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THE ARCHITECTS' JOURNAL FOR NOVEMBER 27, 1947

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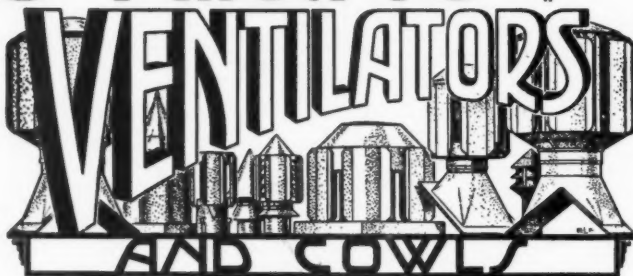
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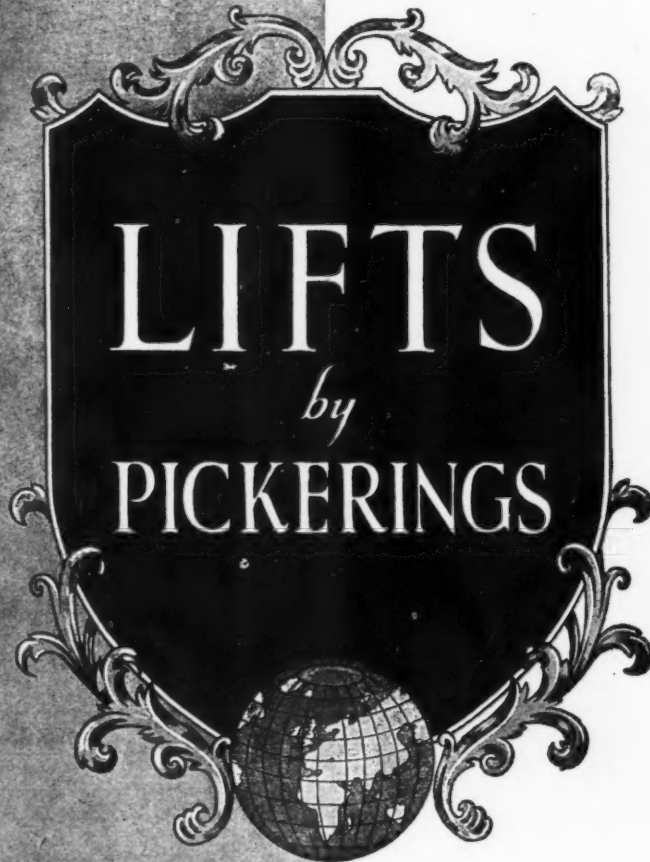
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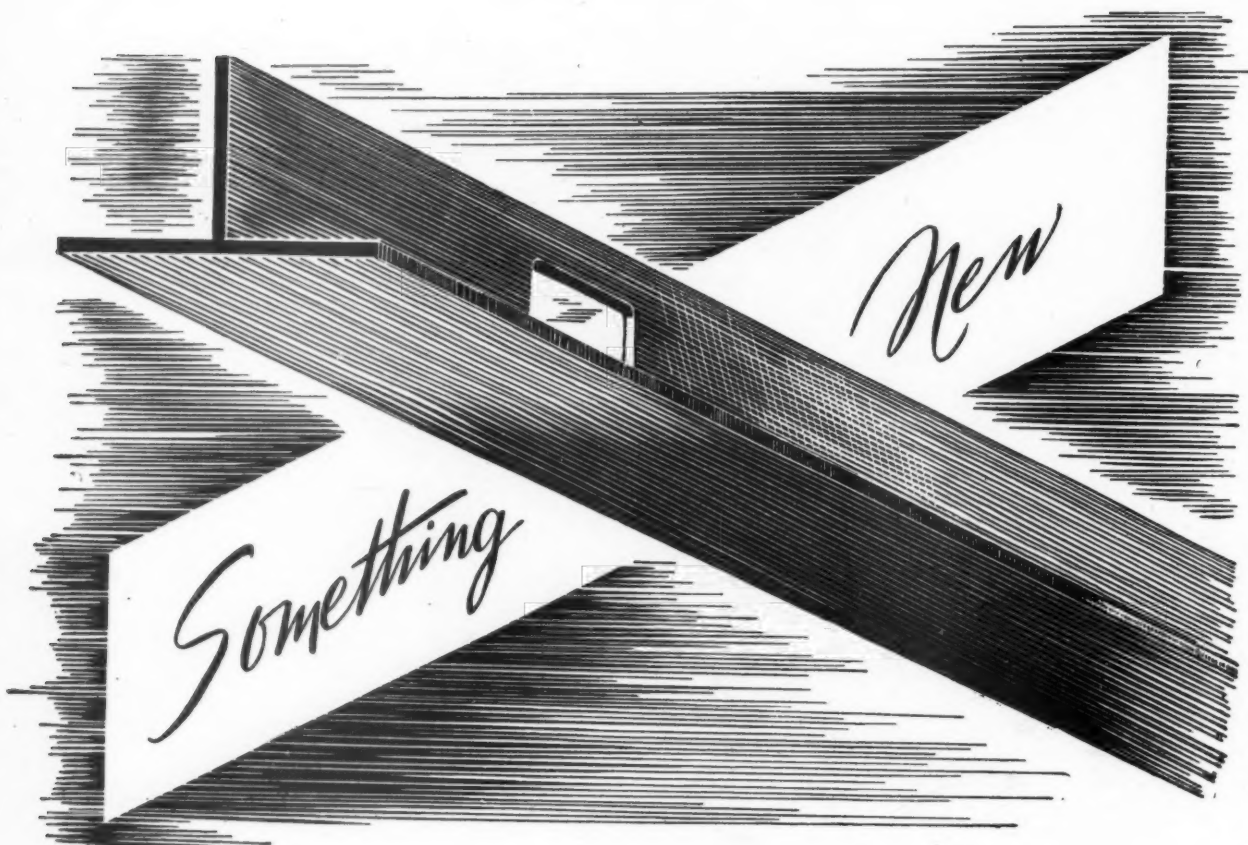
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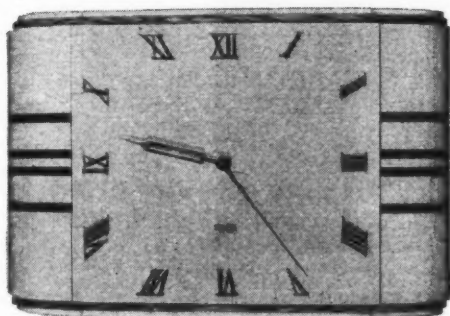


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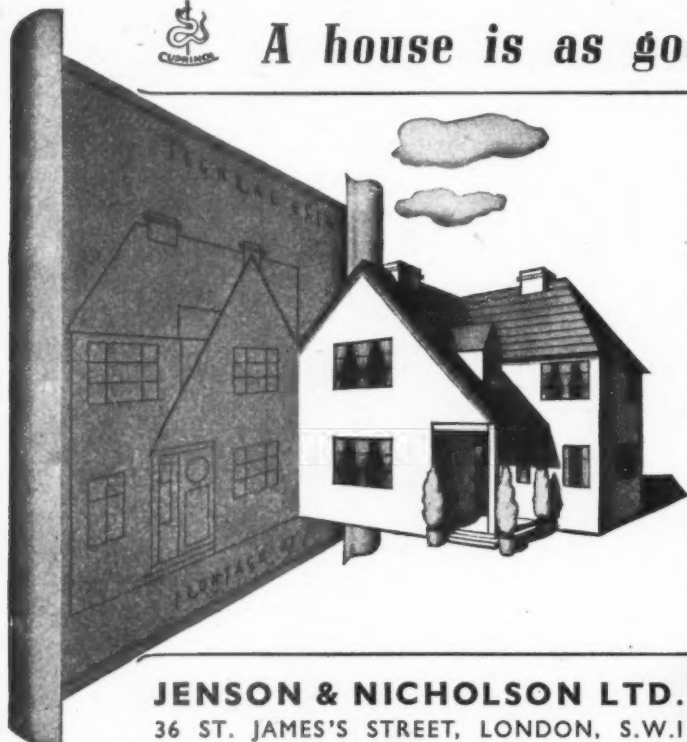
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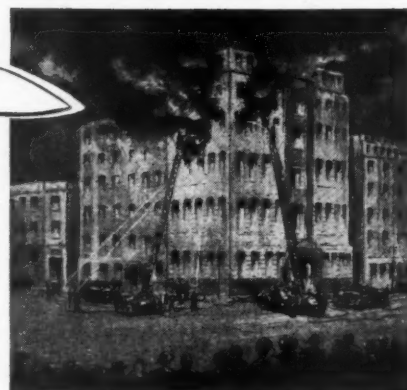


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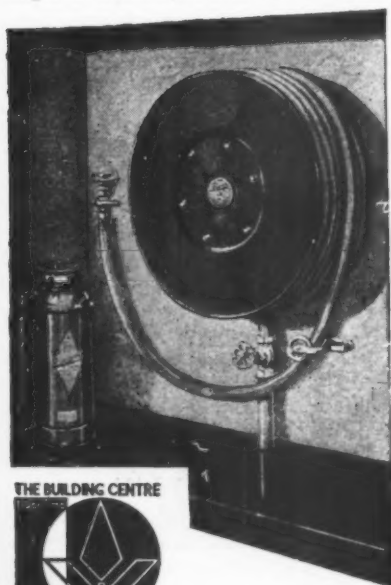
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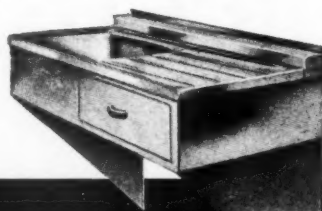
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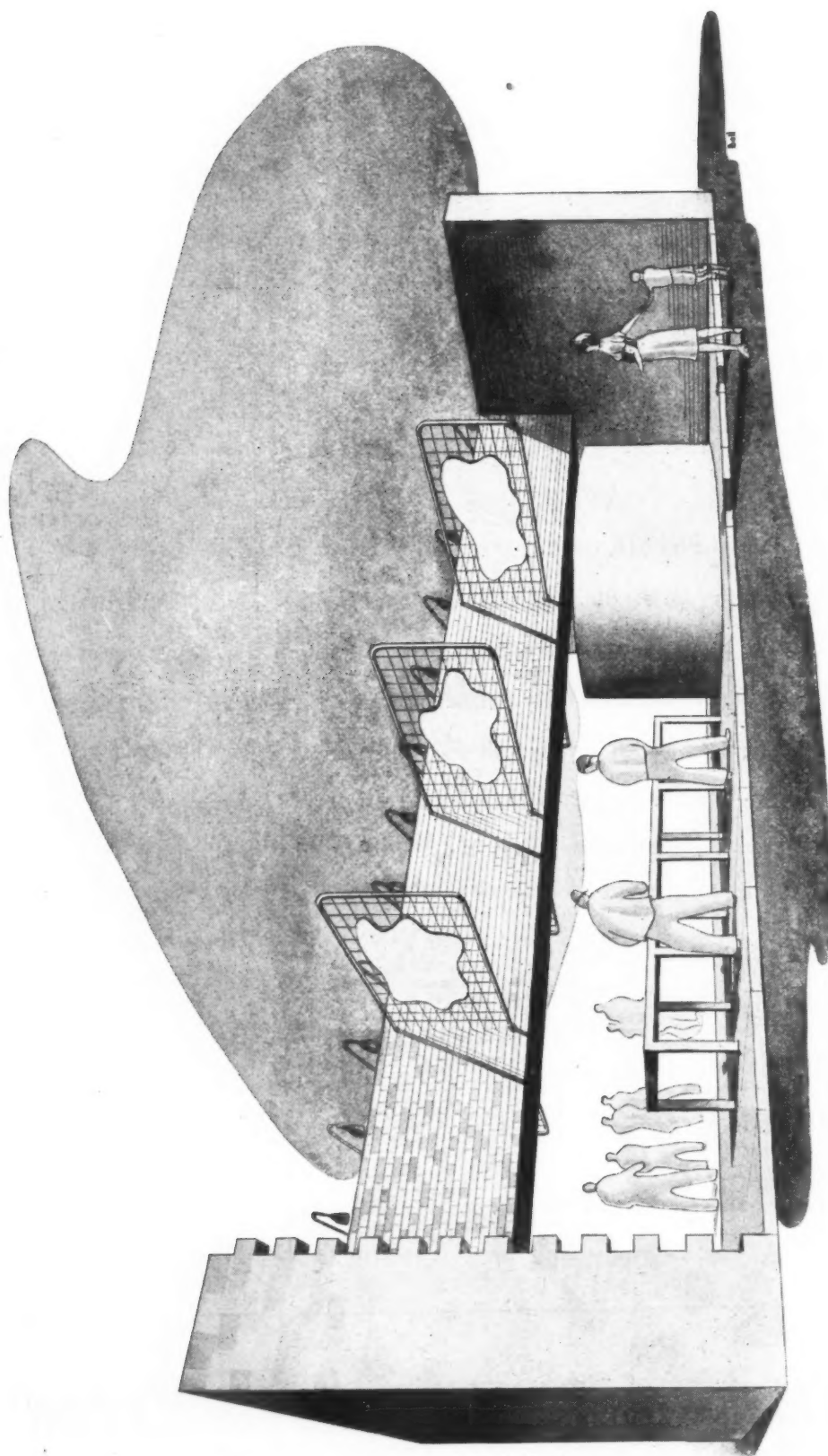
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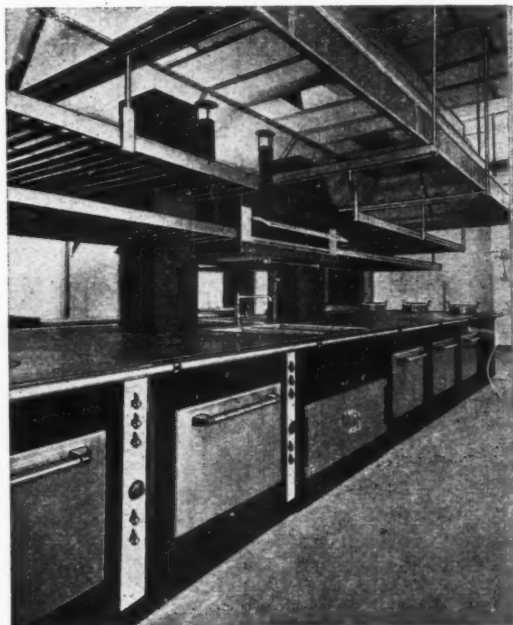
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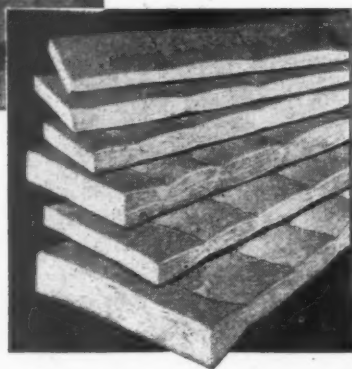
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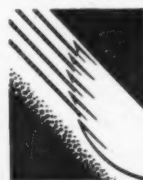
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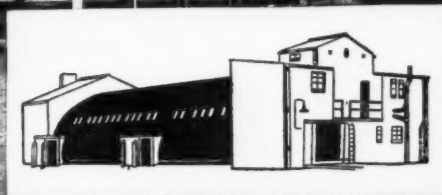
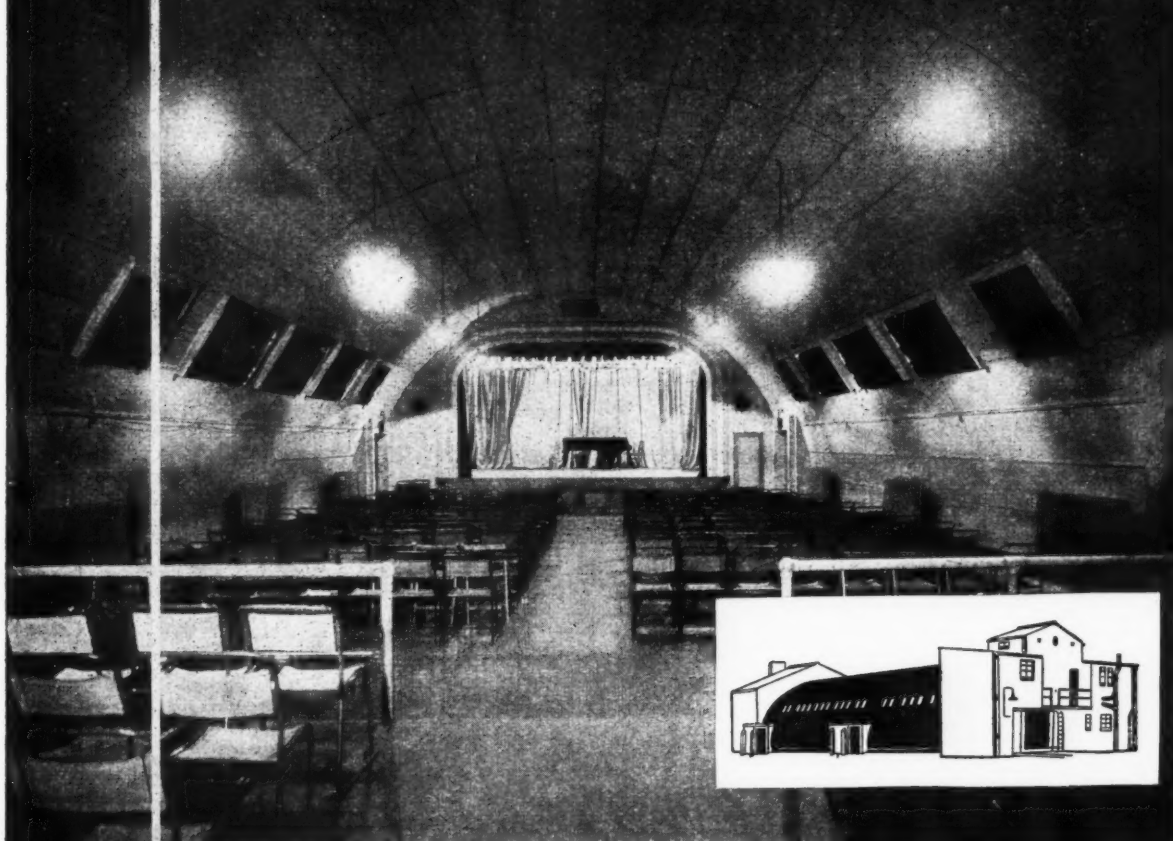
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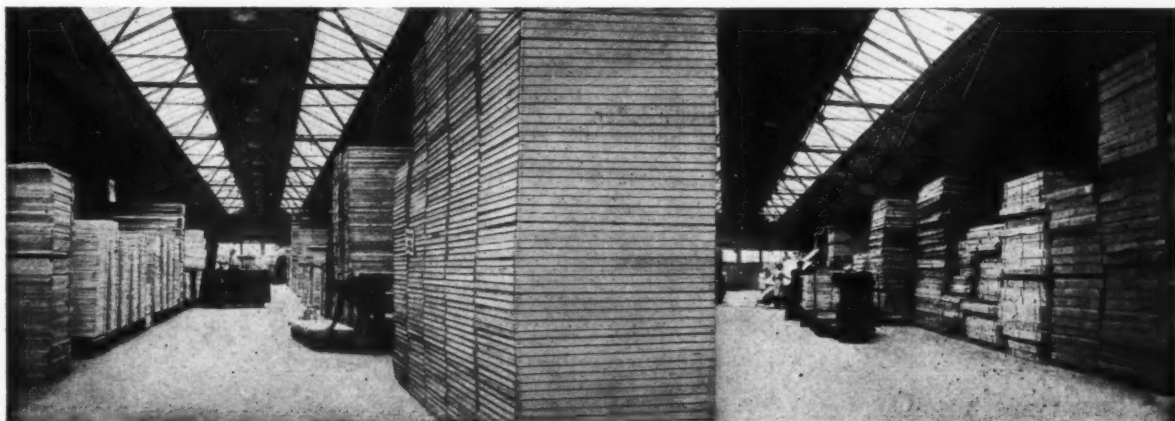
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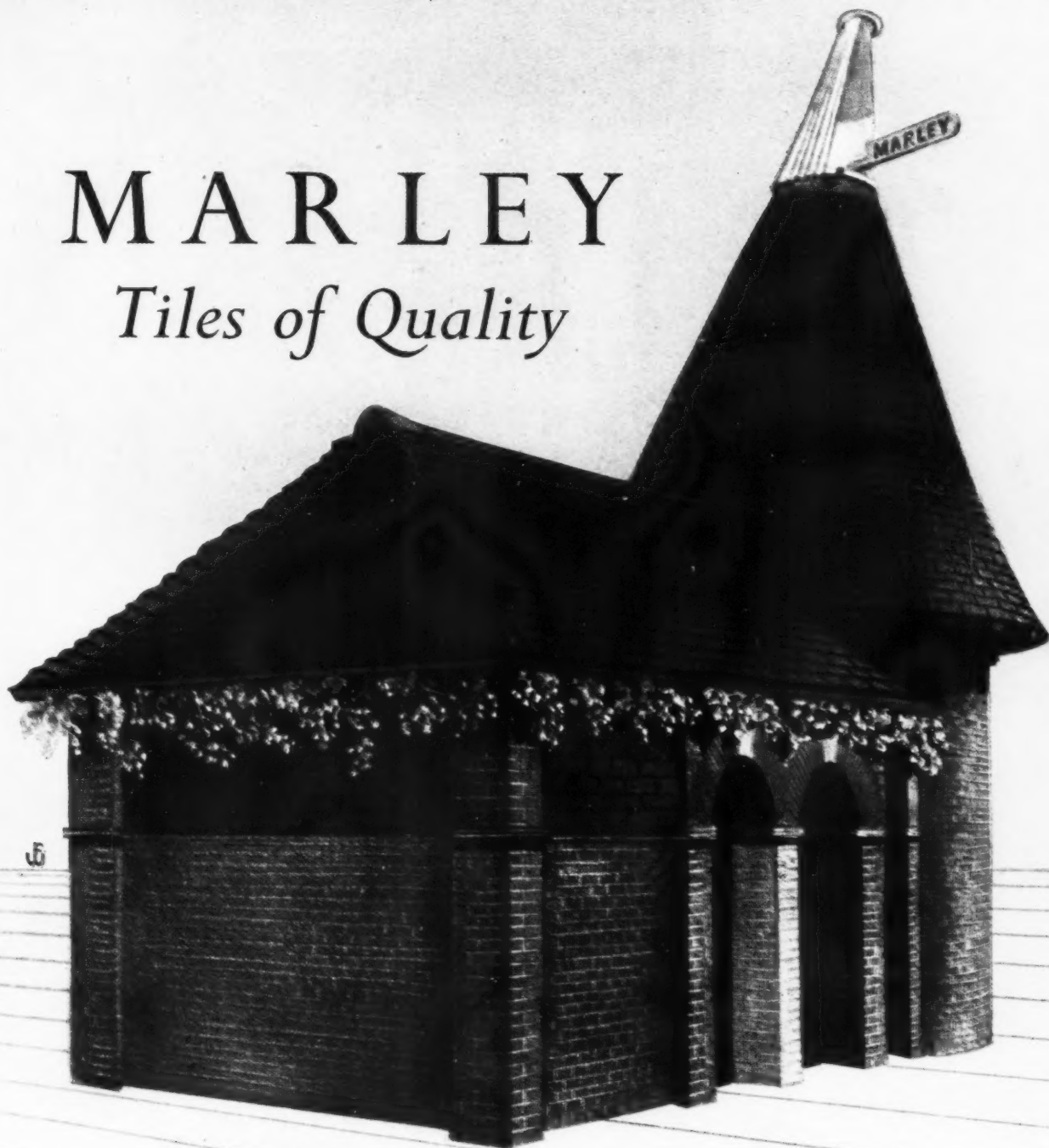
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In common with every other periodical this JOURNAL is rationed to a small part of its pre-war needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee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

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DIARY FOR NOVEMBER DECEMBER AND JANUARY

Titles of exhibitions, lectures and papers are printed in italics. In the case of papers and lectures the authors' names come first.

