. A good habitable building must have good artificial light. In the good old days when baronial halls were lighted by candles and torches, science had little place in the art of lighting. Lighting effects were simply but most effectively obtained in those days because the materials to hand were simple. Indeed, artificial light was used only slightly as a medium to work by, and he believed that some of the old City Guilds had an ordinance forbidding craftsmen to work in the evening, because it was considered dangerous for their sight. Then glass came in both as a decorative and reflective agent, then mirror glass with new techniques, and presently the artist could no longer retain complete control of the situation.

R. O. Ackerley: It is true that the architects of the old days had a rather simpler problem of lighting. There has been tremendous development in light sources during the last half-century. The old architect had no illuminant available with which he could really make a splash of light, and therefore he did not come up against all the perplexities of to-day. He was rarely troubled by glare, because there were not any really glaring light sources.

(He proceeded to illustrate the scientific character of the subject by some simple demonstrations showing that science—in other words, direct measurement—came into lighting, and that the modern illuminating engineer placed at the disposal of the architect some precise tools. All sorts of factors affected the amount of light obtained in any particular room. He showed a small model of a room lighted with two different sorts of fittings, and how a change of fittings and a change in the decoration in the room interacted to produce a different total of illumination as shown on a photometer. He also showed that while decorations made a difference in any system of lighting, they made a much larger difference when the lighting was indirect than when it was direct. Another demonstration showed how different kinds and directions of lighting might alter the appearance of such an object as a relief panel, in some cases making it flat and meaningless, and in others bringing out its character to perfection).

There are three partners in the business of seeing, namely, the eye, the light, and the object. Very diverse effects can be obtained, bringing out the qualities and suppressing the blemishes of an object, if the reaction which it has to light is understood. The relation between the light and the object lighted must be appreciated. To obtain such effects control of lighting is necessary, and the degree to which lighting can be controlled depends to a large extent on the amount of space allowed. Lighting engineers have been accused of only thinking of a building as a place for the use of the fittings which they have designed. If, of course, the space demanded is going to spoil the building, the engineer must give way, but he must explain what will happen if he does not get the required space.

The lighting engineer must be the servant of the architect, and there must be times when, in order to get the results from the lighting engineer's point of view, it will be necessary to put in equipment so big and unsightly that it condemns itself straight-away. But in such a case, if the architect understands the background of the lighting engineer's problem, he will be able to effect the necessary compromise.

A. G. MacDonald: I still hold to my view that, excellent as are the results which the lighting engineer can produce by a strict adherence to scientific rules, yet beyond it all, and incapable of exact assessment, there is some human value in the disposal of lighting without which the best laid lighting schemes will be a failure. Most of the lighting schemes prepared purely on scientific lines will come short of the mark in buildings of any creative quality. In saying this I am not thinking merely of so-called architectural buildings, but also of the factory and the workshop. The artistic control of light is like Music while you Work; it

L. E. Walker, Photo

HOUSE, ST. NICHOLAS' CHURCHYARD, KING'S LYNN
Circa 1645

THIS scene deputised for a Dutch background in a recent cinema film, as did other parts of King's Lynn. The strong Dutch influence shewn by many of the buildings is not surprising, for the town was the headquarters of Cornelius Vermuyden's Hollanders who came over to drain the East Anglian fens, and who even used Dutch bricks and roofing tiles, brought here, as ballast, in ships that had carried potatoes on their outwards voyages. If parts of King's Lynn are literally Dutch in origin, it may be said that we helped to restore the balance by sending them 'PUDLO' Brand waterproofer which, right up to the German invasion of the low countries, was a valuable aid in their constant fight against flood and dampness.

appeals to the emotions without calling attention to itself. In fact there are two persons concerned, one of them on the scientific side and the other on the artistic, and each has his own job to do. Each should know his own job and co-operate with the other.

(He proceeded to show a number of slides, some of them illustrating interiors overlighted, so that they looked naked. One of them was a Gothic cathedral which appeared to be equally well-lighted all over, in its high roof as well as on its floor. Gothic architecture soared towards the heavens, but in a building thus lighted there was no room to imagine heaven. On the other hand, in a Classic building abundance and uniformity of light was called for if its details were to be seen, and in fact such buildings stood up to a great deal of lighting. Among Mr. MacDonald's illustrations of excellent lighting, in which the architect and the lighting engineer had combined to some purpose, were the entrances and booking halls of modern London Underground stations).

Science will take us only so far and no farther. There are mysteries in lighting in architecture which are not amenable to exact rule. To interpret them is the business of the architect. It is for the architect to provide a setting in which the engineer's work can be shown to the greatest advantage and to the credit of both the engineer and himself. As an Irishman might say, the engineer's work has to be lost in order to appear at the greatest advantage. Has Mr. Ackerley ever met an architect who had no appreciation of the scientific principles involved, even though he was not prepared to allow them to have the last word ?

R. O. Ackerley : I have met such an architect. What he did was to work out the whole of his rooms before he thought about the lights at all, keeping his cornices very small, and so on. At the last moment he remembered that he could not light the place without lamps, and asked some quite impossible thing of the lighting engineer.

A. G. Macdonald : The engineer takes out his slide rule, takes the cosine of the angle, and produces some result, which is just as unsatisfactory a way of proceeding as the other.

(The two debaters then experimented together with the lighting of a cornice, and being unable to agree as to the space required behind the cornice to secure an even distribution of light, eventually agreed upon a compromise in the shape of a curved cornice which met the demand for even lighting and at the same time fulfilled the architectural requirement).

I object to the word compromise. There need be no compromise in effectively joining the work of the architect and the engineer. I do not agree with Mr. Ackerley that the best things in life are the result of compromise. The word has a dubious sound. There is no real compromise, but there is correct balance to achieve the finest results. I find difficulty in putting the architect's viewpoint across, but I feel strongly that a room lighted strictly according to scientific requirements may nevertheless create a jarring effect. After all we are lighting, not a certain cubic space, but a room in which people live. We are lighting something intangible in the room. On the other hand, I would say to the architect that however artistic the appearance of a room may be, the effect is shortlived if it causes discomfort to the occupier. A compromise suggests to me that certain important things have been suppressed. What one should have for proper lighting is a well-considered prescription of the necessary ingredients written up by the engineer and dispensed by the architect in such a form as to produce good health, physical and mental.

R. O. Ackerley : In order that architects and engineers may get together they must have some appreciation of one another's point of view. Their background is different. The engineer has a strictly objective training. He starts off with a light source, and he knows many of the things which happen if that light source is badly controlled or uncontrolled. He knows that he will get patchiness, undue contrast, and distortion, and the engineer spends a lot of his time learning to fight these things. The result is that at the end of his training he is inclined to make a fetish of even illumination and to believe that heavy shadows and so on are necessarily evil things. The architect's point of view is the opposite. He is subjective, and is interested in what things look like to the average eye.

A. G. MacDonald : Science provides the data common to all lighting, the lighting engineer considers the requirements of a particular building, and the architect puts into a particular architectural form what is required for the functioning of that building.

DIA

John Gloag

February 2, at the Royal Society, Burlington House. Lunchtime talk under the auspices of the Design and Industries Association on THE SELLING POWER OF GOOD INDUSTRIAL DESIGN by John Gloag.

J. Gloag : By industrial design, I mean that basic operation in the production of goods when trained imagination secures the most efficient, agreeable and inventive use of appropriate materials and processes. The industrial designer is the man with the trained imagination : he is a technician and is becoming recognized as one : his job is just as basically important as that of the research chemist or the production engineer.

The first need is for industrial design to gain recognition as a hard-boiled business proposition, and for the industrial designer to become established as a technician of comparable standing with an engineer or a research chemist. If the technical and business operation of industrial design is regarded as arty uplift, as an expression of so-called progressive politics, or as anything but what it is in commercially successful practice, then those who advocate it because they believe in good design for its own sake are doing a grave disservice to their chosen cause.

After this war we shall have more machines available than ever before in our industrial history. An astonishing array of new materials, and associations of new and traditional materials will be available also. How we use these new and immense powers of fabricating materials into commodities will largely determine the extent of our capacity for selling these commodities abroad. No amount of market research, selling effort, or persuasive propaganda can win or maintain a market for goods, if that market is invaded by producers who have given lively and exceptional thought to the design of their goods. We can bawl British and Best with the utmost confidence in the excellence of our industrial workmanship ; but nobody will Buy British if competitive goods are available which have greater convenience in use, are more agreeable in shape, colour and texture, and have moreover an anticipatory air of new worldliness. That touch of new worldliness is vital : it is the answer to the inarticulate expectancy that I have mentioned.