HARROGATE. *National Housing and Planning Conference.* At the Royal Hall. Nov. 28. Afternoon session: *Town and Country Planning.* An address by the Minister of Town and Country Planning. 3-4.30 p.m. Evening session: *Housing of Special Classes (Agricultural Workers, Miners, Aged Persons.)* An address by the Archbishop of York. 5-7 p.m. Civic reception, 9 p.m.-1 a.m. November 29. Morning session: *The Financial Implications of the Town and Country Planning Act, 1947.* 10 a.m.-12.30 p.m. Scottish session at the Lounge Hall, 10 a.m.-12.30 p.m. Afternoon session: *The Housing Situation. Building by Direct Labour. Management.* 2.15-5 p.m. Rural session at the Lounge Hall for rural delegates to discuss rural housing. 2.15-5 p.m. November 30. Tour around part of the proposed National Park No. 5 (the Yorkshire Dales), 1.40-4.45 p.m. Lecture: *The Report of the National Parks Committee, 1947,* followed by an exhibition of COI Films. 5.30-6.45 p.m. Concert in the Royal Hall. 8.30-10 p.m. (Sponsor, NHTPC.) Nov. 28-DEC. 1

LONDON. *Exhibition of Art, Chiefly from the Dominions of India and Pakistan.* At the Royal Academy Galleries, Piccadilly. An exhibition of sculpture, painting, textiles, jewellery, furniture. 10-7. Sundays 2-7. Admission 1s. 6d.

Nov. 29-FEB. 29

The Countryside Today and Tomorrow. Joint conference with the CPRE, at the ICE, Great George Street, London, S.W.1. M. V. Osmond, Assistant Secretary, CPRE. *Services—land requirements and the public.* R. L. Reiss, Vice-Chairman, Country Towns Committee, TCPA. *Location of Industry in Rural Areas.* Other papers to be read: *Planning a Rural County and National Parks and the Hobhouse Report.* (Sponsors, TCPA and CPRE.)

UNTIL NOV. 27

John Summerson. *Stuart London.* At Highgate Literary and Scientific Institution, South Grove, N.6. (Sponsor, DIA.) 8 p.m. Nov. 27

F. T. Bunclark. *Constructional Features of Meaford Power Station.* At the Institution of Structural Engineers, 11, Upper Belgrave Street, S.W.1. (Sponsor, ISE.) 6 p.m. Nov. 27

Visit to Whiteley Village, Walton-on-Thames. Whiteley Village contains dwellings for old people, a Rest Home and a hospital. By special coach from the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) 5s. Non-members, 7s. 6d. 2 p.m. Nov. 27

T.U.C. Memorial Building Competition. Site: Great Russell Street. Assessor: Sir Percy Thomas. Premiums: £2,000, £1,000, £500. Conditions and plan of site from General Secretary, Trades Union Congress, Transport House, Smith Square, S.W.1, on payment of deposit, two guineas, to be refunded on receipt of a design or return of the Conditions within one month after the receipt of Answers to Questions. Last day for Questions, December 1. Last day for receiving designs, May 31, 1948. DEC. 1

W. A. Knutton. *Airey House Production—Facts and Figures.* At the Housing Centre, 13, Suffolk Street, S.W.1. (Sponsor, HC.) Buffet lunch, 12.45 p.m., 2s. 6d. Talk, 1.15 p.m., 6d. DEC. 2

R. Llewelyn Davies. *Choice of Structural Type and its Cladding.* At 66, Portland Place, W.1. (Sponsor, ASB.) 6 p.m. DEC. 2

Herbert Jackson. *Planning Developments Abroad—Switzerland.* At the Planning Centre, 28, King Street, W.C.2. (Sponsor, TCPA.) 6.15 p.m. DEC. 3

Twenty-Second Building Exhibition, at Olympia. (Sponsors, H. Greville Montgomery, A.R.I.B.A. (HON.) and Hugh R. C. Montgomery, M.C.) UNTIL DEC. 4

AA Centenary Celebrations. December 17. Reception, 11.30 a.m. Opening of the Exhibition illustrating the history and activities of the AA during the past 100 years. Speakers include Sir Ernest Pooley, Chairman of the Arts Council of Great Britain. At 36, Bedford Square. 2.30 p.m. *President's Reception and Dance.* At 66, Portland Place. 8 p.m. Tickets, 2 guineas. AA students, 1 guinea. December 18. *Commemoration Service.* At St. George's Church, Bloomsbury. 11 a.m. *Conference.* At 36, Bedford Square. 2.45 p.m. *Entertainment of Delegates by British Council.* 5.30 p.m. *Gala performance of Student's Pantomime.* At 66, Portland Place. 8 p.m. December 19. *Organised tours for Delegates.* London and Home Counties. Morning and afternoon. *Dinner in honour of Delegates.* Given by the President and Council. At 36, Bedford Square. 7.30 p.m. DEC. 17-19

MANCHESTER. *Exhibition of Designs and Textiles.* By the SIA. At the Colour, Design and Style Centre of the Cotton Board, 19, York Street. Exhibits include printed and woven furnishing fabrics and designs on paper. (Sponsor, Cotton Board.) UNTIL NOV. 29

THAME. *Ideas on Design in the Home.* At the Spread Eagle. (Sponsor, ACCB.) UNTIL NOV. 29

NEWS

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

Owing to shortage of timber, steel and bricks the GWR is making greater USE of REINFORCED CONCRETE to meet its immediate needs.

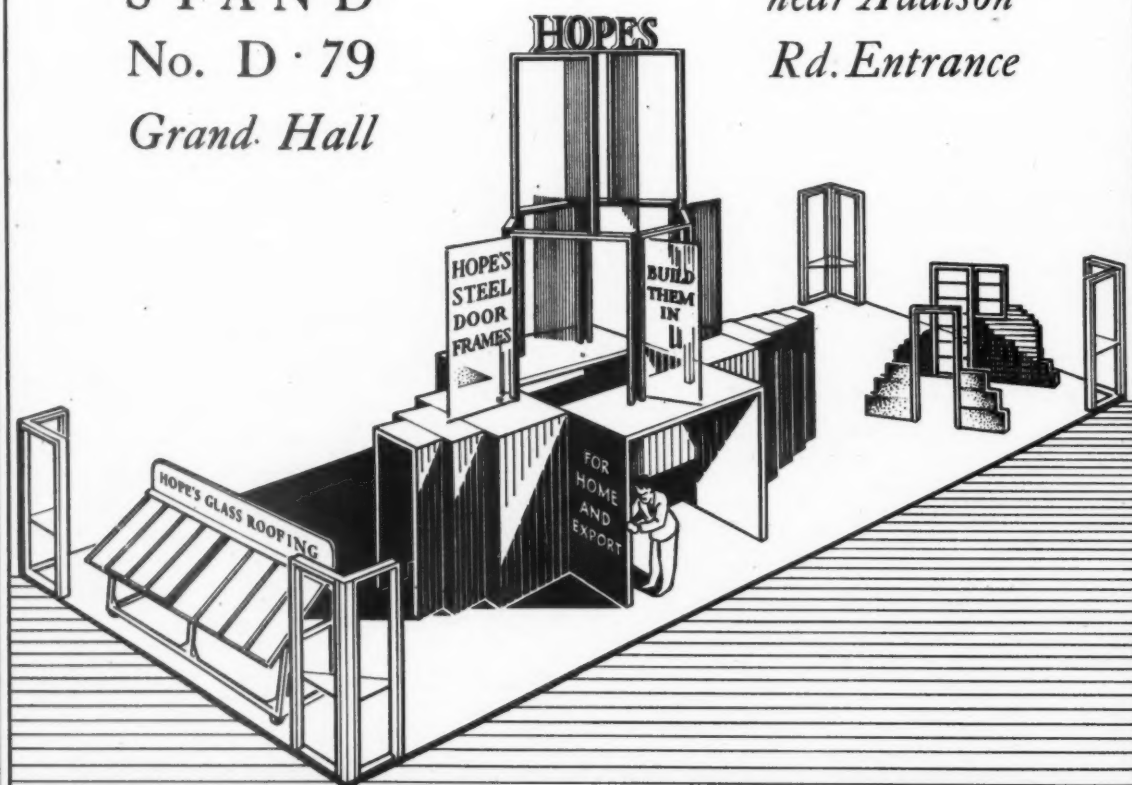
At its Taunton depot over 200 standard articles, varying from paving slabs to sliding stop-blocks and fireplaces to abutment troughs are now in regular production. Footbridges, supports for verandah roof coverings, and bridges are being specially designed and cast in interlocking pre-cast reinforced concrete sections ready for rapid and easy erection at site. A new type of triangular, hollow, concrete block has been designed to replace bricks needed for housing. It can be laid rapidly and easily. Wherever possible the moulds used in the depot are of concrete to save using timber and steel. Parts of future stations at Port Talbot, Barry and Aberdare, and 50 massive sections, weighing up to 32 tons each, which will form a bridge at Aberdare are being cast and made ready for dispatch to site. The acute shortage of wooden sleepers is being helped out by a weekly turn-out of over 2,000 blocks for concrete sleepers.

BUILDING EXHIBITION
OLYMPIA · NOV. 19 - DEC. 4

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From AN ARCHITECT'S Commonplace Book

NATURE OF THE INDUSTRY. [From *The Builder and the State (HMSO).*] The building industry is a "capital goods" or investment industry as opposed, say, to the textile industry or the food industry, which are "consumer goods" industries, and it is, in fact, by far the largest single capital goods industry we have. When the "surplus income" of the nation has to be invested, much of it normally goes to finance new building and civil engineering work as the necessary prelude to the development of new industries or the extension of old. The large capital investor may need to build a new factory; the small investor, in normal times, may wish simply to build one house. Together with repairs, maintenance and civil engineering work, they account for the existence of an industry with, in normal times an annual capital outlay of £500,000,000. More than half the nation's internal invested capital is in "bricks and mortar."

At the invitation of Pretoria City Council, Professor W. G. Holford is shortly to FLY TO PRETORIA to give advice on future developments of the city.

Professor Holford expects to be absent about three weeks.

The largest and most comprehensive exhibition of FINE ARTS OF INDIA ever seen in Europe is to be held in the Galleries of the Royal Academy from November 29, 1947 to February 29, 1948.

The exhibition includes examples of the finest achievements in Indian sculpture, painting, textiles, illuminated manuscripts, terracotta, metalwork and jewellery; most of them have been loaned specially for this exhibition from Museums, State Collections, and Private Collections in India. Their Majesties the King and Queen have given their patronage to the exhibition, which also includes important loans from the Royal Collections. The exhibition has been arranged in co-operation with the British, Indian, and Pakistan Governments, and with the assistance of a committee of experts, including representatives of the Royal Asiatic Society, the Royal Society of Arts, and the Royal India Society.

★★

The Minister of Works asked in the House of Commons for a further £20,000,000 with which to finish the TEMPORARY HOUSING PROGRAMME.

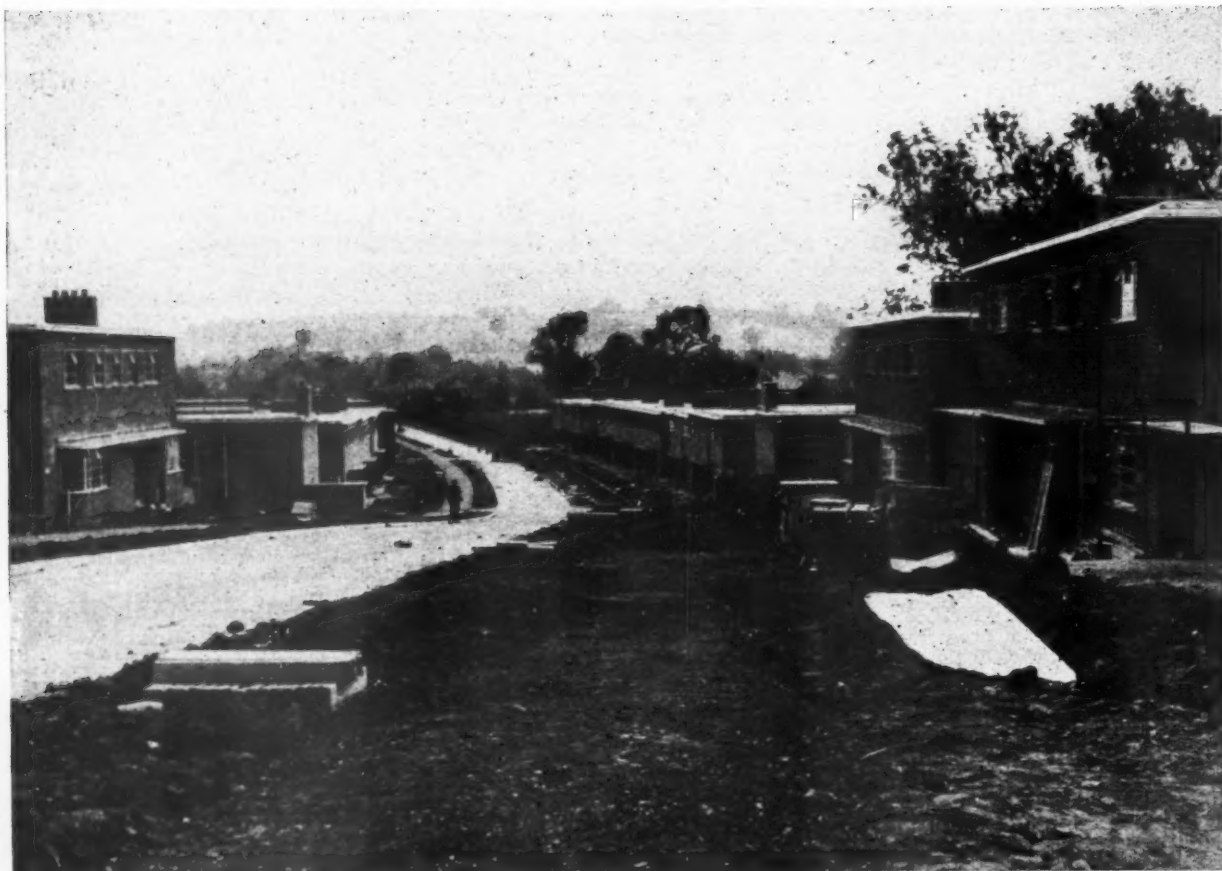
He said the number of temporary houses still to be completed at the end of October was 24,184, of which 17,500 were aluminium, and they should be completed by next May. The remaining 1,900 of other types for England and Wales should be completed by the end of next month, but 4,700 for Scotland were unlikely to be finished before next summer. The total estimated cost was now £217 m., an increase of £39 m. over the estimate prepared when the White Paper was published in October, 1945. Wage rates had increased by 11 per cent., and these, with the increased cost of fittings, involved an additional £11 m. for preparing sites, erecting houses, and supplying fittings for the houses provided by his department. Other substantial increases were in the cost of distribution and transport, amounting to £7,500,000, and additional storage and handling due to accumulation of stocks, costing about £8 m. An

increase of £13,500,000 came from the aluminium house, which was now estimated to cost £1,610. It had always been known that this house would be more expensive than the ordinary type of temporary house, but with very little data upon which to base estimates, the cost of materials, labour, and overheads had been considerably underestimated, and the position had been accentuated by the rising cost of fittings. The house was wholly factory built and erected on the site in a few hours. The saving in building labour had fully justified its inclusion in the programme. Mr. Hicks said he was deeply concerned about why the aluminium house was the one which had been selected. One thousand six hundred and ten pounds was a ridiculous price to pay for it. The building industry had some right to complain about indecision and the frustration they had suffered. Permanent houses built in brick which would have lasted 90 or 100 years could have been built much more cheaply. He did not think the Government were to be congratulated upon the way in which they had handled this task. Mr. Braddock said the cost of the prefabricated houses was too high. The Government should hold an investigation and make the findings known. Mr. Walker-Smith said it was difficult to know what the

permanent local authority house cost to-day, because the Minister of Health was coy about figures, but £1,300-£1,400 was the cost of a private enterprise house. What a shameful contrast there was between that and the £1,610 for an aluminium house. Was that the measure of superiority accepted by the Socialist Government—that private enterprise should be able to build temporary houses at £310 less than the present administration was able to build them? Mr. Durbin, Parliamentary Secretary, Ministry of Works, said that 40 per cent. of the increased cost of aluminium houses was due to changes in the aluminium content, 35 per cent. to increased costs of components, and 20 per cent. to overhead charges through delay in the programme. The history of the figures showed that there had been gross under-estimating, but it was less in degree than the under-estimation in the period between 1944 and 1945. A large part of the under-estimation and the increased costs was the result of the speed with which ambitious industrial enterprises were launched without the necessary preparatory work. The appearance of high cost was in part illusory because, although the aluminium houses were legally temporary, they were technically and physically capable of a much longer life than 10 years.



The Minister of Works, Mr. C. W. Key, opening the Building Exhibition at Olympia last week. On his left are Sir Lancelot Keay, and Sir Giles Gilbert Scott who proposed a vote of thanks to the Minister. On pages 471-477 is a second report on the exhibition.



This or That?

At Olympia there is an exhibit entitled *The Builder and the State*, a joint enterprise of the Ministries of Works and Health and the DSIR. The lower photograph is of a model prepared by the Ministry to suggest how permanent prefabricated houses may be sited to maintain the harmony of an existing village. With the conditions shown in the upper photograph we are only too familiar; the violent

disregard of community and amenity has become a commonplace. If the object-lesson presented by the Ministry of Health is learnt and understood by architects and borough engineers a great advance will have been made. Some further aspects of the work of the Ministry of Health made public for the first time at Olympia are discussed in this week's leading article.

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Northern Command has now explained the War Department's intentions regarding the USE of DOVEDALE for TRAINING PURPOSES.

The Command states that before the war the Territorial Army used the rifle range above Thorpe without any recorded agreement to restrict the public from the danger area behind the butts. The Command now wishes to continue the Territorial use of the range, conforming, of course, to normal safety regulations. It proposes to exclude the public from the area immediately round and behind the butts when firing is taking place, but the area would not be fenced. There is no intention to purchase the land. See A.J., November 13.

At a meeting with Mr. J. J. Robertson, Parliamentary Under-Secretary of State for Scotland, a deputation from the Scottish National Building Trades Federation (Employers) asked that the GOVERNMENT SHOULD ENFORCE THE WORKING RULES AGREEMENT for building operatives.

The deputation discussed the question of the payment by local authorities and building contractors in certain areas of Scotland, of a guaranteed 44-hour week in place of the 32 hours guarantee included in the working rules agreed by both sides of the building industry. It was said that certain contractors who were abiding strictly to the working rules agreement were losing labour to contractors in neighbouring areas who were giving a guaranteed 44-hour week. The Federation feared that this departure from the working rules agreement would spread to other areas, and that one of the results would be a substantial increase in the cost of building. The Federation asked that the Government should accordingly take any necessary action to ensure that the working rules were being strictly observed by all local authorities and building contractors. Mr. Robertson in reply pointed out that this difficulty was one for the building industry itself to settle. He did not think the Government at this stage were called upon to take any official action. It was for the Federation to discipline its own members.

★

The Minister of Town and Country Planning is to make an Order declaring approximately 1,300 ACRES in STEPNEY and POPLAR subject to compulsory purchase for redevelopment by the London County Council.

Stepney and Poplar were selected as a priority area for development by the LCC because of their heavy bomb damage. The application by the LCC, the first in the county of London, was for 1,945 acres, but the Minister has excluded certain less severely damaged areas, as well as railway tracks, gasworks, and canals, which are unlikely to be disturbed. In his letter to the LCC Mr. Silkin has made it clear that his decision does not mean that the larger area should not be redeveloped but that he was not satisfied that under the Town and Country Planning Act, 1944, all the land could be said to have sustained war damage or be adjacent to damaged land. He hoped the Council would continue to plan for the area as a whole.

RE-BIRTH OF THE TERRACE

EVER since Local Authorities first assumed responsibility for housing, the semi-detached house has been the almost universal compromise between the widespread desire to have a house of one's own and the need for economy in construction costs and site area. Of the 4,000,000 houses built between the wars, the vast majority both by speculative builders and public bodies have been to this pattern. The standard semi-detached two-storey house, however convenient its planning may appear, and however economical its construction, provides an almost insoluble architectural problem. If this statement is thought to be too sweeping, a journey through England will convince the traveller that the ability and imagination of architects have mitigated some of the worst features, but within the rigid framework of Ministry of Health requirements the problem well-nigh defies ingenuity.

This does not mean that there is no place for the semi-detached house. Where requirements demand an area in excess of the standard 900 odd sq. ft. for each house there are possibilities of satisfactory design, and in other cases a pair carefully sited and skilfully related to other buildings can be architecturally satisfactory.

The Ministry of Health has now turned its attention to other types of housing. The terrace designs were illustrated in this Journal last week and the maisonette types are shown on page 470 of this issue. This new development, which owes a great deal to the work of Mr. Forshaw, is significant for the future. If the examples illustrated, now on exhibition at Olympia, and described as being designed for high density areas, are merely regarded as a ready-made solution to the problem of fitting a certain number of dwellings on a limited site, the full possibilities of the terrace will remain unexploited.

From the architectural and planning point of view, while there is a strong case in favour of the use of multi-storey blocks of flats or maisonettes where social and economic factors demand such development, the terrace must be regarded as a powerful aid in the struggle to overthrow the tyranny of the semi-detached. It should be borne in mind that the plans prepared by the Ministry of Health are not put forward as accepted standards for municipal housing, but to stimulate discussion within the architectural profession. This initiative is very welcome and it is to be hoped that the profession will respond. The use of terrace housing has, until the twentieth century, been an almost universal factor in our towns and villages. The row of cottages often to be found in the smallest village, giving form and coherence to the general grouping of buildings, shows clearly that the terrace is frequently a beneficial factor even in areas of low density building development. The possibilities of the Ministry's proposals should be studied in this light.

In common with all standard solutions, these ideas require

skilled and imaginative handling. If regarded as final solutions to urban problems, they will become as stifling a strait-jacket as the standard plans for semi-detached houses have been. Though the various Ministries concerned have been able to limit the worst and most ignorant abuses of typical solutions, the possibilities of such solutions will not be fully developed until the officials of local authorities cease to use them as a substitute for the exercise of the proper functions of the architect.

In preparing the proposals for groups of maisonettes, the Ministry of Health made use of the services of a panel of private consultants. Though it is difficult to judge the effects of such collaboration from the present example, it seems to be a method by which the standard of official work can be greatly improved. Having appreciated that everybody does not want to live in either a semi-detached house or a multi-storey block of flats, it is hoped that the Ministry will discover that there is no need for every terrace house to be one of these types, nor for the standard solution to be regarded as anything more than a stimulus to the inventiveness of officials.



The Architects' Journal

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

THE FIRST HUNDRED YEARS

Have you ever thought what a short period of time is a century? There are several members of the AA who can record over sixty years of membership, among them Dr. H. V. Lanchester, who won an AA travelling studentship in 1888, in which year Sir Banister Fletcher won the AA medal and 10 guineas, having joined the Association in 1884. Mr. J. M. Kennard has the longest membership, having joined in 1874. For the greater part of its life Mr. Kennard has been able to observe the development of the AA.

*

In the training of the architect our modern system has grown, as Mr. Sum-

merson shows in his book* on the AA, from Leonard Stoke's great AA reorganization in 1891, when he established an evening school on the firm foundations of the RIBA's compulsory Associateship examination. In 1917 the day school eventually extinguished the evening training.

*

Since then, following the steady development during Howard Robertson's sixteen years at the Atelier, and as Principal and Director, major changes were made by E. A. A. Rowse, who succeeded Robertson in 1935. The former division into "years" was abandoned, and "units" substituted, making possible collaborative work by groups of students. Rowse also started the School of Planning, recognizing that planning is properly a post-graduate training for those who have received a basic training in architecture, engineering and surveying. The School of Planning, of course, was later dissociated from the AA and is now the APRR.

*

To-day we may well sympathise with Mr. Gordon Brown, the present Principal, who has not only got to cope with the administrative reconstruction of the school following the war, but to lay the foundations of an education system designed to equip architects to carry out their job under the changed conditions of to-day. The whole history of the

* *The Architectural Association 1847-1947*, by John Summerson. (Pleiades Books) 12s. 6d.

AA gives hope that the task will be successfully undertaken.

RESEARCH IN BRITAIN

The FBI has just published the results of a statistical survey of the money spent by industry on research. The inquiry was limited to firms spending £1,000 a year or more, and some interesting facts have emerged. It used to be said, with some truth, that we didn't spend anything like enough, but at least the total (by firms, not by the Government) has grown from something under 3 million in 1930 to nearly 30 million in 1946, which is quite a tidy jump, even after allowing for the fall in value of the £, while at the same time 60 per cent. of the firms replying to the FBI questionnaire said they were going to expand their research programme.

*

Unfortunately, it isn't possible to disentangle the figures for Building and Civil Engineering, which is merely shown in the Services group, but the highest spenders are the aircraft and automobile producers, with 8½ million, and chemicals next with 5 million.

*

Government expenditure on industrial research is 4½ million (as against 60 million on what is now called defence research), making 35 million for industry, about 0.7 per cent. of the total annual value of goods produced. Incidentally, I should like to have comparable figures for present-day American and pre-war German expenditure, as I suspect that we still don't spend enough. But there are sad shortages of laboratory instruments and the scientific staff to use them, not to mention a lack of lab. space. The FBI committee is probably right to ask priority for research buildings.

INDUSTRY, MARK IT WELL

If the energy and public spirit he has brought to the honorary secretaryship of MARS are any criterion, Mark Hartland Thomas should quickly make his presence felt at the Council of Industrial Design, where he takes up an appointment next week. Though the activities of the Council that receive most attention are naturally those directed towards the general public—such as "Britain Can Make It"—the work it does within industry is much

more important if the Council is going permanently to raise British standards of design. Hartland Thomas will be taking charge of the industrial side, under the new director, Gordon Russell.

We shall expect a lot from these two appointments, and at least one very important thing—a close liaison between industrial design and architecture—we can be quite certain of with an architect in this key position.

COUNCILLORS' BEANFEAST

It was not the elegant Mayor, nor the Chairman introducing the eminent speakers, nor yet the theatrical Mr. Coppock who bestirred the numbed delegates from within their overcoats in the icy atmosphere of Seaton Dahl's neo-classic Leas Cliff Hall at the Fourth Building Congress last week in Folkestone. What captured their interest was the duffel coat of Kenneth Campbell, the youthful President of the ABT, as he strode to the microphone.

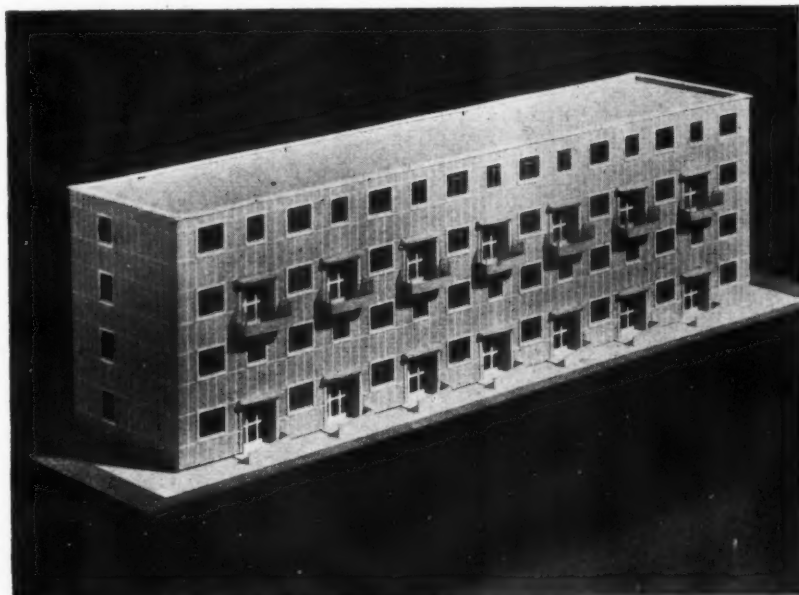
Campbell had listened patiently to endless Councillors' discussion. An inflamed Mayor of Holborn demanded equal pay for bricklayers and architects; a minor trades union official (whose identity one doesn't remember) urged that the architect must come down to the level of the workman. Then just a bit too suavely Campbell brought workmen up to the level of

the architect by reminding the Congress that the craftsman, if he was to retain his significance in the building industry, must keep clear of recriminating back-chat and must to-day be at the front in welcoming experiment and new techniques much as master craftsmen had notably done down the centuries.

In an unguarded moment, reckless in a scientist, Dr. West, of the Aluminium Development Association, disclosed that his Association's estimate of a 30-year expectation of life for aluminium prefabs was politically reduced to 10 years at the suggestion of the Government, which presumably thought 10 sounded better than 30 when talking about prefabs. C. L. Greaves, who practises in the potteries, revealed that barely 21 per cent. of the work on his office table was of bread-and-butter value. The remaining 79 per cent. was held over or under for a multitude of reasons—bureaucratic, crisis, or dollars—which perhaps are one and the same thing.

Nothing new was said at the Congress, no resolutions were passed, and, beyond a call for team-spirit in the industry (markedly absent among delegates), Astragal could only record that he enjoyed Folkestone and hopes it's Torquay next time.

ASTRAGAL



Another view of the suggested maisonette block exhibited by the Ministry of Health at Olympia. See also page 470.

LETTERS

C. W. Dunham,
(Welfare and Employment Officer,
British Limbless Ex-Service Men's
Association)

G. Gneditch, A.R.I.B.A.

Employing the Limbless

SIR.—The Disabled Persons (Employment) Act is intended as a measure of social service and social justice to ensure that disabled persons have a fair share of available jobs. In spite of the Quota provisions of the Act, and repeated statements that such a position should not be allowed to arise, the latest available information shows that approximately 2,600 limbless ex-Service men are registered as unemployed.

The vast majority of limbless men retain robust health apart from partial physical limitations, and, when fitted with modern artificial limbs, are capable of giving regular, loyal and efficient service in return for the opportunity of becoming useful self-supporting members of the community.

It is agreed that those who have lost limbs or suffered equivalent disablement in the country's service are deserving of the utmost consideration, and our officers trust that employers, when filling vacancies, will enquire whether suitable limbless ex-Service men are available.

Employing limbless men won't cripple industry.

C. W. DUNHAM,
Welfare and Employment Officer,
British Limbless Ex-Service Men's
Association

Manchester.

Liverpool War Memorial Competition

SIR.—This would seem to be a three-cornered contest between the "Monument for Monument's Sake" school, the "Public Baths (In Memoriam)" school, and the "No Memorial to War at any Price" school.

As an adherent of the first, I would remind the second that, apart from the difficulty and invidiousness of deciding which interested faction, the National Theatre, the Public Baths or Hospital, Library, and so forth, should have prior claim, the sum of £5,000 proposed in this case is not a very large one and would go but a little way to meet any of these projects.

If it is not a matter of cost, but one of principle, then to save your valuable space I would refer those who argue in this wise to Mr. Whittick's book on War Memorials, where all the arguments are so much more lucidly explained.

To the last-mentioned school, I would suggest that to venerate the memory of the fallen is not necessarily to glorify war. To stifle the memory of past wars is not to ensure against future ones.

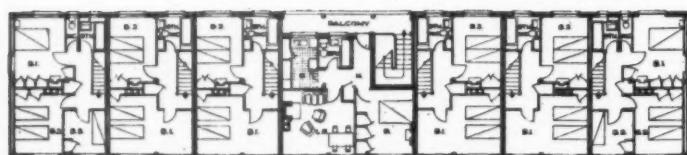
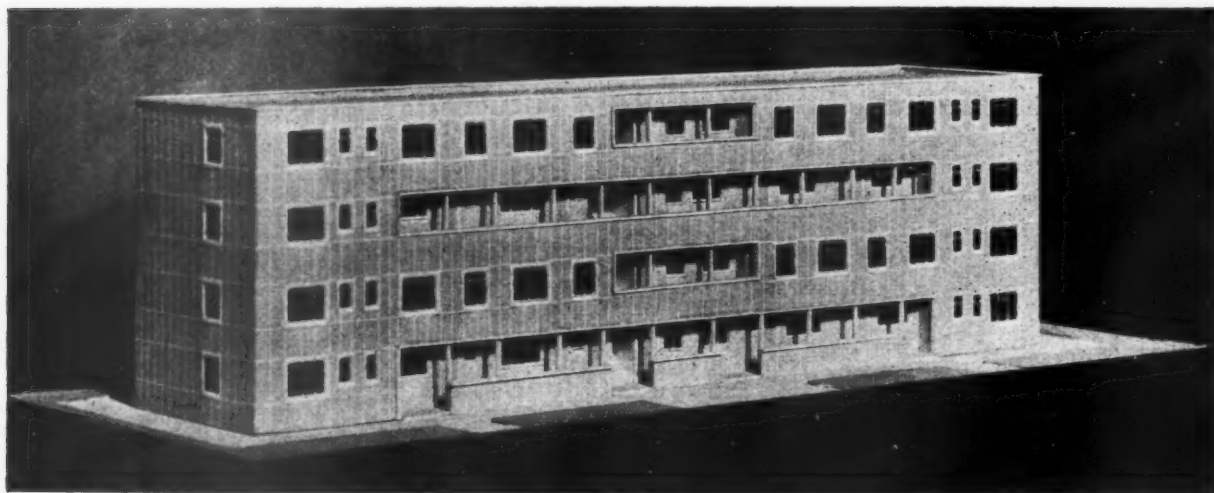
To both, I would say that the desire to create monuments in the form of symbols, whether to commemorate the dead or glorify the living, as in the lovely little fountain illustrated in the AJ for November 13, is a primitive desire, but none the less healthy for that. To refer to it as idolatry is to confuse ends and means.

The earth is full of the manifestations of this instinct from primæval to modern times. Had it not been so, the writings of history would be a pale slim volume and those who peopled its pages, mean sickly creatures.

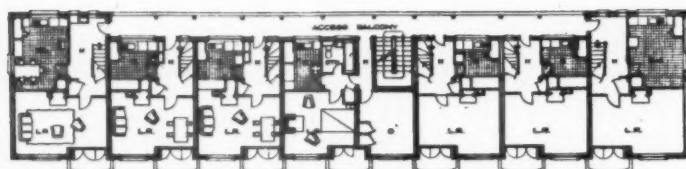
London

G. GNEDITCH.

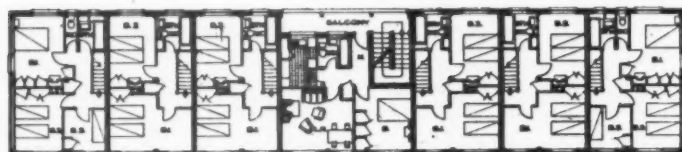
MAISONNETTES BY THE MINISTRY OF HEALTH



THIRD FLOOR



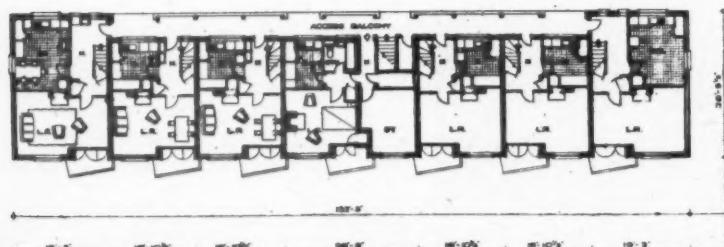
SECOND FLOOR



FIRST FLOOR



GROUND FLOOR



GROUND FLOOR

The new suggestions for 3-storey terrace housing prepared by the Architect's Department of the Ministry of Health were illustrated in the Journal last week. On this page is a complementary scheme for 4-storey maisonnettes, also made public for the first time at the Building Exhibition.

This type of planning is suggested for areas of high density, particularly where there is a need for accommodation for childless couples and those with small, nearly adult, families. The building, a little over 130 ft. long, contains 16 dwellings, 4 large and 8 small maisonnettes, 3 two-room and 1 single-room flats. There is a pram store on the ground floor. The proposal is designed to be built in non-traditional forms of construction, and has been worked out in consultation with a committee of private architects.

Top, a photograph of the model, showing the access balconies on alternate floors. The staircase is in the centre of the block. Left, plans of the four floors. Another photograph of the model appears on page 469.

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Methuen & Co. Ltd., London, 1932.

Briggs, M. S., Building today,
Oxford University Press, 1944.

Eden, W. A., Architectural tradition,
Macmillan & Co. Ltd., London, 1942.

A B C D E F G

H I J K L M N

O P Q R S T U

V W X Y Z 1 2

3 4 5 6 7 8 9 0

A DRAWN ALPHABET AND NUMERALS: LIGHT SANS SERIF.

Designed by Christopher Bayard for Eagle Pencil Company — Chemi-Sealed Turquoise pencils.

1.B7 A DRAWN ALPHABET AND NUMERALS: LIGHT SANS SERIF

General

This Sheet, the third to be published in a series on draughtsmanship, illustrates a light sans serif alphabet and numerals. Further Sheets on lettering will include a bold sans serif alphabet, upper and lower case characters, serif alphabets, stencil and freehand lettering. Other groups of this series cover geometrical drawing, orthographic, isometric and axonometric projections, perspective, rendering and draughtsmanship generally.

Design

This drawn alphabet illustrates the accepted characteristics of good sans serif design free from whimsical eccentricities and is suitable therefore as a basis for general drawing office reference.

The relationship between the height of the letter and the width of the stems in this alphabet is twelve to one and it is essentially a light design. For normal titling of drawings and signs, etc., slightly heavier characters, ten to one, would be suitable. A further Sheet in this series will illustrate a heavy sans serif design approximately five to one.

While it is not the intention of this series to discuss general aspects of the design of lettering a number of observations made by the designer of these characters is of interest. The observations must be taken as the personal opinion of the designer, although in most cases they are supported by the majority of informed opinion on the subject.

- A:** The bar should be lower than centre height and it is important that the character should not be too narrow.
- B:** The top part of the letter should not be wilfully smaller than the bottom.
- C and D:** Should be nicely rounded wide letters but great care should be taken to avoid the D being too wide.
- E and F:** Differences in the length of the arms, although quite small, are important. Excessive differences are entirely unsatisfactory.
- G:** There is no necessity for the G to be an extremely wide letter. The vertical portion of the letter, often omitted in many sans serif type faces, is part of its character and should not be dispensed with.
- H:** The width of this letter requires careful attention. The bar should be very slightly higher than centre height.
- J:** This should be austere, in character with the remainder of the letters. A more rounded foot is quite unsuitable.

K: The arms of the K should touch the stem, but only slightly. Too great an attachment to the stem produces a coarse character.

L: The length of the arm is critical. It could be shorter, but certainly should not be longer than shown.

M: Should be wider than N but only just so. The centre should not finish with a sharp point as this distracts the eye from the letter as a whole.

N: Should never be wider than illustrated.

O: Condensed O's are an abomination.

P: An overlarge top to a P is most undesirable, but a recent tendency to make the top too small is equally unsatisfactory.

R: The important thing in designing an R is to make it as little as possible like a P with a stroke added. Placing the leg either too near or too far away from the stem has this effect.

S: No attempt should be made to produce an S entirely geometrically. The beauty of the letter lies very largely in the freeness of its curves.

T: Should be a fairly narrow letter but by no means as narrow as E and F.

U: Should not be too wide.

V: Looks far too irritable if composed of V's crossed in the middle.

Z: Should be a fairly narrow letter, certainly not wider than H.

The numerals have been designed for use with the characters illustrated. Those figures which are partly composed of curves are slightly taller than others. This is necessary to compensate for the optical illusion which occurs in the same way as with C's, Q's, U's, etc. In a number of cases, but by no means all, sharp points have been deliberately clipped. This has been done for instance to the 2, the S, and the 4. The reasons for this are purely intuitive and it should be stressed that in evolving these characters no attempt has been made to reduce their design to a formula.

Compiled from information supplied by:

Eagle Pencil Company.

Address: Ashley Road, Tottenham, London, N.17.

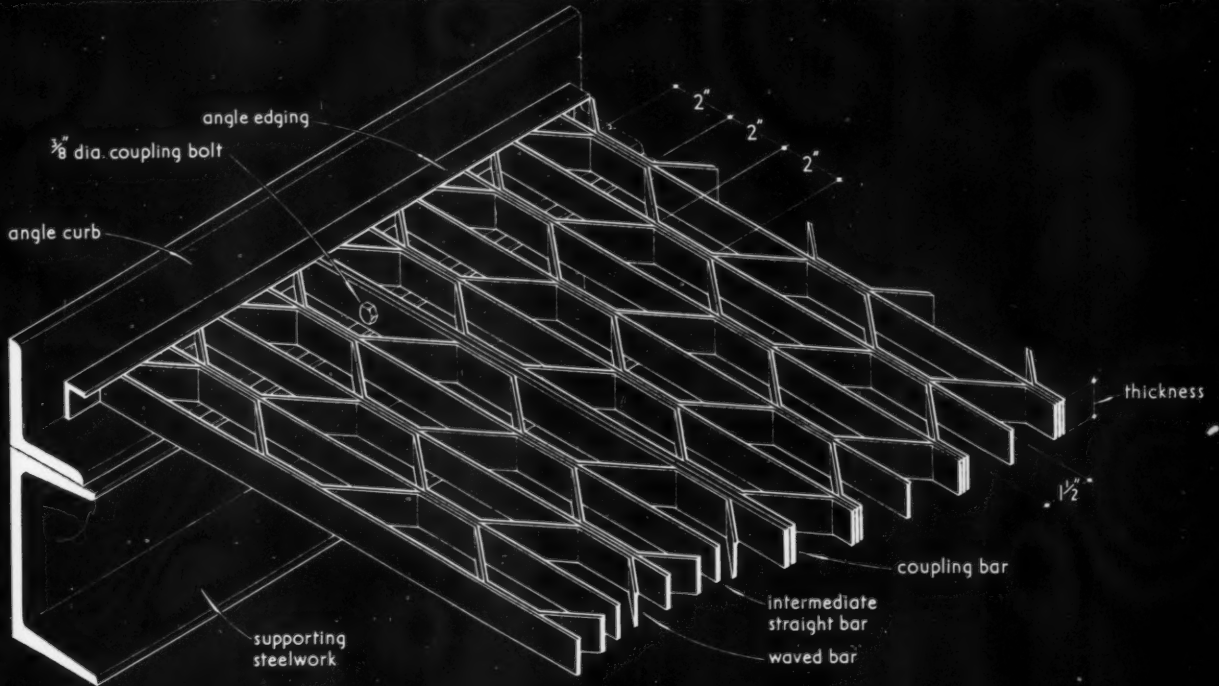
Telephone: Tottenham 4435-6-7.

Telegrams: Octennial, London.

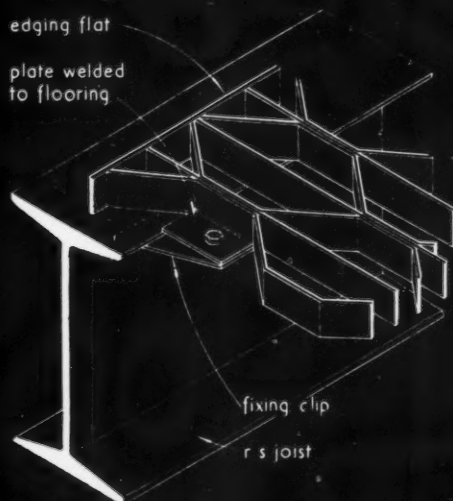
FLOORING | MILD STEEL

20.C1

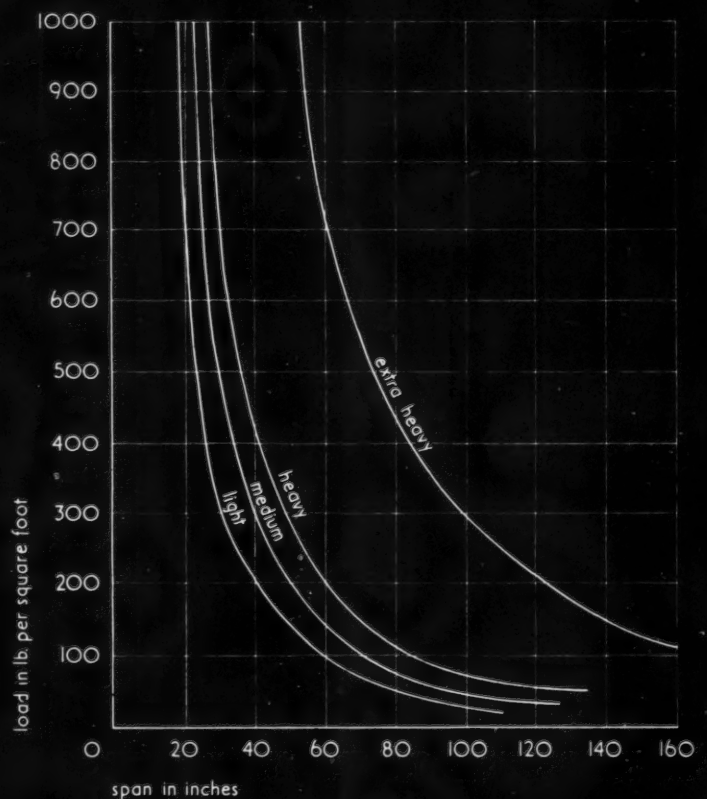
The Architects' Journal Library of Information Sheets 18. Editor: Cotterell Butler, A.R.I.B.A.



ISOMETRIC VIEW OF FLOORING IN POSITION ON TYPICAL SUPPORTING STEELWORK.



METHOD OF FIXING TO STEELWORK WHEN ANGLE CURB IS NOT USED.



DESIGN CURVES FOR FLOORING.

20.C1 BEACON ALL-WELDED STEEL FLOORING

General

This Sheet describes Beacon pressed steel open flooring. The flooring is clean, has an even surface, does not obstruct light, and permits ventilation. It is suitable for gangways and floors in power houses and retort houses, crane walkways, service and operating platforms to machines, car wash pits and for armouring concrete floors in factories, dairies, etc. Complete installations of gangways, fire escapes, etc., including the supporting steelwork, ladders and handrails can be supplied. The flooring is made in four different patterns, light, medium, heavy and extra heavy, and to the specification shown in the table below.

Pattern	Thickness	Weight per square foot	Angle edging	Coupling bars	Intermediate straight bars	Waved bars
Light ..	1½ in.	7 lb.	1½ in. × ½ in. × ½ in.	1½ in. × ⅜ in.	1½ in. × 12 g.	1½ in. × 12 g.
Medium	1½ in.	8 lb.	1½ in. × ½ in. × ½ in.	1½ in. × ⅜ in.	1½ in. × 12 g.	1½ in. × 12 g.
Heavy ..	1½ in.	10½ lb.	1½ in. × ½ in. × ½ in.	1½ in. × ⅜ in.	1½ in. × 12 g.	1½ in. × 12 g.
Extra heavy	2 in.	14 lb.	2½ in. × 1 in. × ½ in.	2 in. × ½ in.	2 in. × ½ in.	1½ in. × 12 g.

Sizes

The flooring is made in the following panel sizes. Up to 6 ft. 6 in. width (*i.e.*, span of bars), 2 ft. 7½ in. long. Over 6 ft. 6 in. and up to 13 ft. 0 in. width (*i.e.*, span of bars), 1 ft. 5½ in. long.

Construction

The isometric drawing at the top of the face of this Sheet illustrates the general construction and design of the flooring. All points of contact between waved and straight bars are electric resistance welded.

Coupling

Panels are butt jointed and are secured by ⅜ in. dia. coupling bolts.