Now when does good industrial design pay in terms of sales ? I suggest that it generally pays in terms of sales when a functional problem has been adroitly solved, and when the article that is being manufactured is partly a mechanical one. For example, if any manufacturer of lawn-mowers took the trouble to redesign that clumsy and needlessly complicated piece of mechanism and called in an industrial designer to collaborate with his own engineers, we might be able to buy a lawn-mower that was easy to clean, easy to adjust, and agreeable to look at. The lawn-mower has replaced the scythe. The safety-razor has replaced the old cut-throat razor. The safety-razor has been designed : the lawn-mower looks as if it has just happened.

Certain appliances have demonstrated the commercial success that follows excellence in design : outstanding examples are the HMV electric iron and the Murphy radio set. But unfortunately, and we must face this, bad design also pays : though I doubt whether a badly designed object that had a mechanical function would continue to sell in competition with something that was well-designed. However, bad design often does pay when machinery is used to imitate a technique that was formerly a handicraft technique employing materials that were formerly used by skilled craftsmen working with individual tools. Bad design pays in this case, because imitation satisfies people who are ill-educated. We must face the fact that a woefully high proportion of the inhabitants of this country is ill-educated.

It is said that machine production creates its own æsthetic forms ; that stark, smooth, sleek surfaces are specially delightful—they are untroubled expressions of pure form. You know the sort of jargon ; millions of words have been written and spoken about machine art and functionalism, and to many sincere and highly educated people good industrial design means the elimination of all evidence of human weakness, for they use the word weakness to designate the old human love of ornaments. They applaud and delight in what may be called *inhumanism*. So far as products with a mechanical function are concerned they are right : we all remember the ridiculous phase of design that radio cabinets endured, when they were dolled-up to look like Tudor food hutches. But although the public is apparently ready to accept certain articles that reflect the stark, rather austere standards of taste, particularly when starkness and austerity reduce housework, there is no indication at present that home makers want to surround themselves with clean, simple, untroubled shapes. A man who works all day long in a factory surrounded by angular and busy machines, whose life is spent in the shadow of their implacable efficiency, does not want to be reminded of his work-a-day life when he reaches home. He wants possessions that have some individuality, things with a flavour of their own, and his purchase of pseudo-traditional furniture is a form of escapism. Also, except for things that have an explicit mechanical function such as a radio set, a motor cycle or a motor car, he has no critical powers.

That is the position at the moment : such facts should not be brushed aside as unimportant or irrelevant. They should not be disposed of by saying briskly that people ought to want or like something that stirs the emotional regard of the highbrow. The highbrows, the intellectuals of to-day, do not possess the warm human appeal of the old pleasure-loving and artistic aristocracy of the golden age of good design, that lasted from 1660 to 1830. Although they express a profound interest in the welfare of the people, the so-called leaders of taste and thought are without influence and without imitators among the people. And it is the people, thousands of workers who will be making new homes and remaking old ones after this war, who will decide, all unconsciously, the exact extent of the selling power of good industrial design.

I hope that I have not suggested that I am pessimistic about the future of good design : I am not. I believe that we have a fifty-fifty chance of a renaissance of public taste ; but because we have passed through a period of compulsory utility and austerity, there is also a danger that the public may react so violently against those necessary war-time restrictions that we shall plunge into a rococo orgy of complex ornament, and endure the Victorian period all over again, with plastic knobs on, so to speak.

I suggest that there are two problems to

which all who are sincerely concerned with the betterment of design should address their attention in the future. First of all, there is the education of public taste in the future; secondly, there is the nature of industry and its effect upon the industrial worker.

If we could have a critical public, a public that was critically aware of its surroundings, we should have a great civilization. Perhaps we tend too much to idealize civilizations of the past, perhaps we are tempted to think that the cities of the great classic civilizations of antiquity, basking like white flowers along the coasts of the Mediterranean, contained no ugly or unpleasant things. But the spade of the archæologist soon disillusions us: he disinters evidence which proves that a ruthless standardization of taste in architecture and the ancillary arts ironed out individual and national expression. There was no room for a large critical public in the last great civilization that was comparable in scale and economic organization with our own—that of Rome. But to-day there is a new sort of public: it is semi-educated. It can read and write, and in England, it can in peacetime guard its privacy and protect its liberties; but, as I have said before, it is largely uncritical of its surroundings. There have been a few heartening proofs that the public would not always remain uncritical if conditions were favourable to the development of their critical awareness of surroundings. I find it difficult to believe that a nation with our immense history of accomplishment in the arts of life, and particularly in the art of home-making, is incapable of reviving and applying the critical faculties which would enable consumers everywhere to appreciate and demand well-designed goods.

But—this can't be brought about in a lifetime. Nearly every plan that is made for the betterment of people or for their education is conceived in terms of our own short lifetimes. We should be making plans *now* for the education of the people who are going to be consuming goods in the early part of the twenty-first century. Among the youngest children we should be inculcating interest in the form and colour and texture and function of the things which are seen. There is, at the moment, an enormous and quickening interest in the education of future generations. But are we planning now for the year 2000? Are our educational authorities being as far-sighted as the seventeenth and eighteenth century landed proprietors who planted groves of trees for the benefit of posterity?

What hope is there for such workpeople who have had the fun taken out of work by industrialization? Well, I for one believe that industrial organization in the future will reduce working hours to three or four a day at the most. If education has, by that time, enabled people to develop a variety of skills for the occupation of their abundant leisure, then we may expect some industries to disappear, because people may prefer to make many things for themselves, particularly things they use in their homes, such as furniture. We may also expect a genuine revival of the arts and crafts, springing from the people. Only when such revivals spring spontaneously from the people themselves can they hope to flourish and endure.

IAAS

Memorandum on Land Control

A special Committee was set up by the Incorporated Association of Architects and Surveyors to consider and make recommendations on the Uthwatt Report, and has submitted the following Memorandum to the Council of the Association, which has been approved.

CONTROL OF PLANNING AND DEVELOPMENT

The Committee felt that what was most prominently in the minds of the Uthwatt Committee, as indeed of the previous Scott and Barlow Committees, was the need for control of planning and development, so far as it relates to building in the future. The Committee accept the need for control. On the other hand, they feel that the Uthwatt Committee, having formed the opinion that control of planning and development in the future was a necessity, allowed itself to regard the matter as one of undue complexity; and as a result put forward various recommendations, such as the acquisition by the State of development rights, which the Committee feel are quite unnecessary for obtaining the control required. The Committee considers the Government could, other than in the exceptional cases referred to below, obtain all the powers necessary to give complete and adequate control by:

(*a*) Compulsory registration of all land;
(*b*) a recasting and codification of all existing compulsory purchase and compensation law;
(*c*) revision of building by-laws, where necessary, and the imposition of minimum standards for all buildings and development;
(*d*) extension of existing Town and Country Planning legislation.

The exceptional cases referred to above would be where large areas of land under multiplicity of ownerships are required from time to time for new townships, or the extension of existing townships or similar large-scale development, or where similar areas have been laid waste by enemy action or otherwise and require reparcelling for fresh development, or where, because of serious non-conformity with a town-planning scheme or congested and insanitary conditions, such areas fail to be re-developed. In such cases it might well be that a special body should be vested with powers for large-scale acquisition; but the Committee feel strongly that, should such powers be exercised, the proper procedure for arriving at the price to be paid for any land so acquired or for any other compulsory acquisition should be determined by the procedure laid down in existing legislation relating to the fixing of compensation for the compulsory acquisition of land. They view with apprehension the suggestion put forward in the Uthwatt Report that the compensation to be paid should be fixed without any right of appeal on the part of the land-owner.

The Committee envisaged many circumstances where it might not be possible or desirable for local councils to make the large-scale acquisitions necessary for general development; and the suggestion was put forward that it might well be that the best method of dealing with such cases would be the formation of a Public Corporation to acquire all separate interests in a re-development area in order to bring them under one control for the time being. Compensation for all compulsory acquisitions to be based on the values obtaining in 1939. The Corporation should be financed by the issue of redeemable bonds, with fixed redemption dates, at a rate of interest which might represent the interest obtaining on Government securities, the bonds to be redeemable at slightly above par. The Corporation should be supported by Government guarantee. After the replanning of an area, the Corporation should dispose of the property in blocks to intending developers with express conditions, and the profit (if any) arising therefrom should, after meeting the expenses of the Corporation, pass to the State. In this way it was felt that the abuse of land speculation could be avoided.

If such a scheme were adopted, the view was expressed that the Corporation should at all times wherever possible give to any individual owner whose property had been acquired the opportunity of re-acquiring his interest or an interest in the re-development area, subject always to the exclusion of those portions of the area used for subsidized housing and non-profitmaking public utilities, roads and the like, in which cases conveyance either of the freehold or by the grant of lease should be made by the Corporation to the local or appropriate authority.