Fixing

The flooring may be fitted loose into an angle curb, which is bolted to the supporting steelwork or alternatively it may be clipped to the main steelwork as shown on the face of this Sheet.

Finish

Before despatch the flooring is stove enamelled black or as an alternative it may be hot-dip galvanized.

Compiled from information supplied by :

John Thompson Beacon Windows Ltd.

Head Office : Beacon Works, Wolverhampton.

Telephone : Bilston 41944 (3 lines).

Telegrams : Windows, Wolverhampton.

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

Telephone : Temple Bar 3216 (3 lines).

Telegrams : Thompson, Temple Bar 3216.

Birmingham Office : Exchange Buildings, Stephenson Place.

Telephone : Midland 1072.

Manchester Office : Deansgate House, 274, Deansgate, Manchester, 3.

Telephone : Blackfriars 4721.

Glasgow Office : 79, West Regent Street, Glasgow, C.2.

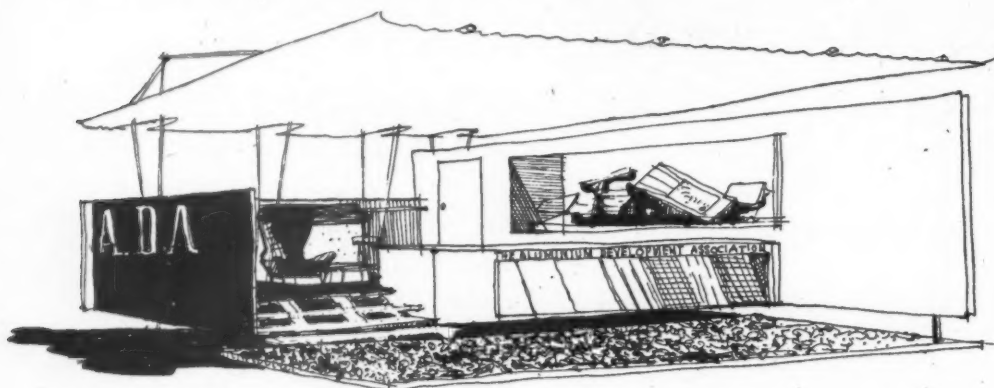
Telephone : Douglas 3983.

TWENTY-SECOND BUILDING EXHIBITION OLYMPIA



Above is a general view of the Grand Hall of the Twenty-Second Building Exhibition at Olympia. The exhibition was opened by the Minister of Works, the Rt. Hon. Charles Key. Sir Lancelot Keay, President of the Royal Institute of British Architects, presided at the opening ceremony and Sir Charles Gilbert Scott proposed a vote of thanks to the Minister. On the following pages we present our second review of the exhibits and a selection of the manufacturers' stands. On page 466 we illustrate a model showing improved siting of permanent prefabricated houses and on pages 469 and 470 plans and elevations of flats designed for high density areas. These are a feature of the joint exhibit of the Ministry of Works, the Ministry of Health and the Department of Scientific and Industrial Research. The exhibition remains open from 11 a.m. to 9 p.m. daily, except Sundays, until December 4.

S E C O N D R E P O R T



Stands for: top, Aluminium Development Association (Q 282) by Lynn Chadwick; left from top to bottom, Copper Development Association (Q 278) by A. L. McMullen; Foamed Slag Producers' Federation (H 158) by Andrew Carden; Flush Door Manufacturers' Association (D 69); Austins of East Ham, Ltd. (R 292).



The immediate impression of the Building Exhibition is that the general level of display is far higher than it was in the years before the war. A quick count shows thirty or forty stands which have been designed by architects, and the majority of manufacturers seem to have acquired some idea of how to present their goods without putting everything in the window.

So far as the production side of the industry is concerned, it seems that the present system of material allocation is not working at all well, nearly every firm having complaints about shortages of one or more vital components. And the complaints are not even consistent: we know, for instance, that there are shortages of steel, electric motors, thermostats and small electrical equipment, yet a washing machine manufacturer says he is all right for motors if only he could get the sheet steel, while a boiler maker may have plenty of sheet but can't find thermostats or motors.

Export quotas are also leading to a number of delays, many groups of manufacturers being allowed to sell only 25 per cent. of their output in the home market. This, however, is Government policy, and the consumer has to wait because he can do nothing else. But the most serious aspect of the problem is that a considerable

number of firms have never manufactured for anything but the home market, and have scarcely a clue when it comes to starting an export business. Even the firms who are really interested in exports do not always get the help they need. As one mildly left-wing manufacturer remarked, "I have inquiries from all over the world and I could export at least three times my total output. I'd like to sell to the countries whose currencies we need most, but all I know is that dollars are top. After that I can't find out whether I'm to try for lire, kronor, francs, pesetas, or the odds and ends of zlotys or pengoes. And it takes me about 12 months through official channels to find out whether some Balkan builders' merchant is good for 150 quid, and by that time, of course, he's bought something else."

Admittedly the sudden stepping up of export quotas is bound to produce a state of confusion to begin with, and one can only hope that material allocations will become more reasonable as time goes on.

So far as Government displays are concerned, the Ministry of Health is showing the 3-storey terrace houses (A.J., November 20) and the 4-storey maisonettes (page 469 and 470 of this issue), while BRS has a display of some of the housebuilder's plant which has been developed at the Thatched Barn. The Council of Industrial Design shows a series of three living rooms adequately furnished with what can be bought now, and an amusing series of heating stoves going back for seventy years or more.

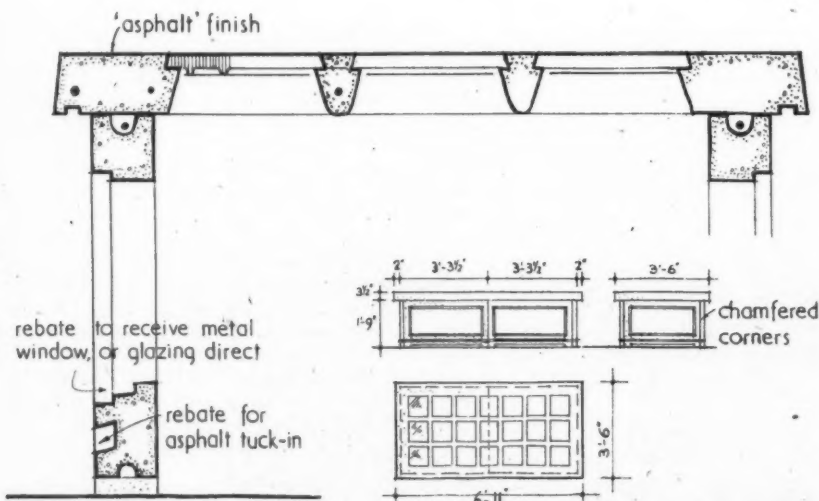
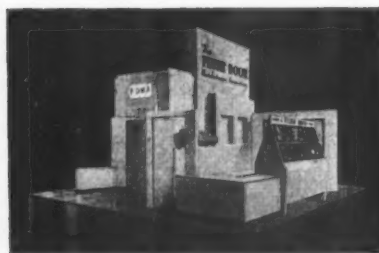
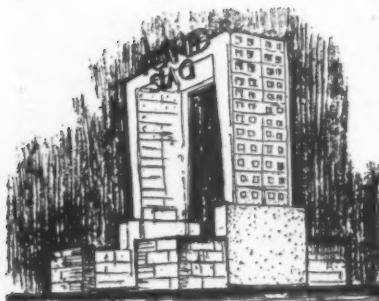


Fig. 1. J. A. King's standard lantern light in precast concrete units (Stand F 118).

As one most ne fuel a boilers, duced properly of the s on vari that ha An inte grate, ham St six incl heat pa is reflect plated the stan £6 6s. efficien grate.

Allied general interest glazed so far mome in stan range. neat an two p largely str.p a beds th A S window known comple for cle the tw Window importe licensin will do These 8 ft. 1 prices size, to cent. fo Of th one mi & Wil glazing developm cated a their their v can be transpo Associa goods and a Alumin range sliding are bu

Stands (Q 27) centre, by Pe bottom 173) b Ltd. (Hellbe

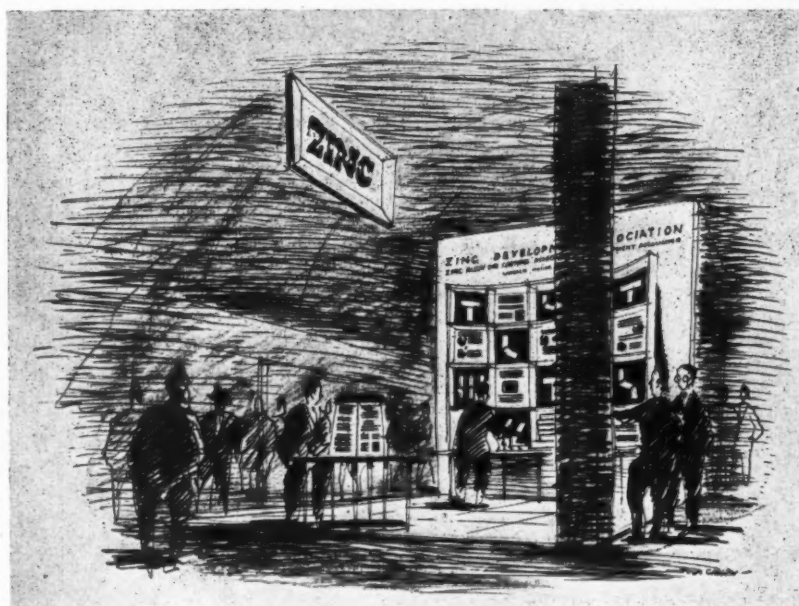
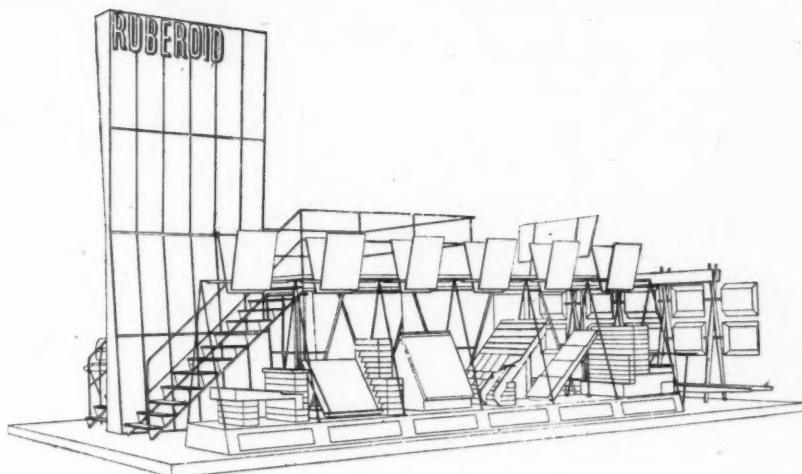
As one might have expected, some of the most notable developments are in the solid fuel appliances. Two small automatic boilers, Watts and Trianco, have been produced for a market which was never properly covered in pre-war years. Many of the stoves and open fires are to be seen on various stands, and here there is little that has not already been fully described. An interesting variation of the normal open grate, the Jaybee, is shown by Birmingham Steel. Here the grate is raised some six inches above the usual level, and the heat passing downwards through the firebars is reflected out into the room by chromium-plated louvres. The complete unit fits into the standard 16-inch opening and sells for £6 6s. No information is available on its efficiency when compared with the normal grate.

Allied to economical fuel burning is the general problem of insulation, and it is interesting to see an English-made double glazed window on the EJMA stand. This is so far only a prototype, and it is not at the moment intended that it should be produced in standard sizes like the rest of the EJMA range. The complete job looks extremely neat and it is extremely easy to separate the two panes for cleaning. Draughts are largely overcome by the fabric weather strip and the method of closing, which beds the frame tightly.

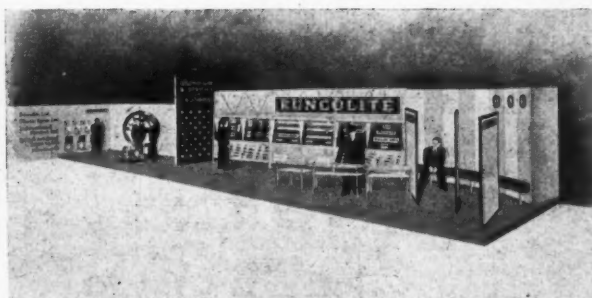
A Swedish double glazed centre hung window is shown by Holcon. This is known in Sweden as the Carda, and can be completely reversed and the panes separated for cleaning from inside the room. Between the two panes is a cord-operated blind. Windows of this kind can apparently be imported if it is possible to convince the licensing authorities that nothing else will do.

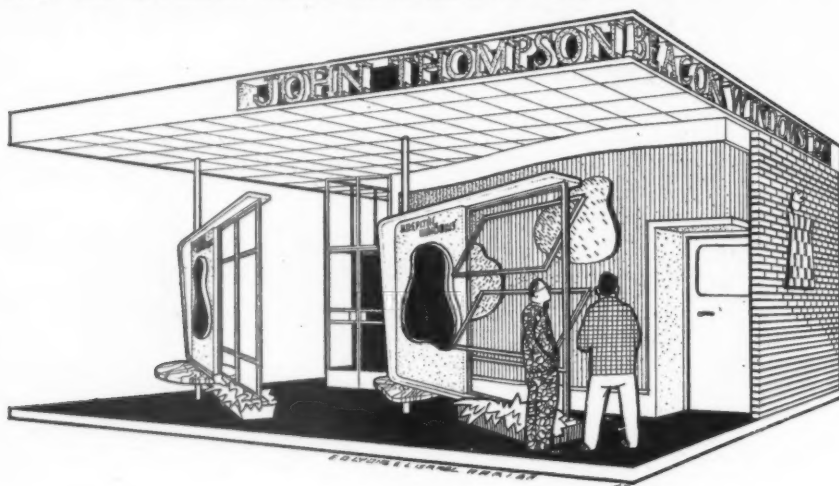
These windows are made in sizes up to 8 ft. 10 in. wide by 7 ft. 6 in. high, and prices start at £9 8s. for the 3 ft. by 3 ft. size, to which must be added about 25 per cent. for freight.

Of the newer materials aluminium is, as one might expect, well to the fore. Williams & Williams show their Aluminex roof glazing; Structural and Mechanical Development Engineers a series of prefabricated roof trusses for various spans, and their transportable buildings, as well as their very interesting tropical building which can be collapsed like a pack of cards for transport. The Aluminium Development Association has a full display of rain-water goods both cast and fabricated from sheet, and a solid fuel stove in cast alloy. The Aluminium Window Company has a full range of sashes and casements, and some sliding types, and on the same stand there are builder's ladders built up from extruded

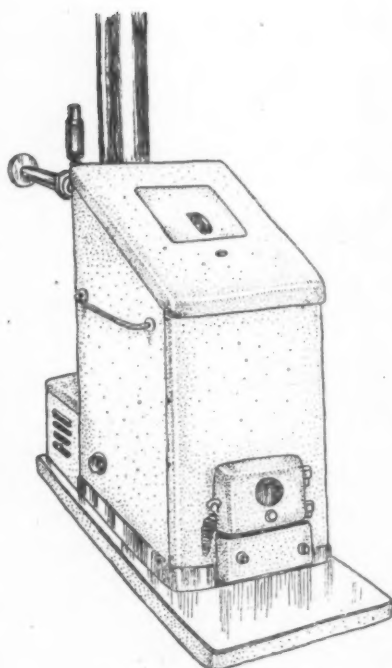


Stands for: top, Ruberoid Co., Ltd. (Q 279) by Eric Brown and Stefan Buzas; centre, Zinc Development Association (H171) by Peter Inglis, sketch by Hugh Casson, bottom left, Armstrong Cork Co., Ltd. (J 173) by John Brewster; right, Runcolite, Ltd. (D 80) by Gaby Schreiber and Rolf Hellberg.





Top, stand for J. Thompson, Beacon Windows, Ltd. (P 271) by Lyons and Israel.



tube in rectangular and circular sections which are stronger than their wood equivalents and rather less than half the weight, while their price is claimed to be more than competitive, particularly after making allowances for longer life. The domestic step ladders by the same firm are also extremely light and easy to handle, and at the same time seem far more stable than some of the pressed steel types which were in production about a year ago.

Kitchen cabinets in light alloy are shown by a number of firms, the C.S.A. designs giving an impression of greater solidity than some of their competitors. Fisher and Ludlow have a number of vitreous enamelled sinks and lavatory basins. Next door to this stand Cunliffe Owen Aircraft are showing a pressed steel bath with a somewhat elaborate but very efficient method of adjusting the feet so that the panelled sides may be easily fitted, none of the usual wood grounds being needed.

Also in this part of the hall are Aidax Electric, who show their type C.E.L. coal

electric water heater, and their very interesting Circoil waste heat utiliser. The C.E.L. is a 30-gallon storage water heater for wall or floor mounting and is fitted with flow and return connections so that it can be used with a solid fuel boiler. It is intended that the heater should take the place of the normal hot water cylinder and give a supply from the boiler in the winter, and from the electric immersion heater in the summer. The electric elements are 500 watts near the top of the cylinder to maintain a hot supply of 7 or 8 gallons, with a further 2,500 watts at the bottom to give rapid heating of the whole 30 gallons when a series of baths are required. Both sets of elements are thermostatically controlled, but the lower bank of elements has a supplementary switch which should be turned on about half an hour before a bath is needed. This heater works best with a back boiler where the heat input can be regulated by a damper: if it is used direct with a boiler the output should not exceed about 7,000 B.Th.U. per hour, or the water may boil

Fig. 2 Trianco automatic domestic boiler. The hopper holds enough fuel for 24 hours and clinker needs removing only once a day. (Stands P 266 and 269)

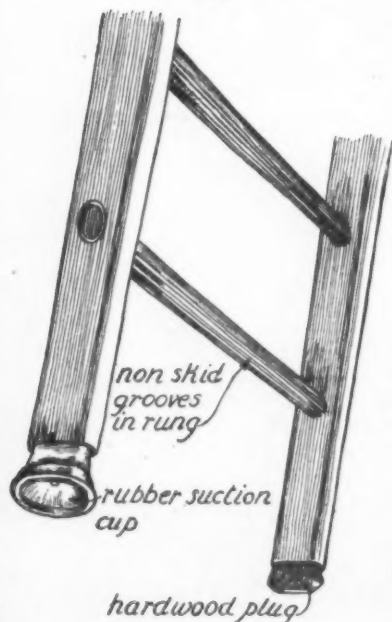


Fig. 3. Light alloy ladder, stronger and about 60 per cent. lighter than wood. The sides are rectangular extruded tubes with suction cup or spike feet, and the tubular rungs have no slip grooves. (Stand P 267)

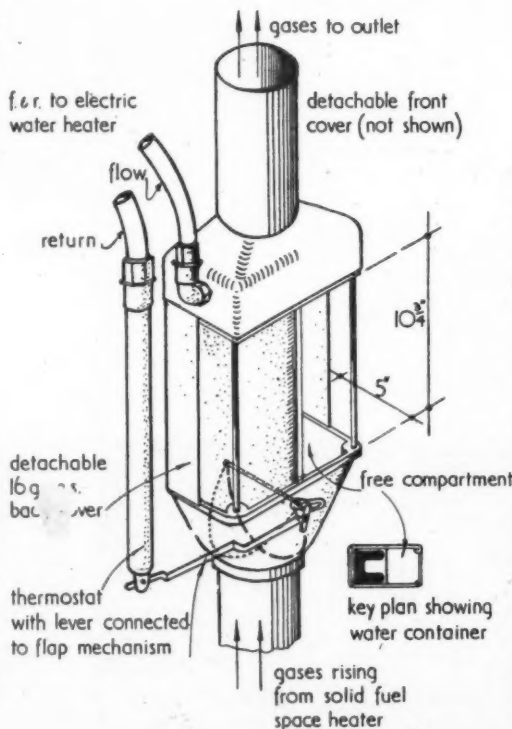
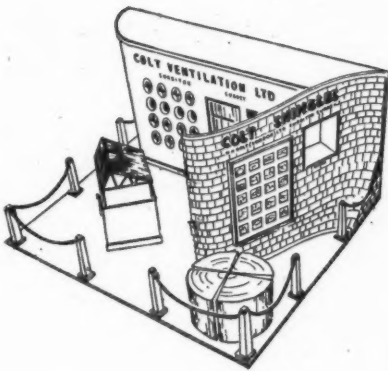


Fig. 4. The Sadia Circoil waste heat utiliser replaces a short section of the flue from any solid fuel stove, and extracts heat normally passing away in the flue gases. The thermostatically controlled flap diverts the gases either through the heater or direct up the flue. This device is for use with the usual electric storage heater and with the stove burning fairly hard will extract the equivalent of nearly 2 kilowatts. (Stand G 143)



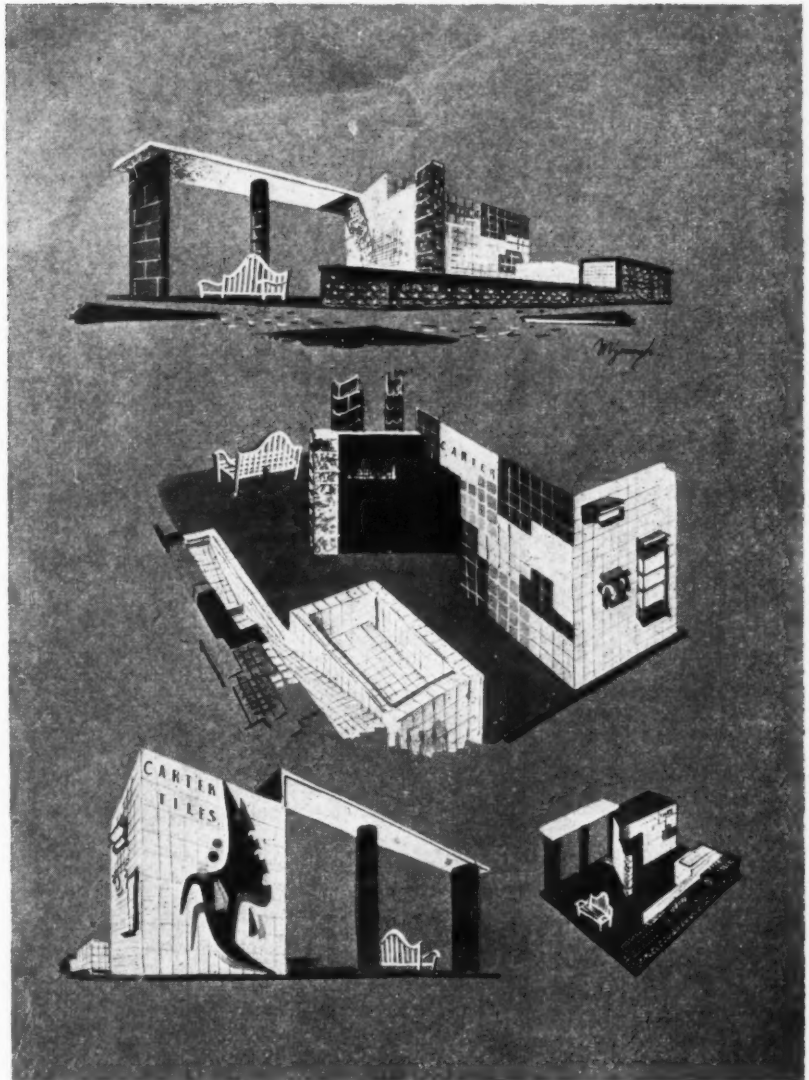
owing to the efficiency of the lagging. At the moment delivery of this heater on non-priority orders is 2 months and the price, with purchase tax, is about £45.

So far as general gas and electrical appliances are concerned, many of the well-known firms are not exhibiting, but the British Gas Council has a general display covering cookers, fires, laundry equipment and refrigerators. Gas water heaters, however, are present in full force, with Ascot, De La Rue, Ranalah and Ewart all staging large-scale displays.

Many other well-known devices are to be found on the stands of the various builders' merchants, even though the manufacturers are not actually showing. The merchants' stands are, in general, well worth a visit, as they show a number of small but important fittings which do not justify a stand to themselves, while a number of merchants have very good ideas of their own. Davis & Co., for instance, show their steel floor joist which is made up of 1 in. by 1 in. angles connected by $1\frac{1}{2}$ in. by $\frac{1}{4}$ in. straps, welded diagonally to form a small lattice girder. This type of construction not only saves timber, but makes the installation of pipe-work and electrical services much easier. Delivery is good, and prices vary from 1s. 4d. a foot for 12 ft. spans, the shorter lengths being comparatively more expensive.

The Marley Tile Co. have on display their Martex Mineral Granules. These consist of rock granules which are vitreous enamelled, giving a permanent colour. They are now using these in the manufacture of concrete roofing tiles, with this finish, available in a wide range of colours with a permanent finish. The use of this for external renderings is, at present, in process of development, but as soon as output is increased some really attractive colour effects should be obtainable. Another new product to be seen on their stand is a floor tile with a plastic composition base and in a very pleasing range of colours. The tiles can be cut by various methods to form almost any desired pattern. At the present moment they are made only in 9-in. x 9 in. size.

"Aro" as a substitute for timber laths is on view on the stand of Broad and Co. This we knew as long ago as 1931 as a material imported from Holland known as



Stands for: top left, W. H. Colt (London), Ltd., and Colt Ventilation, Ltd. (L 223) by Ian Jeffcott and Douglas Dick; above, Carter and Co., Ltd. (D 74) from sketches by Myerscough.

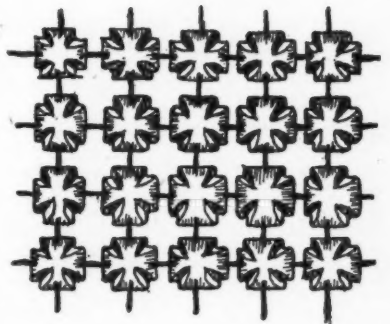


Fig. 5. Aro lathing made up of brick crosses on a wire mesh. (Stand K 216)

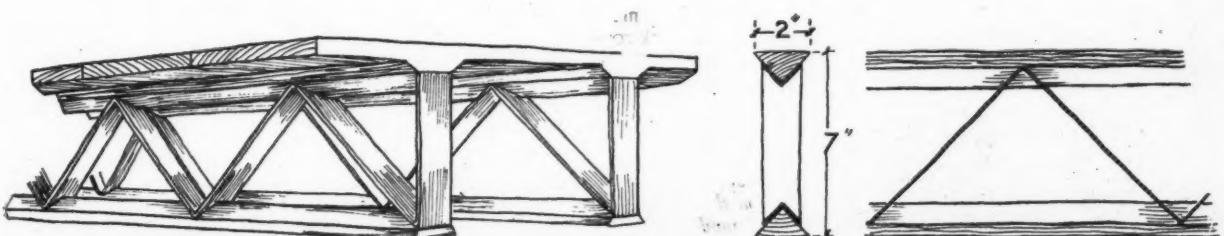
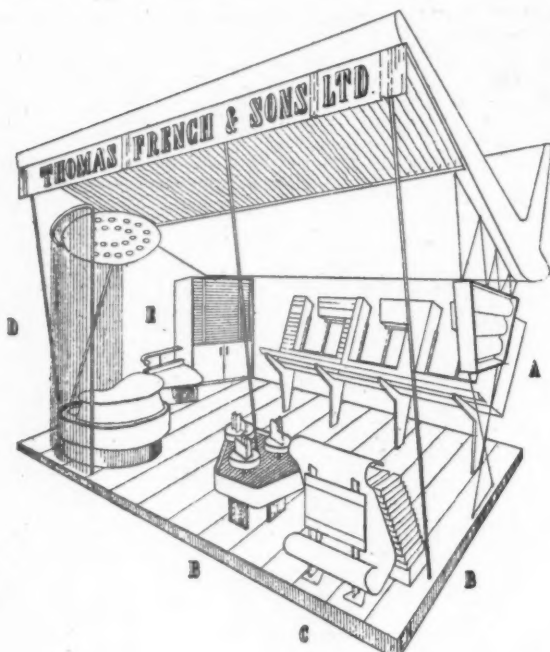


Fig. 6. The Davis steel floor joist, made up from angle and strip and welded. (Stand S 298)



Stands for : from top to bottom, Thomas French and Sons, Ltd. (E 94); Crittall Manufacturing Co., Ltd. (E 86) by Gordon McKnight; J. Clark and Eaton, Ltd. (L 224) by Cecil C. Handiside; Limmer and Trinidad Lake Asphalt Co. Ltd. (F 112).

"Bricanion." With our present timber problems it should stand a better chance than it did 16 years ago. It consists of a wire mesh $\frac{1}{2}$ in. square, and on each intersection of the wire a clay square is applied which is kilned electrically (see Fig. 5). This lathing can be supplied in rolls 3 ft. by 16 ft., and the weight is about 8 lb. per square yard.

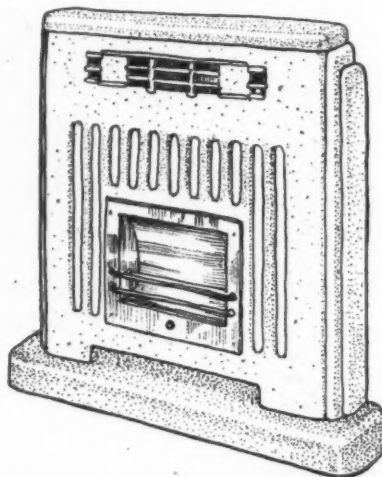
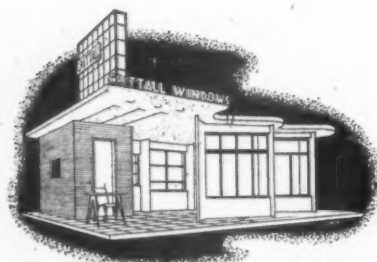


Fig. 7. The electric version of the Ideal Firerad, a combined hot water radiator for background heating with an electric or gas fire for topping up. (Stand Q 280)

A new development by Warerite, Ltd., is a textured plastic sheet made in a fine, medium and coarse finish. This helps to break the very highly polished surfaces on the normal plastic sheeting. The finish looks rather like a neatly applied matt paint. At present they are only manufacturing in one thickness, which is $\frac{3}{4}$ in., but a fluted sheet is also being made.

Two interesting roof trusses can be seen at the Exhibition. One is a light alloy truss which is made from 13-ft. span up to 30 ft. The weights of these two are 30 lb. for the 13-ft. span and 80-90 lb. for the 30-ft. span. This is on show by Metal Sections, Ltd., of Birmingham.

PAINTS

The paint stands are very well displayed, but as one might expect, there is really nothing new or worth a great deal of comment.

Lewis Berger are showing their "Bergermaster," a paint that does not contain linseed oil. The process uses crude oils together with ethyl benzene, which produces Styrene; this in turn with other oils then gives the Bergermaster vehicle.

The Permacem Paint Co. have made a good show of their products. One of interest is Permacon with the addition of DDT. This we believe is one of the first paints to incorporate DDT; how long the effect on the fly lasts remains to be seen.

Ferguson Edwards, Ltd., are demonstrating an attractive two-coat scumble glaze with their Novodec.

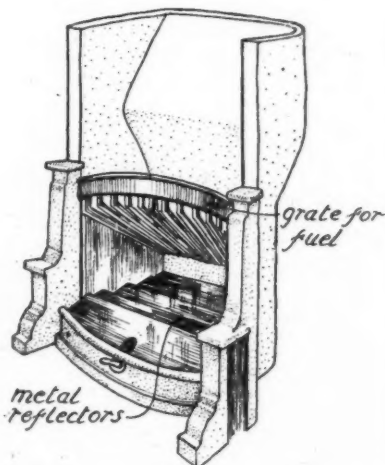


Fig. 8. The Jaybee fire with raised grate, and reflectors to provide increased heat at floor level. (Birmingham Steel, Stand R 286)

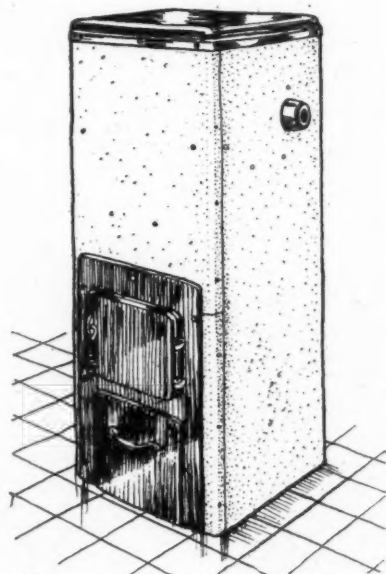


Fig. 9. The Watts automatic boiler for domestic central heating and hot water supply. Conservatively rated output is 60,000 B.Th.U., and the price is £76. Clinker has to be removed once in 24 hours. (Brockhouse, Stand A 12)

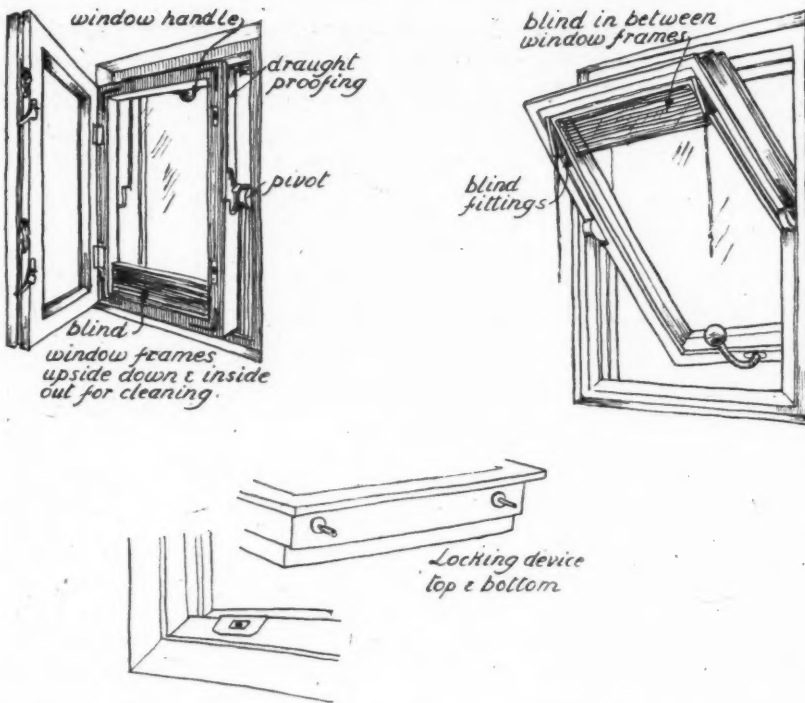


Fig. 10. The Swedish Carda centre hung double glazed window, with a cord controlled blind between the two panes, and fully reversible for cleaning. Available with the necessary priorities. (Stand M 242)

The Tentest Fibre Board Co. have a very interesting show of their Broderick Copper Roof. This has been written up so often in various journals that one feels that nothing much need be said about it. One point of interest is the method used by which the copper panels or tiles are fixed to the wall-board. This is done with five copper cleats to each panel. These are first pushed through the underside of the wallboard, and the copper panel is then placed on the top with the cleats coming through, leaving a lap for the copper panel which is fixed above. The lap of the higher panel is then folded over with the lap of the lower one in an envelope fashion. The copper tiles are made 2 ft. by 4 ft.

C.M.C. cover the whole range of their products, explaining various effects obtainable with Tyrolean Cullamix, Stipple, Rough-cast, Dash Finishes, Snowcem and other renderings.

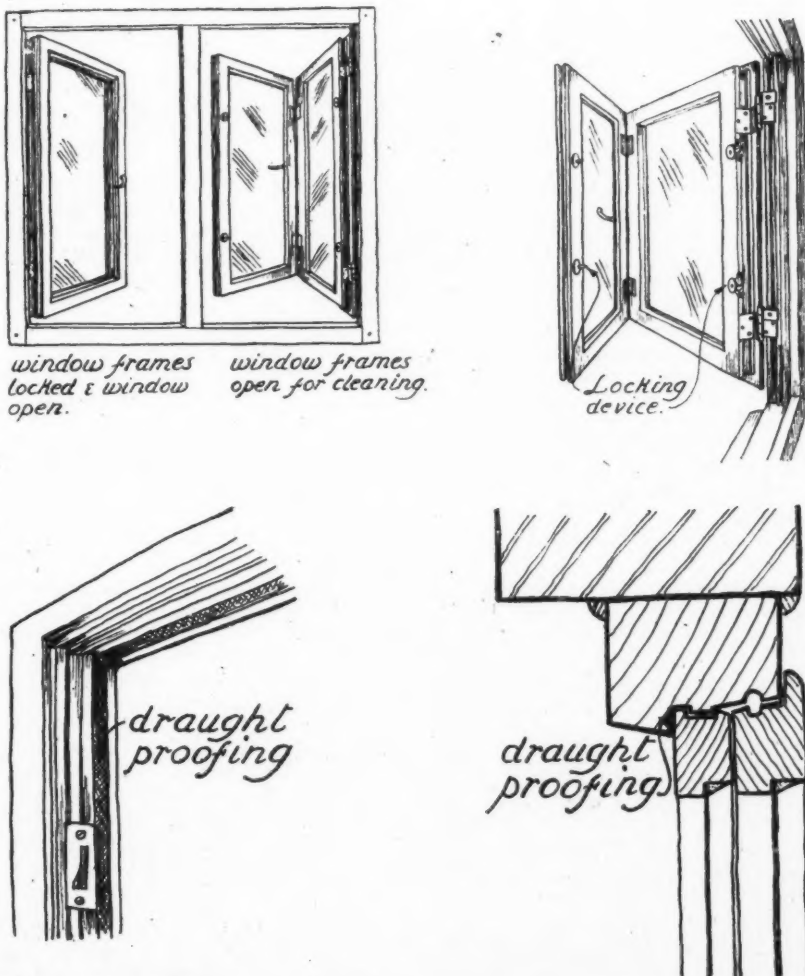


Fig. 11. The EJMA double glazed window. The model shown is a prototype and no standard sizes have yet been fixed. (Stands S 299 and 300)



Stands for : above, top to bottom, Marley Tile Company, Ltd. (H 164); Adamite Co., Ltd. (E 85) by John Lansdell; C. F. Anderson & Son, Ltd. (L 222).



POLICE HOUSING

BY SIDNEY LOWETH, J. C. SPOONER AND J. JEMPSON

GENERAL.—The police housing programme which the Kent Police Authority has now started will ultimately provide over 700 houses throughout Kent. Under the present conditions a proportion only of the houses required in each area is being planned. The scheme is being carried out by Mr. Sidney Loweth, F.S.A., F.R.I.B.A., Kent County Architect, Mr. J. C. Spooner, A.R.I.B.A., A.R.I.C.S., the Principal Assistant Architect for County Buildings, and Mr. J. Jempson, F.R.I.C.S., L.R.I.B.A., Senior Assistant Architect.

TYPES.—The requirements of accommodation and siting for urban and rural areas are covered by eight types of houses. One type

only is illustrated herewith. The urban houses generally are built in pairs, in groups of four and six. Houses in rural areas are built as single houses or pairs, with a police office which includes a wireless station. The sites are chosen with regard to the police administration of the town or village in which the houses are to be built. Where an office is incorporated, car parking space is provided. Garages are provided for most rural sites.

ACCOMMODATION.—Accommodation is standard in all types and consists of a living room, dining recess and working kitchen on the ground floor, with clothes drying cupboard, stores, w.c. and fuel

store in a single storey outbuilding, through which there is access to the kitchen. There are three bedrooms on the first floor, each with cupboard, and a bathroom, w.c. and linen cupboard. The floor areas, window sizes and fittings have been standardised to facilitate interchange of furnishings when policemen are transferred from one area to another.

CONSTRUCTION.—As the maximum number of houses in a group is six, it was decided that traditional materials within the scope of local building should be used. External walls are 11 in. hollow brickwork faced with local bricks. The ground floor is of 4 in. concrete covered with composition flooring. The first floor has timber joists covered with boarding. The roof is normally covered with double Roman pantiles at 30 deg. pitch. Standard metal windows in wood frames, and standard doors in pressed metal frames are used throughout. Stairs are of prefabricated steel construction with wooden treads and hardboard soffits and balustrade in extruded aluminium framing.



Top, perspective showing a pair of houses in a rural area with a police office and garages. Left: The plans.

FURNITURE FRAMES

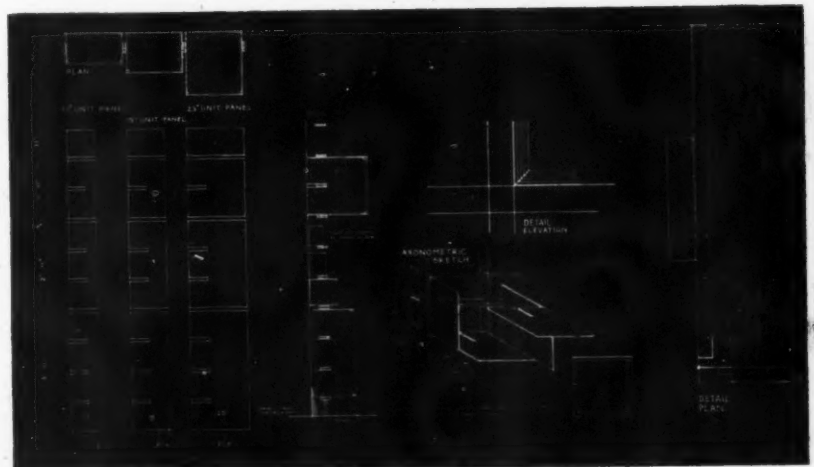
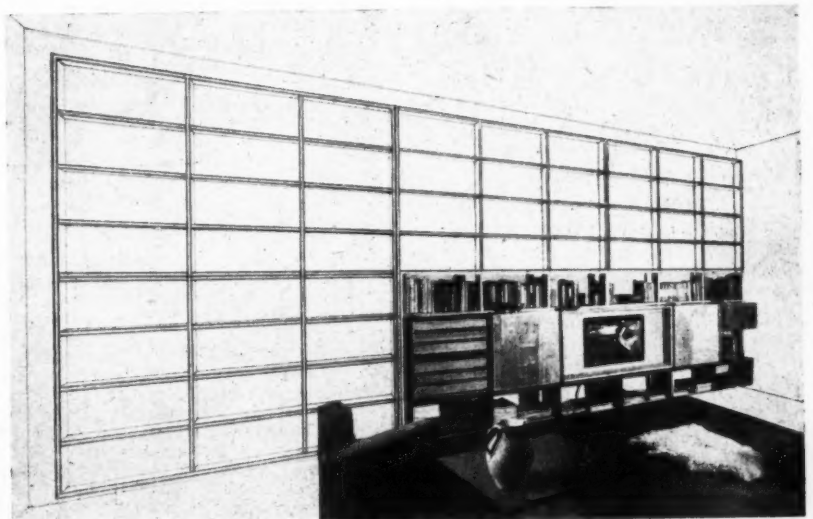
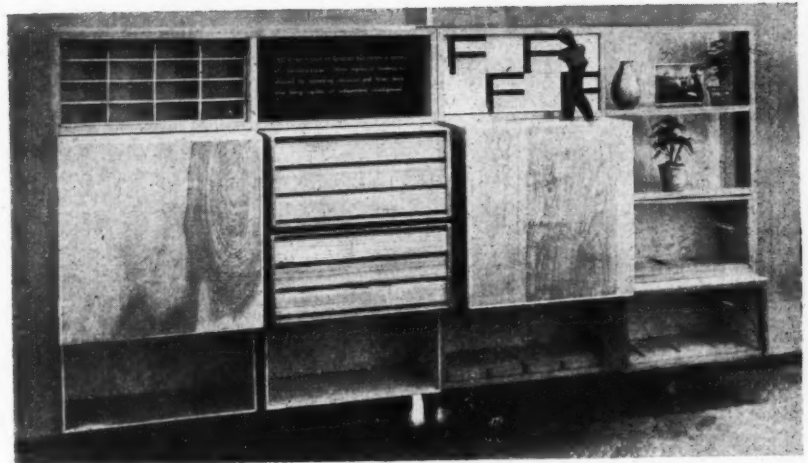
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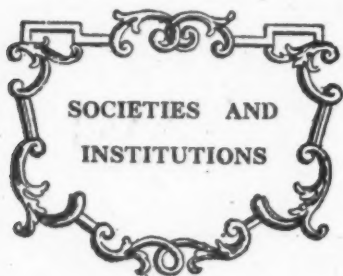
The combination of standard furniture units into various groupings is by no means new. Recent well-known examples include those designed by George Nelson, Charles Eames and Eero Saarinen. All these systems have one thing in common: the unit cases are built up beside or on top of each other and their position in space is therefore dependent on the units adjoining them. To make the individual elements independent of each other a separate structure called a furniture frame has now been introduced. This provides a high degree of standardisation and creates a flexibility not previously achieved.

The furniture frame is a simple grill with uprights spaced at 2 ft. and horizontals at 1 ft. c.c. made out of 3 in. by 1 in. timber and held at a distance from the wall by metal brackets. A wide range of different cabinets can be supported by this grill by simply sliding them into the standard openings. One can add, subtract, or interchange the units without having to move adjoining ones. The system can be used for living rooms, bedrooms, dining rooms, studies and nurseries, and could be adapted for offices and shops, where mostly standardised articles have to be stored.

For transportation and packing, most of the cabinets are designed to be knocked down into flat pieces. For example, a wall fitment 12 ft. long, including all the cabinets, similar to the one shown, can be packed into a crate, measuring 4 ft. by 4 ft. by 15 in., the furniture frame being the crate itself.

Top, wall fitment of furniture frame units. Centre, sketch showing furniture frame partly filled with units. Bottom, details of the frame.





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

BINC

Fourth Building Congress

November 18 and 19. At Leas Cliff Hall, Folkestone. Fourth Building Congress.* Among papers read were: **Factories**, by G. L. Greaves; **THE GENERAL SITUATION**, by A. W. Davson for the Congress Committee; **THE ARCHITECT AND TECHNICAL DEVELOPMENT**, by Alister C. MacDonald.

Factories

G. L. Greaves: With the Factories Act of 1802 began a series of legislative Acts which, coupled with Bye-laws and Codes of Practice, have gradually regulated the design of our factories. More recently we have had added to these the various requirements of the Health, Planning and Fire Authorities, which taken all together constitute a formidable array of regulations to be observed. Some controls are necessary, but their effect for good or ill depends on the wisdom, knowledge and experience of the particular official appointed for each purpose. All too often a rigid adherence to the printed word takes precedence to an appreciative understanding of the many problems arising. Further, legislation lags behind technical development, often by many years. This at a time when changes in building practice have been expedited by wartime research.

Not only does the industrialist now require a building adequate for his manufacturing process, but also one displaying a certain measure of grandeur, and this leads to a tendency to produce hard and fast structures of a heavy and over-permanent character, and yet we are faced with the possibility of a far greater change than that from steam to electricity. Atomic energy, on well founded estimate, may be with us within a decade.

See also A.J. last week pages 457-458.

and nobody can foresee the effects on industry except that they will be dynamic. This points a warning finger against continuing to build for 100 years when the structure will be out-dated in perhaps twenty. There is no bar to designing structures of a lighter and more flexible character, but we may not erect them because—well because of the Bye-laws.

NEW MATERIALS AND MAINTENANCE

Closely coupled with new methods of construction are new materials, and in particular their resistance to wear and atmosphere, which is a matter related to, but quite separate from, their structural qualities. There is little doubt that there is a need for applying closer study to maintenance. Owing largely to private development in 1934, steel roof lights are now being replaced with aluminium bars, which are accepted as being equal in performance to steel but have the advantage that they can be virtually forgotten after fixing. On similar lines glazing, roofing sheets and many varying commodities in general use may be considered and alternatives less likely to require intermittent attention substituted for those accepted to-day. On these and other like physical factors the industry as a whole and throughout the country lacks guidance in spite of the valiant efforts of the Building Research Station and the laboratories of the larger component producers.