BETTERMENT AND WORSEMENT

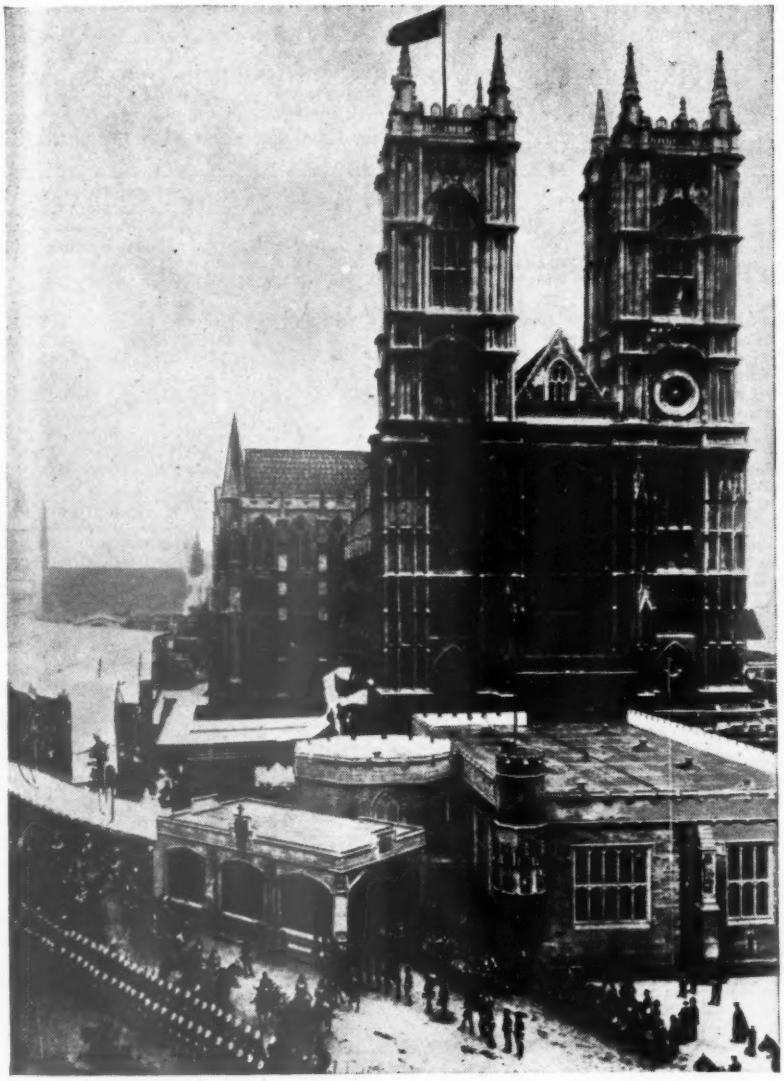
The Committee accept the principle of betterment and worsement. They were strongly and definitely of the opinion, however, that betterment and worsement could obtain only:

(1) Where an increase or decrease in land value is the result of particular and positive central or local government action, or action of any competent public authority; or
(2) where land values were increased or decreased as a result of town-planning, including re-zoning.

The Committee was unanimous in its opinion that betterment and worsement in their generally accepted meanings could not be held to arise from general community influences. It was felt that any attempt to claim betterment or worsement under general community influences would be so far-reaching that it would be open to be argued that any increase or decrease of land value must, if not falling under heading (1) or (2), inevitably come within the scope of those influences, and that therefore any attempt to apply the principle of betterment in those circumstances would result in the stultification of the best use of land lest betterment be attracted. It was considered that any such result would be anti-social. The Committee was of the opinion that, with agreed 1939 values, betterment and worsement could be readily ascertained. It was felt that the proposed alternative scheme for periodic levies was impracticable, and would prove even more unwieldy and unworkable than the proposed increment value duty under the Finance (1909-10) Act. It was definitely agreed that worsement should be admitted and compensated on precisely the same basis as betterment.