GUIDANCE THE NECESSITY

In general terms what we chiefly need is guidance. Guidance on the acceptance of changed technical methods, guidance on material supplies outside the control of the industry itself, and above all guidance on wide policy from the Government. I suggest the following aids to progress:—

Where the Standard Bye-laws are contravened by new methods, these should be deemed to have been satisfied where the Chief Scientific Adviser of the Ministry of Works approves. The multifarious requirements of Local Authorities, Factory Inspectors, and particularly Health and Fire Departments, should be simplified, condensed, codified and made standard throughout the country and their application be in the control of a single Local Officer with special training and power to use his discretion within defined limits. Encouragement should be given to research in new materials and methods to the end that structurally lighter types of factories are produced. Dissemination of information on these new accepted principles and methods should be as widely undertaken as possible, through the technical press and exhibitions, to the trade and to industrialists. There should be greater definition of the materials to be available for building so that intermittent shortages can be avoided.

The General Situation

A. W. Davson: It cannot be denied that this is a time of grave emergency and that if it is necessary to cut capital expenditure and reduce the building labour force, this must be done. But in our view the nature of the crisis is such as to require not a reduction in the building programmes, but a positive building effort in support of the economic rehabilitation of the country. The Government's plans for increasing production and encouraging exports all call for a vigorous building programme. The expansion of steel production which is envisaged by 1951 will involve the erection of new plant and the modernisation of existing plant, and in this connection a considerable amount of building and civil engineering work will be necessary. The attainment of an increased production of manufactured goods will call for



The Mayor and Mayoress of Folkestone receiving delegates to the Fourth Building Congress at a reception in the Leas Cliff Hall, Folkestone.

an extensive programme of factory building; in many cases the only practicable way to modernize a factory and to introduce new production lines is to scrap the existing buildings and to build afresh. The Board of Trade Working Party reports provide a mass of evidence on this point, as well as showing the need for building work to improve working conditions and amenities.

Housing for agricultural workers is to receive special priority, but much more than new houses will be required. A substantial programme of rural public works—water, gas, electricity and other services—is needed as well as the provision of new and modern farm buildings.

There are still probably 400,000 families who have not a separate home of their own or else are living in houses which but for the war would have been demolished as slums. Social considerations apart, the present housing situation is a serious limitation upon the mobility of labour which is necessary to overcome the crisis.

No maintenance and repair work has been done on many buildings since 1939, with the result that many buildings will be in grave risk of serious deterioration if maintenance work is still further restricted. Lack of maintenance to domestic property will result in a serious loss of amenity and in some cases may even endanger health. In factories and workplaces maintenance is of the highest importance; bright clean surroundings have a direct and often considerable effect on production.

There is much other building work requiring to be done, some of it (such as schools and hospitals) of a high social priority. Not all this work can be done at once, and it may be necessary to postpone work involving the use of steel and other scarce materials, but it will be evident that there should be no cutting down of the building industry.

EFFECTS OF CUTS ON THE INDUSTRY

It may be argued that in the present situation a purely temporary reduction in the building programme could be made in order to assist the immediate short-term export drive. We are convinced that this would be disastrous for the efficiency of the building industry. A temporary reduction in the labour force would have a serious effect on the organization of the industry. Even if it were certain that the men who left the industry would return later, the effect on efficiency might be considerable. The successful contractor knows that a high rate of production depends to a large extent on the employment of well-versed and balanced teams of operatives. One of the causes of the

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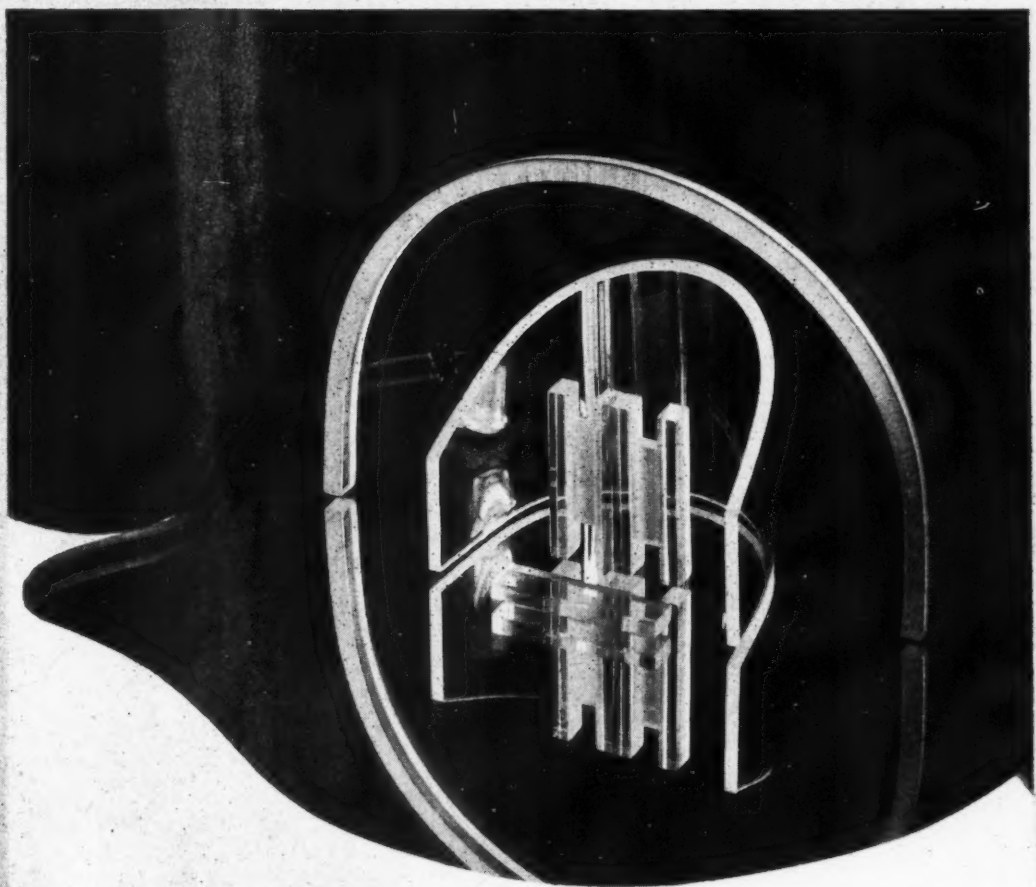
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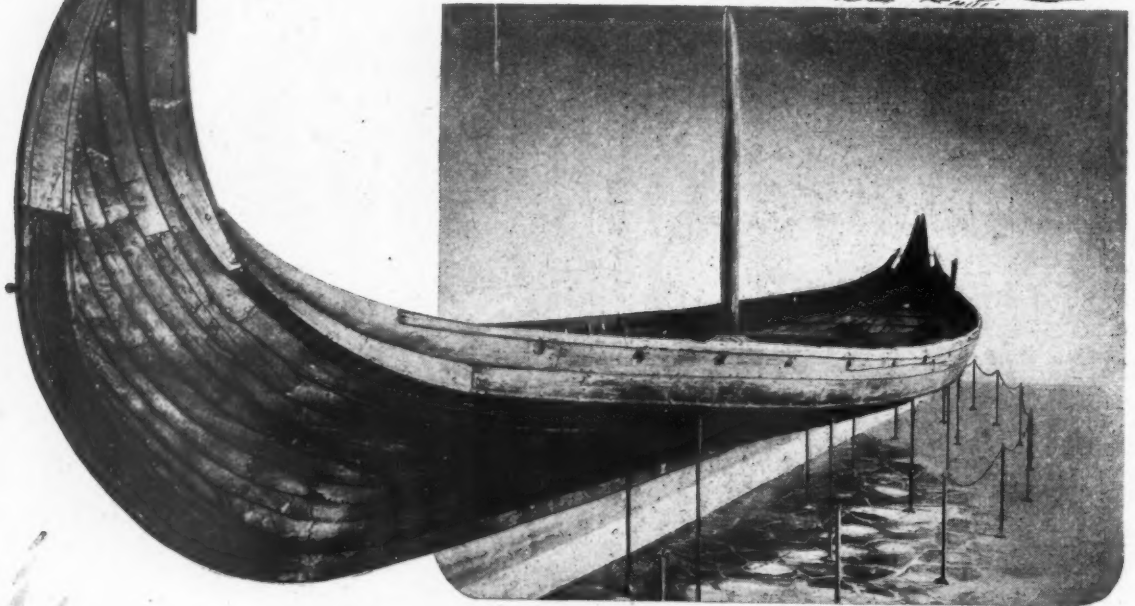
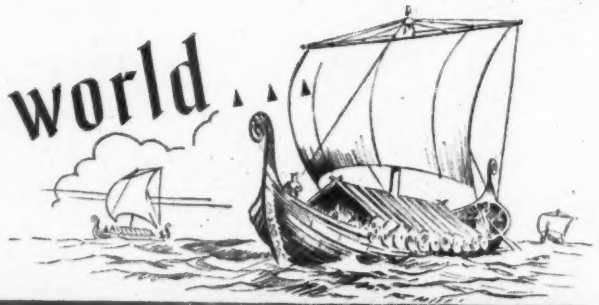
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reduced output to-day lies in the fact that many of these teams were broken up during the war and that it takes time to reconstitute them.

It is probable that if a large number of men are forced to leave the industry now, they will leave it for good. A reduction in the labour force would have an unfavourable effect on materials supplies. Some of the materials industries might be able to maintain full employment by concentrating on exports, but others, e.g., bricks and cement, would be forced to shut down productive capacity and would have difficulty in starting up again. The industry is not likely to be able to attract to the professional, supervisory or operative grades a sufficient number of men of the right type if it is once again to be subject to a slump. There are at the moment barely sufficient trainees and apprentices to fill the gaps caused by the war and to provide the nucleus of youth essential to a great industry. They must be encouraged and absorbed into really good teams and not allowed to drift away from the industry.

For these reasons it is imperative in the national interest that the building industry should be maintained at a high level of activity. On the other hand, some re-arrangement of the programme to avoid the use of steel and other scarce materials and to concentrate on projects essential to restoring the country's economic position is necessary.

MATERIALS SUPPLIES

A greatly increased supply of materials will be necessary if this programme is to be carried out. With the exception of plaster-board and cement, the essential materials for building are being manufactured in amounts far below the pre-war production. The required increased production of building materials may be difficult to achieve in view of the coal shortage and the claims of the export industries. But if the industry is recognized as an essential national industry, then an adequate supply of materials must be provided. Greater attention should be given to the economical use of materials and the development of new materials. The industry as a whole must organize itself to take full advantage of these developments and to secure the benefits of research in other directions also. The possibilities of variations in design and construction to overcome the shortages in materials should be explored.

The Architect and Technical Development

Alister Mac Donald :

In these days of changing values each one of us has to accustom himself to some new condition in his mode of life. Old values disappear and new ones (some of them very crude) appear. An architect used to argue and thrive on modes and styles of building from æsthetic and historic points of view. A third point of view has now appeared: the scientific one, with which is incorporated "technical development." The conflict between old-fashioned æsthetics and new fangled Science continues, but the issues are becoming clearer. Science can be as old as æsthetics and æsthetics can be as new and as fresh as science. In other words an architect needs to be trained in his most important subject, design, both æsthetically and scientifically and he must, therefore, keep abreast of all technical developments.

Although in the recent past much building work could and did unfortunately proceed without the help of an architect, it is becoming clear that neither the building will be fair to look upon nor the planning worthy of the citizens unless architects are put in charge to create the designs which will, with beauty, be translated into bricks and mortar and modern structures by the

designer's colleagues, the builder and the operative. The increased demand for architects of high quality training arises not only because man's thirst for beauty increases as qualitative education itself increases, but also because modern scientific requirements and discoveries require to be harnessed to building as well as to all the other activities of normal life. Nobody can deny that however efficient engineering may be, the beauty and humanity in a building can only be imparted by a man of artistic character who not only has studied how beautiful buildings were made in the past but knows the elements of modern scientific calculations about such things as heat losses in walls and sound insulation in community buildings.

THE ARCHITECT AND SCIENTIFIC RESEARCH

Architectural designing is not skin deep. It goes right through a building if that structure is really going to be a thing of beauty. Again, therefore, the architect is vitally interested in technical developments, and he is the link between scientific research, building design and the consumer.

The possibilities now developing of expressing æsthetic beauty in building will transcend the wildest dreams of the Gothic master-mason-architect, despite his soaring edifices, his exciting flying buttresses and the tremendous "atmosphere" which he created. Even wood is becoming "elastic" in its ply laminated forms and resin bonded glues.

Technical development and beauty must go hand in hand if each is going to be perfect. The architect of to-day and tomorrow has an infinitely wider and more exciting field of research at his disposal and that is surely why his æsthetic sense will have an infinitely wider field of expression than did that of his predecessors. Some may think that the range of interests and subjects about which an architect should know a reasonable amount is too much for one man to absorb. It may be that we have to work more in groups, and the fact surely remains that all the most lasting beautiful buildings have been designed by the equivalent of the present-day architect or a group of architects, whose æsthetic sense has put his or other people's scientific knowledge into final and proper shape. In other words, the designer kept abreast of technical developments and did not just draw pretty pictures on his architectural board. In the old days the architect worked with his tools as well as with his pencil. Some still do if they can afford the time.

The builder and the operative have technical knowledge of the materials which they use every day, and they are interested about scientific developments which affect the

bread-and-butter side of their business. A craftsman plasterer for instance can teach many an architect more than the latter can write into his specification. But that fact does not confine the architect to his drawing board. Although the architect must rely on the craftsman and the building organizer to guide him in certain matters, he, the architect, can and should sit and talk with them all and tell them tales of technical and scientific discoveries in other fields of building. The architect is not there to preach, but because of his position as designer and liaison officer he does have the time and the opportunity to survey the field from a wider angle than do his colleagues, the builder and the operative.

Each type of individual in the building industry must know the mind of the other more harmoniously than at present. The architect's work is translated into fact, into wood and bricks and mortar and concrete and steel by others, and therefore the expression of the architect's theme is not entirely under his control. Each must naturally stick to his own job and be a master at it, but the greater the knowledge that each has of his own job the greater will be the sympathy between the various parties and the more beautiful will the buildings be. Common record shows this to be true all through the ages, and this must not be forgotten in this present age when we all tend to be specialists and ignore other people and their interests.

If full advantage, from the community's point of view, is to be taken of scientific discoveries and technical progress, the designer must not be frustrated in what he wishes to do because the other members of the building team lack similar initiative and progressive working rules. At some stage, for a few months in their training, young architects, builders and operatives should all three be attending the same lectures and practical work.

Publications Received

- Planning and Construction 1948.* F. J. Osborn. (Todd Reference Books, 25s.)
Design This Day. Walter Dorwin Teague. (The Studio, 35s.)
The Bombed Buildings of Britain. J. M. Richards. (The Architectural Press, 25s.)
New Ideas for Farm Buildings. (Farmer & Stock-Breeder, 30s.)
Outline Plan for County Borough of Birkenhead. Professor Sir Charles Reilly and N. J. Aslan. (County Borough of Birkenhead, 17s. 6d.)



General view of delegates to the Fourth Building Congress held in the Leas Cliff Hall, Folkestone. More than 400 delegates were present and sixteen papers were read over four sessions.



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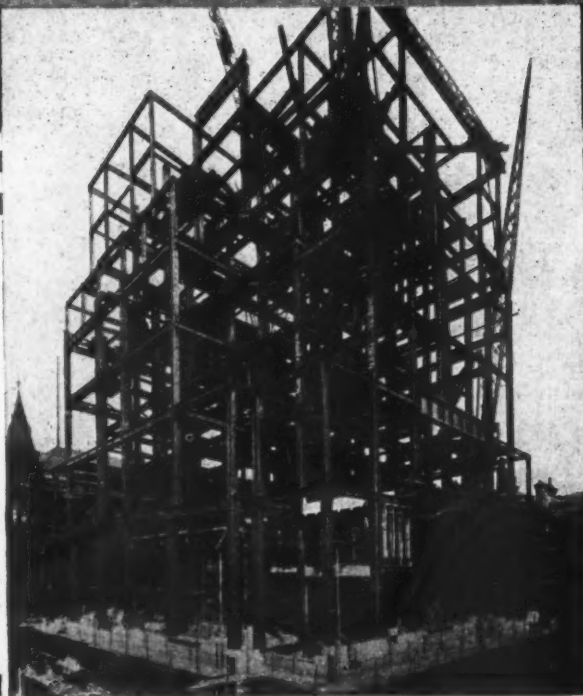
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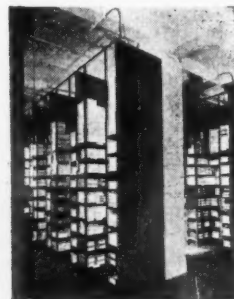


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COVENTRY: Britannia Works, Paynes Lane.
WREXHAM: Whitegate.

Despite the reduction in the number of new houses started in America, says Ian Bowen in the following article, the building boom there is by no means exhausted. Until it is, or effective control of prices is re-introduced there, we can expect high materials' prices here.

A New Index Number of Building Materials' PRICES

No. 7

[by Ian Bowen]

THE INDEX NUMBER AT NOVEMBER, 1947.

The index number for the middle of the fourth quarter of 1947 is 206.0. This is the average rise in price since August, 1939, of the 44 building materials covered by the Index, the items being weighted according to their peace-time usage.

The following table shows how the Index has moved since the end of the war:—

		Index (Aug. 1939 = 100)	Number of points increase on previous quarter.
1945	Quarter 3 ..	160.5	—
	" 4 ..	164.2	+3.7
1946	Quarter 1 ..	167.6	+3.4
	" 2 ..	170.2	+2.5
	" 3 ..	175.8	+5.6
	" 4 ..	180.7	+4.9
1947	Quarter 1 ..	183.5	+2.8
	" 2 ..	197.2	+13.7
	" 3 ..	200.7	+3.5
	" 4 ..	206.2	+5.5

The Index has risen by 5.5 points since the middle of the third quarter of 1947, and by 25.5 points since the fourth quarter of 1946. More than half of the materials covered by this index have undergone a rise in price since August, the most important (in terms of their effect upon the average) being locks, steel products, cast-iron pipes and cement. Other commodities which have risen appreciably in price are roofing slates (8%), plaster (7%) and lime (8%).

ANALYSIS OF PRICE MOVEMENTS BY GROUPS OF MATERIALS

The 44 materials have been divided into four groups; according to their nature and their method of production.

The basis of this division is described more fully in earlier articles.*

An index number has been calculated for each of these groups, first taking August, 1939, as the base, and secondly August,

1945. The following table shows these index numbers for the four quarters of 1947, on the base August, 1939.

	August, 1939-9 = 100			
	Quarter I.	Quarter II.	Quarter III.	Quarter IV.
I. "Imported" products ..	268.0	336.9	336.9	337.2
II. Metal products ..	201.5	205.9	209.2	223.3
III. Quarried products ..	176.5	191.5	201.4	202.0
IV. Primary materials ..	149.8	149.3	152.1	156.8
Average of all materials ..	183.5	197.2	200.7	206.2

"Imported" products have remained fairly steady since their spectacular rise in price between the first and second quarters of this year. The prices of timber and paint have not changed since May, but the price of linseed oil putty rose by 3% between August and November. There has been a steep rise in the index number for metal products; 13 out of the 18 materials in this class have gone up in price. Locks and cast-iron rain water and soil pipes have all risen by 10% or over. Steel by 5% and the other materials by about 3%. The index number for "quarried products" has risen by less than one point between the third and fourth quarters. "Primary materials," an important group including bricks, cement and roofing slates, has risen by 3%. A rise of 8% in the price of slates was the chief contributor to this increase, and the price of cement has risen by 6.25%.

MOVEMENTS IN PRICES SINCE 1945

It is interesting to compare present-day prices with their level at the end of the war. Figures on this basis are shown in the following table for the four quarters of 1947.

	(August, 1945 = 100)			
	Quarter I.	Quarter II.	Quarter III.	Quarter IV.
I. Imported products ..	141.0	175.5	175.5	175.6
II. Metal products ..	124.9	127.3	129.3	144.5
III. Quarried products ..	114.8	125.1	131.5	131.9
IV. Primary materials ..	101.1	100.8	102.6	105.6
Average of all materials ..	114.1	121.5	123.6	128.4

This table illustrates very well the "drag" effect upwards of a sudden rise in any one group of building materials; the sudden rise in the (controlled) prices of imported pro-

ducts in the second quarter of this year was not an isolated event. It was almost inevitably followed by some adjustment upwards of home produced goods of various kinds. If import prices show a sharp rise, prices of goods available for export (though not necessarily rising so steeply) are unlikely to stay constant. Metal products, quarried products and primary materials followed the lead of imported items, though maintaining their same relative order; the upward drag of imports may not indeed have yet been exhausted.

The strength of the sympathy between domestic prices and import prices depends very largely upon (a) the proportion of imported raw materials in the home-produced products, and (b) the proportion of exported raw materials (or products) concerned. A rise in import prices usually means some rise in export prices, especially when, as in the present period, there is suppressed or open inflation of prices in every country of the world; a rise in the export prices of coal, for instance, or of some of the building materials themselves being used for export must affect the domestic market.

A DOWNTURN IN PRICES

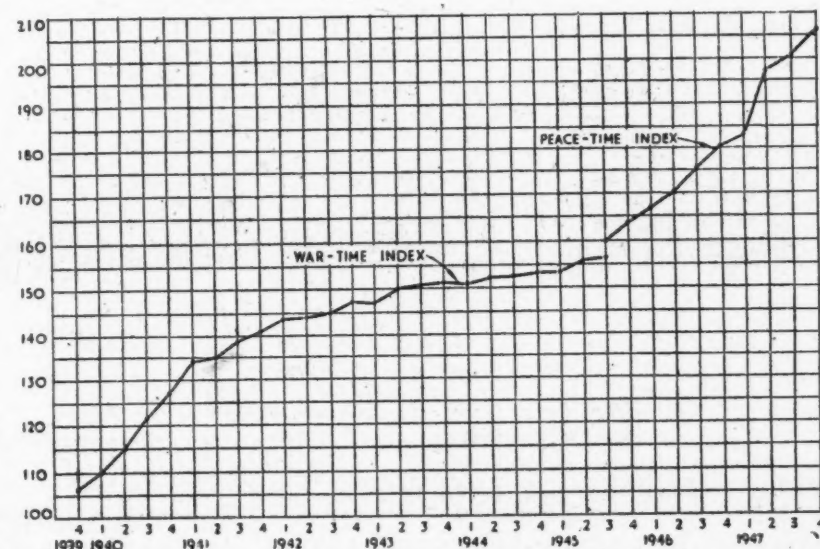
Imported products are likely to remain price leaders for some time to come. Only when these prices turn downwards, or flatten out, is a decline in domestic prices to be expected.

The hopes of a reduction in the cost of the materials in a new house, entertained in high quarters two years ago, must by now have been abandoned. Those hopes were based on the more or less rational belief that a larger quantity of output could be achieved *pari passu* with a reduction in unit costs.

A few commodities showed such a reduction (for instance, cement), but they have now gone up in price. The rising fuel, labour and transport costs of these industries have offset the undoubted economies of large-scale production open to them.

It is, indeed, remarkable that primary materials have advanced by only 5.4 per cent. since the end of the war, and this should be indeed a matter of congratulation for the Ministry concerned in the price-control of these commodities (the Ministry of Works). But can this level be held? It is doubtful whether it can, unless there is a downturn in prices generally.

There is not the slightest prospect of such



Graph showing price index from 1939 to the present.

* A.J. July 3 and September 11, 1947.

a downturn until a recession shows itself in the American economy—or unless price-controls are re-imposed over there.

PRICES AND THE HOUSING PROGRAMME

Finally, a consideration of the changes in the housing programme does not suggest that any influence towards lower building materials' prices has yet been established. A smaller programme might seem at first sight to mean lower demand, and hence lower prices for materials. But the extent of the cut is not even yet clear. It seems to be Government policy to start fewer houses each month, than the average numbers started per month recently. This will mean a considerable reduction in the demand for certain materials (e.g., sand and gravel) needed in the early stages of house-building, and may lead to actual price falls in some parts of the country. But this can probably apply only to a limited number of (mostly quarried) products.

In general, if there is any slowing-up in the expansion of the manufacturing industries, far from a reduction of costs, the result is more likely to be a rise. The cut in the building programme is intended to bring the demand into line with the supply, and the limiting factor is assumed to be timber. If the cut turns out to be really severe, then prices may be forced down. Indeed, if timber were quite literally the limiting factor, the prospects for building materials' prices would be very unattractive.

Houses, and other buildings, can, however, be built with much less timber than is commonly used, and this truism will soon be forced upon a wider audience than is now conditioned to digest it. A small reduction in the domestic demand for materials will not mean more than an easing of the present

inflationary position. All in all, there does not seem to be much hope of a fall in building materials' prices until the American housing demand has been partially satisfied, or the supply "priced out of the market." Despite the reduction in the number of new houses started in America, the building boom there is not by any means exhausted, and until it is, we can expect high materials' prices in this country.

Announcements

Messrs. F. R. S. Yorke, F.R.I.B.A., E. Rosenberg, and C. S. Mardall, A.R.I.B.A., have moved their offices to 2, Hyde Park Place, Marble Arch, W.2. Telephone No.: Ambassador 2451/3.

The Secretary of State for Scotland has appointed Sir Frank Mears, P.R.S.A., F.R.I.B.A., who is at present a member of the Amenity Committee under the Hydro-Electric Development Act, to be Chairman in place of Colonel the Hon. Ian Campbell, D.S.O., who has resigned.

Mr. Leslie Wallis, Chairman of the Public Relations Committee of the National Federation of Building Trades Employers, has left for South Africa. He is carrying fraternal greetings from the National Federation to the builders' federation of South Africa, and also from British Rotary to various of the Rotary Clubs in the towns of the Union he will be visiting.

The recent Congress held in Paris arranged jointly by the *Institut de Cinématographie Scientifique* and the Scientific Film Association concluded with a unanimous decision to form immediately the International Scientific Film Association. The British delegation was asked to arrange for the 1948 Congress to be held in Great Britain in October, 1948.

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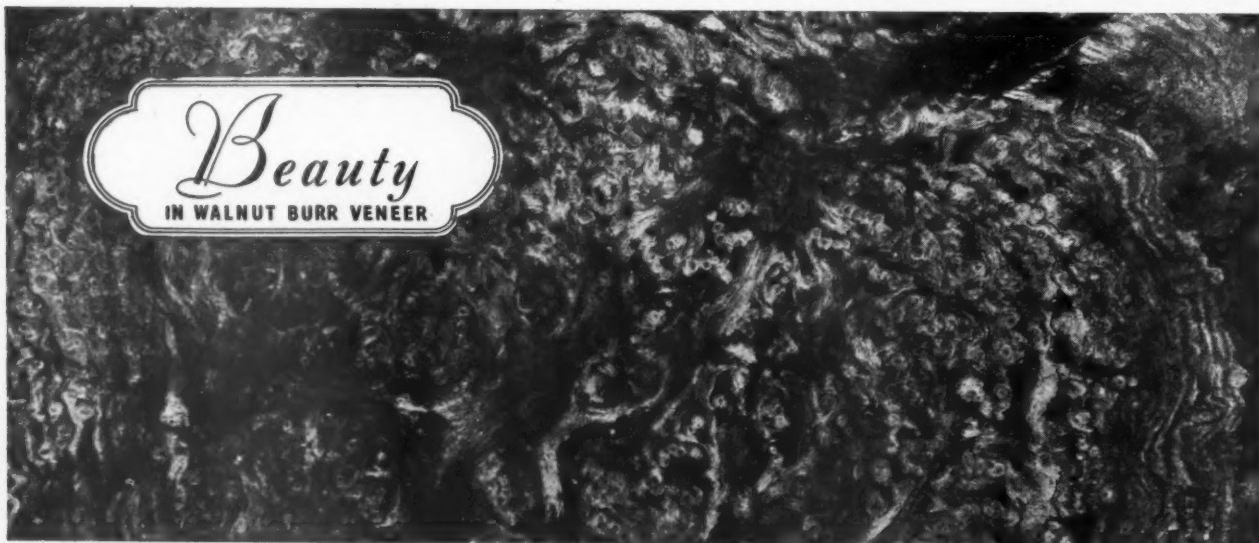
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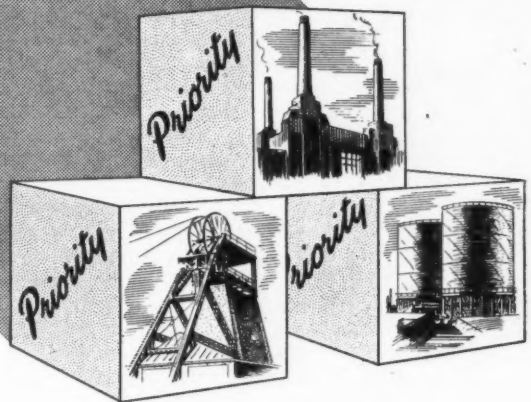
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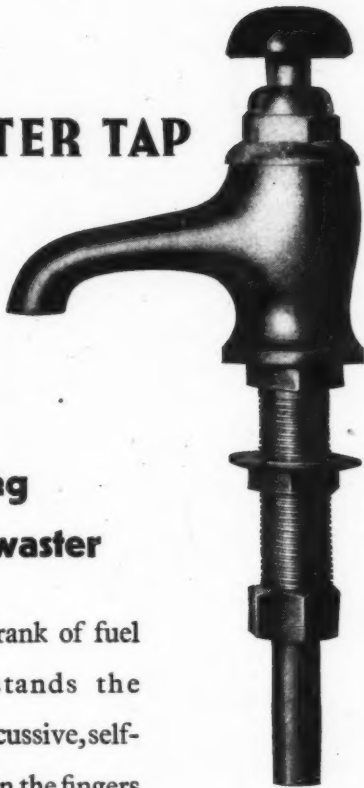
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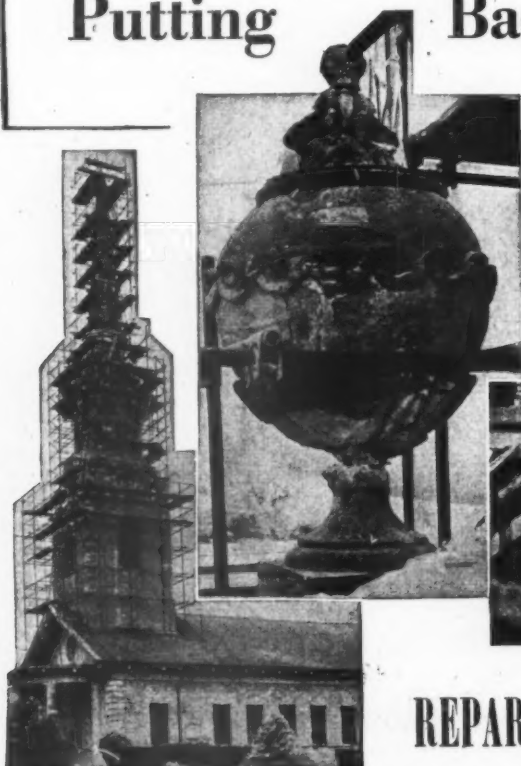
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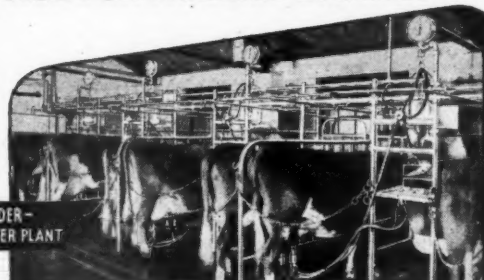
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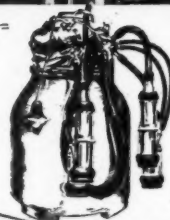
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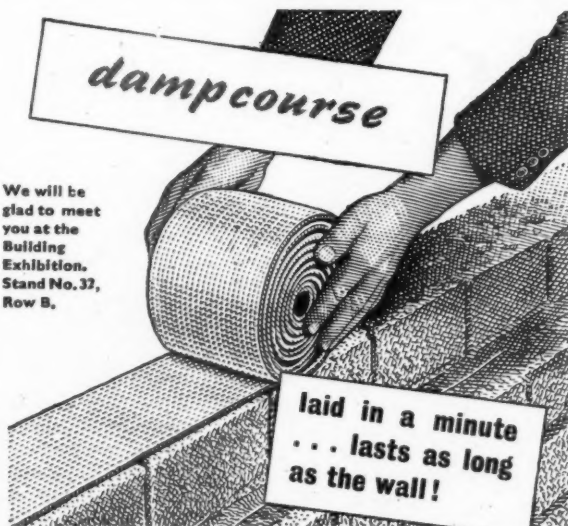
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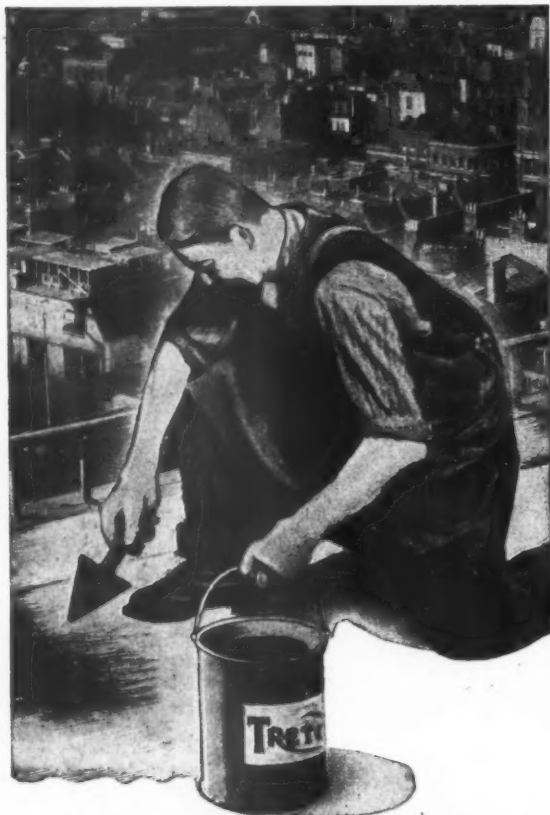
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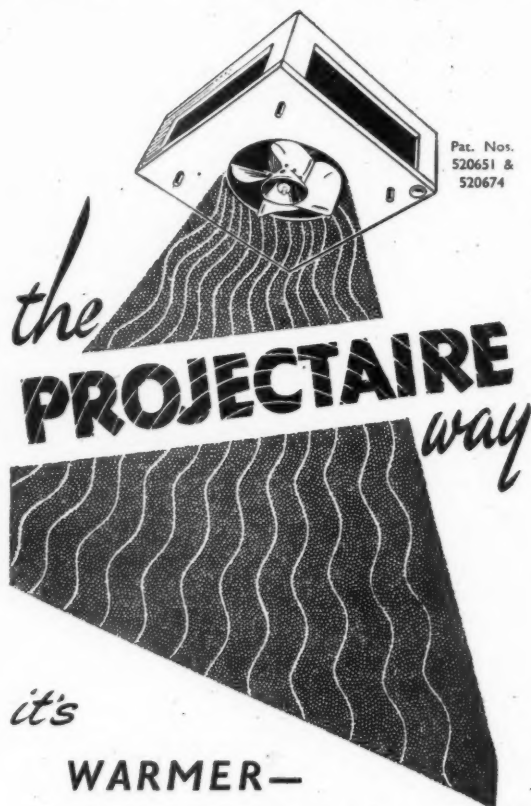
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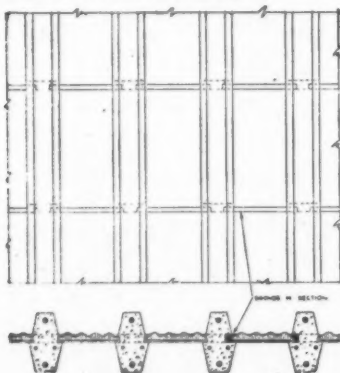
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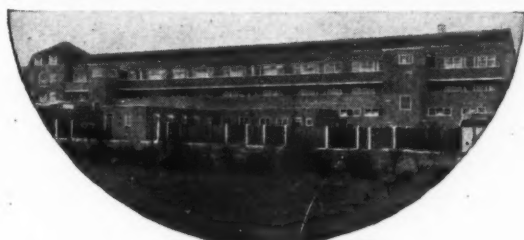


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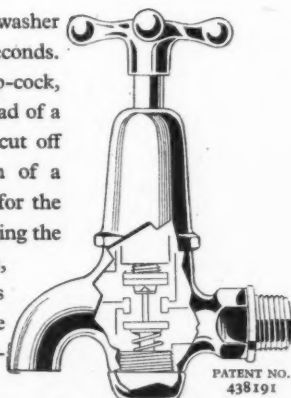
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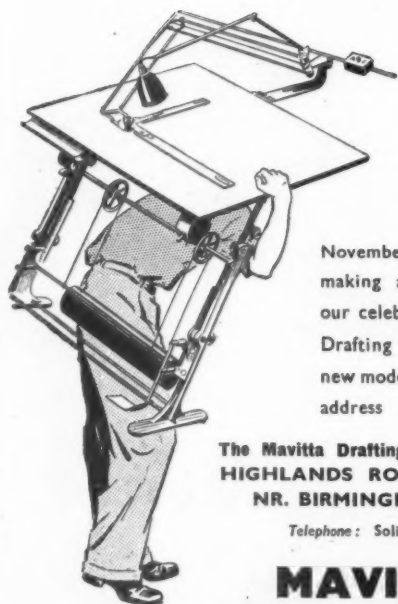
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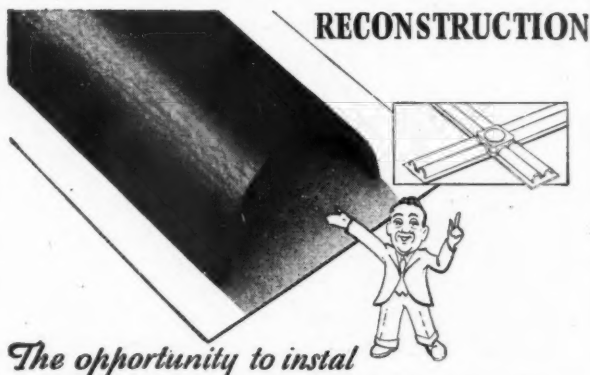


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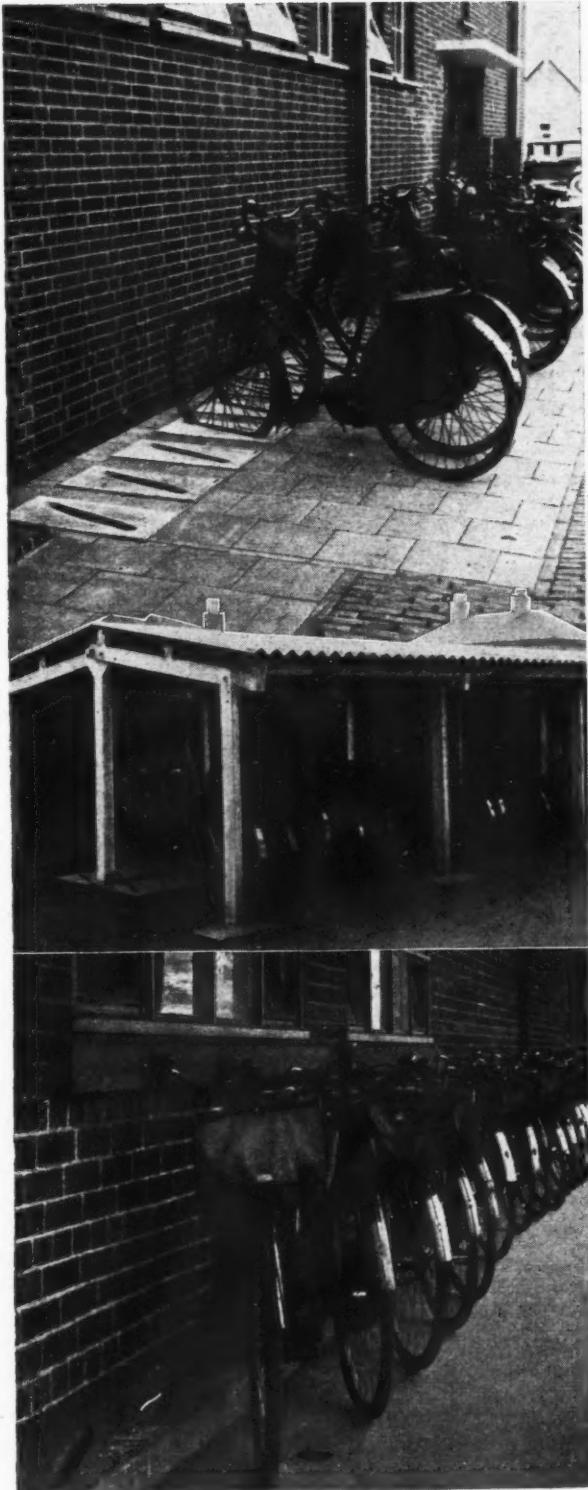
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Application forms obtainable from Architect to the Council, County Hall, S.E.1 (enclose stamped addressed envelope), returnable not later than 10 days from this date.

Canvassing disqualifies. (1680) 535

LONDON COUNTY COUNCIL. Required at Brixton School of Building, Fernside Road, S.W.4, as soon as possible, two Full-time **TEACHERS OF CONSTRUCTION—Lectures and Studio.** Applicants should hold Higher National Certificate, or diploma, in Building, or be Corporate Members of an appropriate professional institution, and have had responsible industrial or professional experience in connection with building. Teaching experience a recommendation. Commencing salary: £300, plus a London allowance of £36 or £48, according to age or teaching experience. An additional £15 p.a. allowed for each year of approved industrial experience up to a maximum of 10 years, together with an increment for each year of previous full-time teaching service. The maximum of the scale is £525, plus the London allowance. Application forms (stamped addressed foolscap envelope necessary) from the Principal at the School, returnable by 31st December, 1947. (3581) 1009

BOROUGH OF TAUNTON. By permission of the Ministry of Labour and National Service, under the Control of Employment Order, 1947.

Applications are invited for the following appointments, in the Borough Housing Architect's Department:—

(a) **SENIOR QUANTITY SURVEYOR.** Salary A.P.T., Grade V (£460-£510).

(b) **ASSISTANT QUANTITY SURVEYOR.** Salary A.P.T., Grade I (£330-£375).

(c) **ARCHITECTURAL ASSISTANT.** Salary A.P.T., Grade I (£330-£375).

Each appointment will carry a cost-of-living bonus, at present £59 16s. per annum.

For the appointment (a) candidates should be Associates of the Royal Institute of Chartered Surveyors (Quantities Division), and have had experience in the preparation of Bills of Quantities, estimates, valuations and settlement of accounts.

For the appointments (b) and (c) preference will be given to candidates having passed the intermediate examinations of the Royal Chartered Surveyors' Institute, or the Royal Institute of British Architects respectively, or who are studying for the Direct Final Examinations.

Each appointment will be subject to one month's notice on either side, and to the provisions of the Local Government Superannuation Act, 1937. The successful candidate will be required to pass a medical examination.

The Committee will give consideration to the provision of housing accommodation, if required. Applications, stating age, qualifications, previous and present appointments and salaries, full details of experience, etc., together with copies of two recent testimonials, should be sent to C. Bacon, A.R.I.B.A., Borough Housing Architect, No. 2, Baldwin Road, Taunton, to be delivered not later than Friday, 19th December, 1947.

Canvassing, directly or indirectly, will disqualify.

L. ATWELL, Town Clerk. Municipal Buildings, Taunton. 14th November, 1947. 514

DENBIGH COUNTY COUNCIL. COUNTY ARCHITECT'S DEPARTMENT.

The above County Council invite applications for the under-mentioned appointments, in the County Architect's Department, viz:—

(a) **ASSISTANT ARCHITECTS.** Grade V, A.P.T. Division. Salary £420-£510.

Preference will be given to Members of the R.I.B.A. and Registered Architects. Applicants must have sound experience in architectural design and in the preparation of working drawings, with full understanding of modern school construction.

(b) **ASSISTANT ARCHITECTS.** Grade IV, A.P.T. Division. Salary £420-£465.

Preference will be given to members of the R.I.B.A. and Registered Architects. Applicants must have sound experience in architectural design and in the preparation of working drawings.

(c) **ONE JUNIOR ASSISTANT ARCHITECT.** Grade III, A.P.T. Division. Salary £390-£435.

Preference will be given to those who have passed the Intermediate R.I.B.A. examination. Applicants must be capable of preparing working drawings for modern buildings.

The salaries specified for the respective appointments are subject to the addition of temporary cost-of-living bonus, at present £59 16s. per annum, and the appointments will be subject to the provisions of the Local Government Superannuation Act, 1937.

The successful applicants will be required to pass a medical examination and to reside in such place in the County as the County Council may from time to time direct.

The appointments will be subject to termination by one month's notice on either side.

Applications, giving age, qualifications, and particulars of present and previous appointments, and accompanied by copies of three recent testimonials, to be sent to me, the undersigned, in a sealed envelope, endorsed with a description of the post applied for, by not later than the 10th day of December, 1947.

WILLIAM JONES, Clerk of the County Council. County Offices, Ruthin. 12th November, 1947. 503

METROPOLITAN BOROUGH OF HOLBORN. HOUSING AND PLANNING DEPARTMENT.

Applications are invited for the following appointments on the established staff of the above:—

(a) **SENIOR ARCHITECTURAL ASSISTANT** (Grade A.P.T. VI). Salary £555, rising by two annual increments of £20 and one of £25 to a maximum of £620 (inclusive of London weighting) per annum, plus cost-of-living bonus (at present £59 16s.).

(b) **ESTATES ASSISTANT** (Grade A.P.T. V). Salary £480, rising by two annual increments of £15 and one of £20 to a maximum of £530 (inclusive of London weighting) per annum, plus cost-of-living bonus (at present £59 16s.).

Candidates for appointment (a) must be qualified Architects, and are required to have experience in preparation of schemes for conversion of houses into flats, schemes for new flats and houses, together with the preparation of specifications, estimates, and supervision of works in progress.

Candidates for appointment (b) must be qualified Architects or Surveyors. The successful candidate will be required to handle all requisitioned property, including inspection of buildings, preparation of schedules of condition, specifications and progressing of repairs and supervision of works in progress. Candidates must have a sound practical knowledge of building construction.

The appointment will be subject to the conditions of service of the National Joint Council for Local Authorities' Administrative, Professional and Technical Services, and to the provisions of the Local Government Superannuation Act, 1937, and the successful candidate will be required to pass satisfactorily a medical examination by the Council's medical officer.

Applications, stating age, qualifications and experience, and accompanied by copies of not more than three recent testimonials, should be sent, in envelopes endorsed "Senior Architectural Assistant" or "Estates Assistant," as the case may be, to the undersigned not later than 12th December, 1947.

C. F. S. CHAPPLE, Town Clerk. 523

CROWN AGENTS FOR THE COLONIES.