Throughout the deliberations of the Committee one aspect of the effect of the Uthwatt recommendations remained foremost, viz., the almost entire reversal of the accepted principles of landed tenure which seemed to be envisaged. The Committee felt in some difficulty on this particular phase of the Report, lest it be suggested that their views were coloured by political concepts. Nevertheless, strong expression was given to the view that any legislation which by its very nature would bring about a lessening in the number of individual freeholders, each with an absolute stake in the country, would be retrograde, and deeply to be deplored. In the opinion of the Committee, many of the suggestions contained in the Uthwatt Report such as the suggestion of the acquisition of development rights or, in other cases, the purchase of freehold outright, with the proposal that building leases should thereafter be granted, savour of the eventual nationalization of the land. It was felt that it should be proclaimed and then again emphasized that there was no evidence to show that freehold tenure was not the most desirable of all forms of landed tenure, and this being accepted, nothing should be done that conflicted with this principle. The Committee reflected that, taking a long view of national policy, so far as landed development is concerned, there might be a better case for the enfranchisement of all leaseholds than an attempt to render all property leasehold, although they do not agree that such a course is in any way necessary or desirable, having regard to the statutory protection now afforded to all classes of lessees and tenants.

The Committee were influenced in arriving at these views by their inability to concede that there was any necessity, in order to obtain all such control over land as is necessary, in the national interest to ensure good planning, to do other than was remarked in opening, viz., to amend, extend and codify the existing legislation, although the Committee fully subscribe to the view that it would be necessary, indeed essential, to set up a central authority to control and direct planning from a national point of view.



WHEN WE WERE YOUNG

The dawn of a memorable reign. The Coronation procession of King George V. arriving at Westminster Abbey, June 22, 1911

Who could foretell on that glorious June day, the momentous events that would fill the years of the reign! The rhythm of progress was advanced to an unbelievable tempo. The air was mastered, the ether harnessed; all the sciences made greater strides in years than had been accomplished in centuries.

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CVS-517

TRADE NOTES

Braithwaites have evolved a system known as Braithwaite Unit Frame Construction which will be employed in two experimental steel-framed houses to be erected on the LCC Watling Estate at Hendon. The object of this system, say Messrs. Braithwaite, is two-fold. First, to provide homes quickly and inexpensively. Second, to make use of manufacturing facilities and labour at present engaged on war work. The system, it is claimed, makes possible dimensional planning, standardization of parts, and mass production; allows a variety of plans and designs to suit the requirements of all house-planning authorities, and lends itself also to the rapid construction of two and three-storey flats, schools, and community buildings of all types. The houses will be permanent and not temporary structures. Built-in cupboards in bedrooms, prefabricated plumbing units, mass-produced refrigerators, water heaters and other kitchen equipment will be included. Erection of the houses will commence in April.

Mr. F. W. Sutton, who has been appointed Midlands Area Sales Representative to the General Cable Manufacturing Co., Ltd., Leatherhead, has been with the Company for 23 years and in recent years has represented them in the North of England Area.

ANNOUNCEMENTS

Messrs. Davis & Belfield, Chartered Quantity Surveyors, of 4, Harley Road, N.W.3, announce that Mr. R. L. Everest, F.S.I., previously in practice at No. 13, Lower Belgrave Street, S.W.1, has joined the firm as a partner. The name of the firm is now Messrs. Davis, Belfield & Everest, and their offices are at 9, Ashley Place, Westminster, S.W.1. Tel.: Vic. 5311/2.

Miss Jane Drew, F.R.I.B.A., has opened temporary offices at 12, Bedford Square, W.C. 1. Museum 7676.

PRICES

BY DAVIS, BELFIELD AND EVEREST, CHARTERED SURVEYORS

The only alteration in the prices of Basic Materials given below during February was for Lime Greystone. Rates of Wages have not risen since April 2, 1943.

BASIC MATERIALS	Increase over pre-war prices at end of January, 1944	Increase over pre-war prices at end of February, 1944
	Per cent.	Per cent.
Portland cement	+41·46	+41·46
2-in. Unscreened ballast	+108·70	+108·70
Fletton bricks (at station)	+29·73	+29·73
Stoneware drainpipes (British Standard) 2 tons and over	+43·75	+43·75
Roofing tiles	+45	+45
Steel joists (basic sections) ex mills	+47·5	+47·5
Lime greystone	+43·53	+65·88
Sheet lead	+65·22	+65·22
Iron rainwater goods and soil pipes	+32½	+32½
White lead paint	+46·21	+46·21
RATES OF WAGES (Central London Area)		
Labourers	+26·98	+26·98
Craftsmen	+21·43	+21·43

LABOUR—Rates of Wages since April 2, 1943.

LONDON DISTRICT	Craftsmen	Labourers
Within 12 miles radius	2s. 1½d.	1s. 8d.
From 12-15 „ „	2s. 1d.	1s. 7¾d.

N.B.—Prices of materials include for delivery to site in the Central London area unless otherwise stated.