Applications from qualified candidates are invited for the following post:—

QUANTITY SURVEYOR required by Malayan Union Government, Public Works Department, for three years, with possibility of permanency. Commencing salary according to experience in scale \$4,800 to \$5,600 a year, plus cost-of-living allowance up to \$1,200 a year. Children's allowance \$50 a month for first child and \$35 for second (Malayan dollar equals 2s. 4d.). Outfit allowance £60. Free passages. Candidates should be Chartered Quantity Surveyors and have had at least two years' experience, after pupillage, in all aspects of the work. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1, quoting M/N/18275 on both letter and envelope. 534

COUNTY OF ESSEX. ILFORD COMMITTEE FOR EDUCATION.

The Essex County Council invite applications for **ARCHITECTURAL ASSISTANTS** as under:—

ONE SECTIONAL ASSISTANT ARCHITECT (Grade VII), to act as leader of a section in the office of the Borough Engineer of Ilford, to deal with work for the Committee for Education.

ONE ARCHITECTURAL ASSISTANT (Grade V), to work in the office of the Borough Engineer of Ilford, to deal with work for the Committee for Education.

Applicants should be members of the Royal Institute of British Architects, and have had considerable experience in the planning, designing, construction, and supervision of School buildings and have had administrative experience.

ONE ARCHITECTURAL ASSISTANT (Grade II), to work in the office of the Borough Engineer of Ilford to deal with work for the Committee for Education.

Applicants should have had good general training and experience.

The scale of salary will be in accordance with the provisions of the National Joint Council, A.P.T. Division.

There will also be paid such (if any) bonus and travelling and subsistence allowances as may from time to time be determined by the County Council. The amount of bonus payable at present is 23s. per week.

In fixing the commencing salary, regard will be had to the qualifications and experience of the successful applicant in each case.

The appointment will be held at the pleasure of the County Council, and may be terminated by the holder of the office by two months' notice.

The successful applicant in each case will be subject to the provisions of the Local Government Superannuation Act, 1937, and will be required to pass a medical examination to the satisfaction of the County Council.

Applications must be made on a form to be obtained from the Borough Education Officer, and returned to him at the Town Hall, Ilford, together with copies of not more than three recent testimonials, not later than 14 days after the appearance of this advertisement.

The envelope must be sealed and endorsed with the appropriate designation of the post applied for.

Canvassing, either directly or indirectly, is forbidden.

B. E. LAWRENCE, Chief Education Officer. County Offices, Chelmsford. 536

VALUATION AND ESTATE SURVEYORS are required by the Inland Revenue Department, Ministry of Works, Admiralty, War Office and Air Ministry Lands Branches and Commissioners of Crown Lands for temporary posts throughout the United Kingdom, at salaries ranging from £300-£800 p.a., according to qualifications and experience. Applicants, who should have a knowledge of valuation or management of real property, both urban and rural, should apply, stating preference, and quoting Ref. J/GEN/Val, to Room 377, Ministry of Labour and National Service, Technical and Scientific Register, York House, Kingsway, London, W.C.2. 527

METROPOLITAN BOROUGH OF PADDINGTON. HOUSING DEPARTMENT.

APPOINTMENT OF QUANTITY SURVEYOR.

Applications are invited for the appointment to the permanent establishment of a Quantity Surveyor, in the Architectural Section of the Housing Department. The appointment is Grade VI and VII of the A.P.T. Division of the National Joint Council's Scheme of Conditions of Service, viz., £535 per annum, rising by the annual increments of those Grades to £650 per annum, plus London "weighting" (£20 per annum) and cost-of-living bonus (at present £59 16s.). The commencing salary will be fixed within those grades according to the experience and ability of the successful candidate.

Applicants, who should have passed the final examination of the Royal Institute of Chartered Surveyors (Quantities Section), must be experienced in all branches of the work and able to prepare estimates, bills of quantities, specifications, contract documents, and cost statistics, and to measure-up for interim and final certificates and to settle final accounts. They should also be capable of organising and controlling the work of a staff of qualified and junior assistants.

The appointment will be subject to one month's notice on either side, and the successful candidate will be required to produce a certificate of birth, pass an examination by the Council's medical examiner, and devote the whole of his time to the duties of his office. The appointment will also be subject to the Conditions of Service of the National Joint Council for Local Authorities' Administrative, Professional, Technical and Clerical Services, and to the provisions of the Paddington Borough Council (Superannuation and Pensions) Acts.

Applications, stating age, qualifications and experience, and present and previous appointments, with salaries together with copies of three recent testimonials, should be delivered to the undersigned in an envelope marked "Appointment of Quantity Surveyor" not later than Saturday, 13th December, 1947.

Canvassing, either directly or indirectly, will disqualify.

W. H. BENTLEY, Town Clerk. Town Hall, Paddington, London, W.2. 27th November, 1947. 532

KINGSTON-UPON-HULL EDUCATION AUTHORITY. COLLEGE OF ART AND CRAFTS. SCHOOL OF ARCHITECTURE.

Required, as soon as possible, a SENIOR ASSISTANT LECTURER, for appointment to the School of Architecture. Candidates should possess a Degree or Diploma of a recognised School of Architecture, and be qualified (in co-operation with three other full-time Lecturers) to lecture, and to supervise the studio work, in connection with the Five Year Diploma Course. Salary will be in accordance with the Burnham Scale of Salaries for Technical Institutions, i.e., £600 by £25 to £750 (men) or £480 by £20 to £600 (women), with additional allowances for training. Particulars of appointment and application forms to be returned within fourteen days of the date of this issue may be obtained on receipt of a stamped addressed foolscap envelope from the Director of Education, Guildhall, Kingston-upon-Hull. 520

METROPOLITAN BOROUGH OF WANDSWORTH.

ASSISTANT ARCHITECT.

Applications are invited for the established appointment of ASSISTANT ARCHITECT, in the Borough Architect's Department, at a salary according to qualifications and experience, within Grades A.P.T. V and VI, of the National Scheme of Conditions of Service, viz., £480-£620, plus cost-of-living bonus (at present £59 18s. 4d.).

Candidates should have had good professional training, and experience in housing design, including supervision of site works. Preference will be given to Associates of the Royal Institute of British Architects.

Forms of application are obtainable from Mr. W. H. Beesley, A.R.I.B.A., F.R.I.C.S., Borough Architect, and must be returned endorsed "Architectural Assistant," to the undersigned, not later than 19th December, 1947.

R. H. JERMAN.

Town Clerk.

Municipal Buildings, Wandsworth, S.W.18. 516

CROWN AGENTS FOR THE COLONIES.

Applications from qualified candidates are invited for the following post:—

QUANTITY SURVEYOR required by Hong Kong Government Public Works Department, for three years, with prospect of permanency. Salary according to qualifications in scale £500 to £910, plus cost-of-living allowance up to £235. Residential allowance £45 upwards. Outfit allowance £60. Free passages. Candidates not over 40 years of age, must be Chartered Quantity Surveyors, with at least 5 years' experience dealing with large building works. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the Crown Agents for the Colonies, 4, Millbank, London, S.W.1 quoting M/N/17517 on both letter and envelope. 513

PONTYPRIDD URBAN DISTRICT COUNCIL.

Applications are invited for the appointment of an ARCHITECTURAL ASSISTANT, at a salary of £435 per annum—the maximum of A.P.T. Grade III, of the National Scales of Salaries—plus bonus, at present £59 18s. per annum.

Preference will be given to candidates who have passed either the Intermediate or Final Examinations of the R.I.B.A.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937, and to the successful candidate passing a medical examination. The person appointed will be required to devote the whole of his time to the service of the Council, and the appointment will be subject to one month's notice on either side.

Applications, stating age, present and previous positions, technical training and qualifications (with dates) and concise particulars of experience, together with copies of three recent testimonials, must be delivered, endorsed "Architectural Assistant," to the undersigned, to arrive not later than Monday, the 8th day of December, 1947.

Canvassing will be a disqualification, and candidates must disclose any relationship to Members of the Council.

H. LEONARD PORCHER.

Clerk of the Council.

Municipal Buildings, Pontypridd. 506

COUNTY BOROUGH OF BLACKBURN.

Applications are invited for the post of ASSISTANT QUANTITY SURVEYOR, on the permanent staff of the Borough Engineer and Surveyor, at a salary in accordance with Grade VI of the National Scale of Salaries (£535-£600), plus cost-of-living bonus, at present £59 18s. per annum.

Applicants must be experienced in taking off quantities, site measurements, adjusting variations on contracts, and the preparation of estimates. Preference will be given to Professional Associates of the Royal Institution of Chartered Surveyors.

The Council is prepared to assist the successful applicant in finding housing accommodation.

Applications, appropriately endorsed, stating age, qualifications, experience, present and past appointments, together with not more than three recent testimonials, to be delivered to the Borough Engineer and Surveyor, Town Hall, Blackburn, by 4th December, 1947.

CHAS. S. ROBINSON.

Town Clerk.

529

CIVIL SERVICE COMMISSION, DUBLIN. POSITIONS VACANT.

Particulars of the under-mentioned established posts in the Department of Local Government, Dublin, may be obtained from the Secretary, Civil Service Commission, 45, Upper O'Connell Street, Dublin.

ARCHITECT - IN CHARGE OF HOUSING.

Salary scale: Men, £1,100-£25-£1,230 inclusive a year. Women, £920-£25-£1,110 inclusive a year. Essential qualifications: University Degree in Architecture, or equivalent qualification, and at least 8 years' high-class experience, in a responsible position, of architectural work, including experience in the design and construction of dwellings, the selection of sites, and the layout of housing schemes.

ARCHITECTURAL OR ENGINEERING INSPECTOR. Salary scales: Men, £730-£20-£880 inclusive a year. Women, £575-£15-£730 inclusive a year. Essential qualifications: University Degree in Architecture or Engineering, or equivalent qualification, and practical experience in architecture or civil engineering.

SENIOR ARCHITECTURAL OR ENGINEERING INSPECTOR. Salary scales: Men, £880-£25-£1,060 inclusive a year. Women, £730-£20-£920 inclusive a year. Essential qualifications: University Degree in Architecture or Engineering, or equivalent qualification, and at least 5 years' high-class experience in a responsible position, of architectural or engineering work, including experience in the design and construction of dwellings, the selection of sites, and the layout of housing schemes.

Age limits for the above-mentioned posts: 30-45 years on the 1st November, 1947, with extensions in certain cases.

ASSISTANT ARCHITECT. Salary scales: Men, £420-£20-£800 inclusive a year. Women, £350-£20-£650 inclusive a year. A successful candidate with special qualifications and/or experience may be allowed to enter the appropriate scale at a point above the minimum, not exceeding £520 in the case of a man and £450 in the case of a woman. Essential qualifications: University Degree in Architecture, or equivalent qualifications, and practical experience in Architecture. Maximum age limit: 30 years on the 1st November, 1947, with extensions in certain cases.

Latest time for accepting completed application forms: 5 p.m. on the 7th January, 1948. 539

ESSEX EDUCATION COMMITTEE.

MID-ESSEX TECHNICAL COLLEGE AND SCHOOL OF ART, CHELMSFORD.

Applications are invited for the following appointment:—

Full-time LECTURER in the Department of Architecture, to assist in the instruction of Full-time Day and Evening Students preparing for the Intermediate and Final Examinations of the Royal Institute of British Architects.

The successful candidate should have suitable qualifications, preferably trained at a recognised School of Architecture, and with experience in an Architect's office.

Previous teaching experience, though desirable, is not essential.

Salary in accordance with the Burnham (Technical) Report, £300 x £15 to £255, with allowances for approved professional and/or teaching experience.

The successful candidate will be required to commence duties as soon as possible.

Further particulars and application forms may be obtained from Mr. E. W. Alston, Clerk to the Governors, Mid-Essex Technical College, Market Road, Chelmsford, on receipt of a stamped addressed envelope, to whom they should be returned as soon as possible.

R. E. LAWRENCE.

Chief Education Officer. 540

COUNTY BOROUGH OF HALIFAX.

BOROUGH ENGINEER'S DEPARTMENT.

Applications are invited for the appointment of QUANTITY SURVEYOR. Salary £420, rising to £465 per annum, in accordance with Grade IV of the National Scale, plus cost-of-living bonus, at present £59 18s. per annum.

The appointment is subject to the conditions of service adopted by the Corporation and to the Local Government Superannuation Act, 1937. The successful candidate will be required to pass a medical examination. The Corporation have decided that in the letting of requisitioned houses, consideration should be given to the requirements of newly appointed members of the staffs of Corporation Departments.

Applications, stating age, qualifications, present position and salary and experience, accompanied by copies of three recent testimonials, and appropriately endorsed, should be delivered to the undersigned not later than Monday, 8th December, 1947.

W. USHER.

Town Clerk.

Town Hall, Halifax. 533

QUANTITY SURVEYORS AND ASSISTANT QUANTITY SURVEYORS are urgently required by several Government Departments for temporary posts at salaries ranging from £300-£800 p.a., according to qualifications and experience. Vacancies exist throughout the United Kingdom and occasionally overseas. Applications for these vacancies should be made to Ministry of Labour and National Service, Technical and Scientific Register, Room 377, York House, Kingsway, London, W.C.2, quoting ref. J/Q.S. 526

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BOROUGH OF BEXLEY. BOROUGH ENGINEER AND SURVEYOR'S DEPARTMENT. ARCHITECTS' SECTION.

Applications are invited for the under-mentioned appointments:—

(1) **ASSISTANT ARCHITECT.** Salary in accordance with Grade V of the National Scale of Salaries (£460 x £15 x £15 x £20-£510 per annum).

(2) **TWO ARCHITECTURAL ASSISTANTS.** Salary in accordance with Grade III or IV of the National Scale of Salaries (£390 x £15-£435 and £420 x £15-£465 per annum).

The above scales are subject to the addition of £20 a year London weighting and a cost-of-living bonus, which for persons of 21 years and over is £59 18s. per annum (males) and £48 2s. per annum (females).

Form of application, with conditions of appointment, may be obtained from the Borough Engineer, West Lodge, Broadway, Bexleyheath, to whom completed applications must be returned by the 12th December, 1947. Canvassing, directly or indirectly, will disqualify.

W. WOODWARD.

Town Clerk. 505

NORTHAMPTONSHIRE COUNTY COUNCIL.

APPOINTMENT OF COUNTY ARCHITECT.

Applications are invited from Registered Architects for the appointment of County Architect, at an initial salary of £1,100, rising by annual increments of £50 to £1,400 per annum, inclusive of bonus.

The person appointed will be entirely responsible for all the Council's architectural work, including police and educational building programmes. He will be required to advise the Council on all architectural matters under its control, and will be responsible for the upkeep and maintenance of the Council's buildings, and for the administration of the Architect's Department.

The appointment will be terminable by three months' notice on either side, and will be subject to the provisions of the Local Government Superannuation Acts, and the selected candidate will be required to pass a medical examination before the appointment is confirmed.

Forms of application embodying further particulars of the appointment may be obtained from the undersigned, to whom applications, endorsed "County Architect," and accompanied by a copy of one recent testimonial, must be delivered not later than 31st December, 1947.

J. ALAN TURNER.

Clerk of the County Council.

County Hall, Northampton.

27th November, 1947. 528

METROPOLITAN BOROUGH OF HAMMERSMITH.

Applications are invited for the appointment of Two Temporary ARCHITECTURAL ASSISTANTS (Grade I, £250-£20-£450 per annum, plus bonus). Preference will be given to candidates experienced in the preparation of working and detailed drawings for public buildings and Municipal dwellings.

Forms of application may be obtained (on receipt of a stamped addressed envelope) from the undersigned.

W. H. WARHURST.

Town Clerk.

Town Hall, Hammersmith.

17th November, 1947. 524

BRISTOL CORPORATION CITY ARCHITECT'S DEPARTMENT.

Applications invited following Permanent Staff:—(a) SENIOR ASSISTANT ARCHITECT (Health), Grade VI (£535-£600). (b) SENIOR ASSISTANT ARCHITECT, Grade IV (£420-£460). Plus cost-of-living bonus (£59 18s.). Applicants (a) A.R.I.B.A. qualification, (b) R.I.B.A. inter. examination. Subject provisions Local Government Superannuation Act, 1947, one month's notice either side, and medical examination. Applications (age, experience, qualifications, three references) by 8th December, J. Nelson Meredith, F.R.I.B.A., City Architect, Eagle House, Bristol, 1. 530

Partnership

5 lines or under, 10s.; each additional line, 1s. 6d.

AN opportunity for qualified Architect seeking Partnership in well-established London firm (mainly industrial); capital relatively small, and possibly not required during probationary period on salary. Write in confidence, stating age, particulars of education, training and experience, to Box 1088.

Architectural Appointments Vacant

4 lines or under, 5s.; each additional line, 1s. 6d.

ARCHITECTURAL ASSISTANT required immediately in London office; must be good draughtsman of intermediate standard; some experience of industrial buildings an advantage. Box 963.

TWO SENIOR and THREE JUNIOR ARCHITECTURAL ASSISTANTS required for busy West End office, with interesting work in progress. Box 1064.

JUNIOR ARCHITECTURAL ASSISTANT required in large industrial concern in mid-Kent area; probationer R.I.B.A. preferred. Box 1070.

IMPERIAL CHEMICAL INDUSTRIES, LTD., Wilton Works, near Redcar, Yorks, require **DRAUGHTSMEN** to assist with the design and detailing of a large new works; successful candidates will be appointed to the established staff.

Preference will be given to applicants who hold the Higher National Certificate or higher qualification, and have the appropriate experience as follows:—

Draughtsmen—Architectural: Design of offices, laboratories, houses, welfare and general industrial buildings. Order No. D.31.

Civil: Design of roads, railways, drains and water services. Order No. D.27.

Structural: Design of buildings and structures, and design and detailing of reinforced concrete work for industrial buildings. Order No. D.28.

Mechanical: Design of pipework for steam, gas and water, compressed air stations, layout of chemical plant, etc. Order No. D.29.

Power Station: Design and layout of modern H.P. Boiler Plant and Power Plant. Order No. D.27.

Electrical: Layout of plant electrical installations, including motors, starters, distribution boards, cables and lighting, and necessary calculations. Order No. D.30.

Instrument: Layout of mechanical and electrical instrument installations for Chemical Plant. Preference for men experienced in modern automatic control and measurement instruments for temperature pressure and flow. Order No. D.29.

Applications, giving full details and quoting advertisement reference ICI/X/34, and the Order No., should be addressed to the Manager, Employment Exchange, South Bank, Yorks. LM/RH.

4th November, 1947.

1060

VACANCY for SENIOR ASSISTANT ARCHITECT in Architect's Department of London Company; applicants should have the ability to control drawing office staff and take charge in the absence of the architect; industrial and commercial experience an advantage. Applications should state, in confidence, age, training, experience, war service, salary required, and position now held, to Box 1082.

ASSISTANT required, with drawing office experience and interest in contemporary design; office near Hampton Court (4 hr. Waterloo). Apply Eric Lyons & Townsend, Mill House, Bridge Road, East Molesey. 511

ARCHITECTURAL ASSISTANTS, preferably qualified and with experience of industrial buildings, are required by a public utility company in London; salary up to £600 per annum, according to qualifications and experience. Apply Box 512.

SENIOR ARCHITECTURAL ASSISTANT required in Architect's office in North-West Kent; permanent position, with good prospects, to gentleman having good general experience; salary about £600 p.a. Box 515.

INTERNATIONAL CORRESPONDENCE SCHOOLS require, for immediate full-time employment, an **ARCHITECT (Male)**, A.R.I.B.A. Also a **JUNIOR ARCHITECTURAL ASSISTANT**, qualified by examination. Write or 'phone, stating age, experience, and salary required, to Director of Instruction, International Correspondence Schools, Kingsway, W.C.2. 525

ARCHITECTURAL ASSISTANTS.—Senior men required. Write, stating experience and salary required, to Wood, Goldstraw & Yorath, Victoria Chambers, Tunstall, Stoke-on-Trent. 537

IMPERIAL CHEMICAL INDUSTRIES, LTD., General Chemicals Division, require a number of **Structural Draughtsmen**, with experience in the design of steel or reinforced concrete structures; salary dependent upon age and experience. Write, quoting E.8, and giving full particulars of experience and qualifications, to Staff Manager, Imperial Chemical Industries, Ltd., General Chemicals Division, Canard Building, Liverpool, 3. 538

ARCHITECTURAL DRAUGHTSMAN required by specialists in the design of precast concrete units applied to housing and factory construction; thorough knowledge of building construction, and sound practical experience in domestic building are essential; must be capable of preparing full working and detailed drawings. Applications, stating age, experience, and salary required, to General Manager, Keema Construction, Ltd., Milford Manor, Salisbury. 541

Architectural Appointments Wanted

ARCHITECTURAL ASSISTANT; 6 years' experience, including surveying, war damage rehousing, adaptation plans, L.C.C. schools and general office routine; 3rd year building construction; studying for R.I.B.A. special final. Box 444.

ARCHITECTURAL ASSISTANT; final standard; sketch schemes to site supervision; 7 years' experience, mainly commercial and industrial; salary £500. Box 455.

A. R.I.B.A., 38, desires senior position with 20 years' varied experience, including civil engineering; ex-major, R.E.; would consider commercial proposition; salary £900-£950. Box 445.

A. R.I.B.A., 10 years' practical experience in all classes of work, chiefly housing and industrial, quantities, specifications, etc., requires position; minimum salary £520 per annum; own car. Box 456.

Other Appointments Vacant

4 lines or under, 5s.; each additional line, 1s. 6d.

EXPERIENCED SECRETARY wanted for London Architect's office. 'Phone Chancery 7915. Box 519.

ENGINEER ESTIMATORS required by a large City Company; age 30/35; B.Sc., Mechanical or Civil Engineering, or equivalent; engineering apprenticeship and experience in estimating major projects with large engineering contracting organisations; salary depending on qualifications and experience, minimum £600; Provident Fund benefits. Applicants should write, quoting Dept. H.416, stating age, qualifications, experience, etc., to Box 517.

Services Offered

4 lines or under, 2s. 6d.; each additional line, 1s.

CHARTERED ARCHITECTS, situated in London, are willing to undertake the preparation of perspectives in line or full colour. Box 1097.

YOUNG free lance DRAUGHTSMAN in London offers his services for Exhibition Stand detailing and industrial styling work. Box 510.

STUDENT R.I.B.A., up to final standard, with office experience, requires part-time work in office or at home; London area. Box 522.

CAPABLE ASSISTANT undertakes perspectives, interiors and architectural renderings. Box 531.

For Sale

4 lines or under, 5s.; each additional line, 1s. 6d.

FOR SALE.—Small Quantity Steel, consisting of: 6 in. by 13 in. flat, 24 ft. and 28 ft. lengths; 15 in. by 4 in. by 3 in. channel 19 ft. to 25 ft.; 9 in. by 3 in. channel 19 ft. to 25 ft.; 12 in. by 3 in. channel 19 ft. to 25 ft.; 18 in. by 6 in. rolled steel joists 30 ft. lengths. Quantity M.S.P., 6 ft. by 4 ft. by 3 in. Box A110/4, Strand House, London, W.C.2. 521

Miscellaneous

4 lines or under, 5s.; each additional line, 1s. 6d.

A. J. BINNS, LTD. Specialists in the supply and fixing of all types of fencing, guard rail, factory partitions and gates. Harvest Works 99-107, St. Paula Road, N.1. Canonbury 2061.

WANTED.—One set of "Arts Et Manners Graphiques." Please reply to Box 5.

WANTED.—Complete set of "Typography." Box 487.

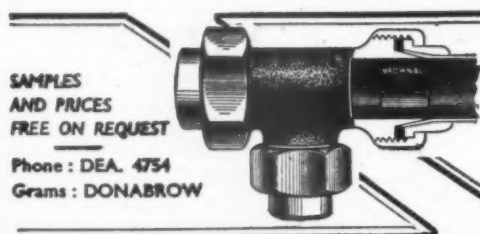
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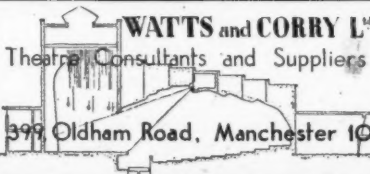
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