GRADE CLASSIFICATIONS

	A	A¹	A²	A³	B	B¹	B²	B³	C
Craftsmen	2/–	1/11½	1/11	1/10½	1/10	1/9½	1/9	1/8½	1/8
Labourers	1/7	1/6½	1/6¼	1/5¾	1/5½	1/5	1/4¾	1/4½	1/4

O. A. DAVIS, F.S.I.

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

The Incorporated Association of Architects and Surveyors maintains a register of qualified architects and surveyors (including assistants) requiring posts, and invites applications from public authorities and private practitioners having staff vacancies. Address: **75 Eaton Place, London, S.W.1. Tel.: Sloane 5615** 991

CUMBERLAND COUNTY COUNCIL.

COUNTY SURVEYOR'S DEPARTMENT.

APPOINTMENT OF PLANNING ASSISTANT.

Applications are invited for the position of Planning Assistant, at a salary of £450 per annum, plus war bonus, payment (at present £50 per annum) for extended hours, and a car and subsistence allowance, all in accordance with the County Council's scale.

The appointment is subject to the Local Government Superannuation Act, 1937, and the successful candidate will be required to undergo a medical examination.

The appointment to be terminable by one month's notice on either side.

Candidates must be fully conversant with the Town and Country Planning Acts and Orders made thereunder, and be thoroughly competent to carry out field work, plotting and the preparation of plans.

Applications, stating qualifications, experience and age, accompanied by copies of three recent testimonials, and endorsed "Planning Assistant," should be received by Mrs. G. O. Lockwood, M.INST.C.E., County Surveyor, Citadel Chambers, Carlisle, not later than Monday, 20th March, 1944.

G. ANDREW WHEATLEY,
Clerk of the County Council.

9th February, 1944. 557

CITY OF MANCHESTER.

TEMPORARY TOWN PLANNING ASSISTANTS.

Applications are invited for Temporary Senior Appointments in the Planning Section of the City Surveyor's Department, at basic salaries ranging from £400 per annum to £700 per annum, plus appropriate cost of living adjustment ranging from £45 10s. to £33 16s.

The successful applicants will be expected to have technical qualifications and town planning experience which would readily enable them to take charge of different aspects of Town Planning work involved in the preparation of draft proposals for the reconstruction of built-up areas.

Applications endorsed "Temporary Town Planning Assistant" stating age, present occupation and salary, previous experience, and qualifications, and accompanied by copies of three recent testimonials, should be delivered to the undersigned not later than 17th March, 1944.

R. H. ADCOCK,
Town Clerk.

Town Hall,
Manchester, 2. 558

CITY AND COUNTY OF NEWCASTLE-UPON-TYNE EDUCATION COMMITTEE.

JUNIOR TECHNICAL SCHOOL OF BUILDING CRAFTS.

Wanted, for September 1st, 1944, a HEADMASTER for the above school (ultimate accommodation 270). Commencing salary £550 per annum, rising by annual increments of £25 per annum to a maximum of £700 per annum, together with the war allowance recognised by the Board of Education. Application form must be returned to the undersigned not later than 20th March, 1944.

THOS. WALLING,
Director of Education.

City Education Office,
Northumberland Road,
Newcastle-upon-Tyne 2. 562

CARMARTHENSHIRE EDUCATION COMMITTEE.

Required at once capable ARCHITECT'S ASSISTANT particularly in connection with School Feeding Schemes. Salary £450 p.a. For further particulars apply to W. Vincent Morgan, A.R.I.B.A., County Architect, County Offices, Carmarthen. 559

Architectural Appointments Vacant

Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charges given under each heading.

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

ARCHITECTURAL ASSISTANTS required. State age, experience and salary required, with copies of references, etc., to Ernest A. Newton, Chartered Architect 28, Kennedy Street, Manchester 2. [Architect and Consultant]. 251

SENIOR ASSISTANT required in Architect's Office near Birmingham. Must be competent with good qualifications. State age, experience with references. [Architects and Consultants.] Box 262.

WANTED, an experienced qualified architectural assistant for a large public authority in the North Midlands. Salary will be paid according to ability and experience. Box 561.

Architectural Appointments Wanted

Experienced SENIOR ASSISTANT, shortly at liberty; fully qualified, 12 years' general experience in all fields, including quantities, war damage claims and valuations. Exempt. West Riding district. Box 238.

R.I.B.A. STUDENT, medically exempt, requires position in London. Post-war planning or journalistic work preferred. Box 241.

ASSISTANT (32), desires return to high-class architect's office in London or Home Counties; 16 years' experience; interested town planning, prefabrication or housing, if prospects good. £600 up, according to degree of responsibility. H. F., 12, Park Mount, Revidge, Blackburn. 243

KEEN AND ENTHUSIASTIC A.R.I.B.A. 17 years' experience, requires spare time work at own home. London area. Box 244.

ARCHITECTURAL PERSPECTIVE ARTIST desiring prepare works for Exhibition, free of charge, seeks Contact Architects view collaboration. Box 245.

Classified Advertisements continued on page xlii.

BUILDING SURVEYOR, CLERK OF WORKS, REGISTERED ARCHITECT desires position, carried out extensive Contracts during 30 years public and private experience, practical and theoretical, also Estate Management, General Property Repairs and Maintenance; in Midlands, London and North of England; not liable for military service; rendered War Service during 1914-18. Box 248.

REGISTERED ARCHITECT, Dip. Arch. (Austrian nationality), requires position with architect in London. Interested in post-war planning and housing. Salary by arrangement. Box 249.

ARCHITECT - ENGINEER, qualified, American citizen, desires new appointment, varied experience. Box 257.

ARCHITECTURAL ASSISTANT, qualified, exempt, seeks position; wide experience of all kinds of work, including setel and R.C. framed buildings. Knowledge of quantities and surveying. Salary by arrangement. Box 258.

ARCHITECT experienced in carrying through works complete, requires position with prospects. Box 259.

ASSISTANT, 6½ years' practical experience in industrial and domestic architecture, studying for Final RIBA, seeks position in London or Provinces. Exempt from military service. Box 260

ENTERPRISING AND CAPABLE ARCHITECT, B.A.(Hon.), A.R.I.B.A., wide experience, requires responsible and interesting appointment. Box 263.

Other Appointments Vacant

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

ASSISTANT EDITOR wanted for Architectural Paper. Write, with full particulars of qualifications, salary required, &c., to Box 51.

Other Appointments Wanted

Four lines or under, 2s. 6d.; each additional line, 6d.

ADVERTISER of proven ability and with valuable existing contacts with Architects, Government Departments and the building industry generally, would like to hear from progressive and well-established company requiring the services of a keen and responsible sales executive. Box 205.

Miscellaneous

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

A. J. BINNS, LTD., specialists in the supply and fixing of all types of fencing, tubular guard rail, factory partitions and gates. 53, Great Marlborough Street, W.1. Gerrard 4223-4224-4225.

SPECIFICATIONS AND BILLS OF QUANTITIES, etc., expeditiously and accurately typed or duplicated. Translations and Facsimile, Typewriting. All work treated confidentially. Miss G. Saunders, Typewriting Bureau, 17, Dacre Street, Westminster, S.W.1. Telephone: Whitehall 2605.

MONOMARK service. Permanent London address. Letters redirected immediately. Confidential. 5s. p.a. Royal Patronage. Key tags 3 for 1s. 3d. Write BM/MONO5R, W.C.1. 44

AUTHORS are invited to submit Stories for Children, Poems, Fiction, and MSS, all types, for book publication. Stockwell, Ltd., Elms Court, Ilfracombe (Duration address). 560

Partnership

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

ARCHITECT wishes to hear from established firm with practice in Kent—Maidstone, Medway, Ashford, Tonbridge—to discuss association or partnership. Box 551.

For Sale

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

GEOMETRY SET, 13 pieces, in 8½ in. case, perfect condition; sliding rule; some crayons. Accept best offer over £5 10s. Apply Box 549.

FOR SALE.—THREE DOUBLE DOORS, 8 ft. by 4 ft. from Adam mansion, original condition, and furniture, solid mahogany with figured panels. Tweedie, 32, Cranmore Street, Dunfermline, Fife. 550

BUCKLAND TILES. Concrete Roofing Tiles and Fittings—also Air Bricks, Paving Slabs and other concrete products for sale. Large or small quantities—keen prices ex works or delivered. Apply Buckland Tile Co. (Reigate) Ltd., Reigate Heath, Surrey. Phone Reigate 2202. 556

Educational Announcements

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

R.I.B.A. AND T.P. INST. EXAMS. Private Courses of tuition by correspondence arranged by Mr. L. Stuart Stanley, M.A., F.R.I.B.A., M.T.P.I. Tutor, St. Catherine's College, Cambridge. 231