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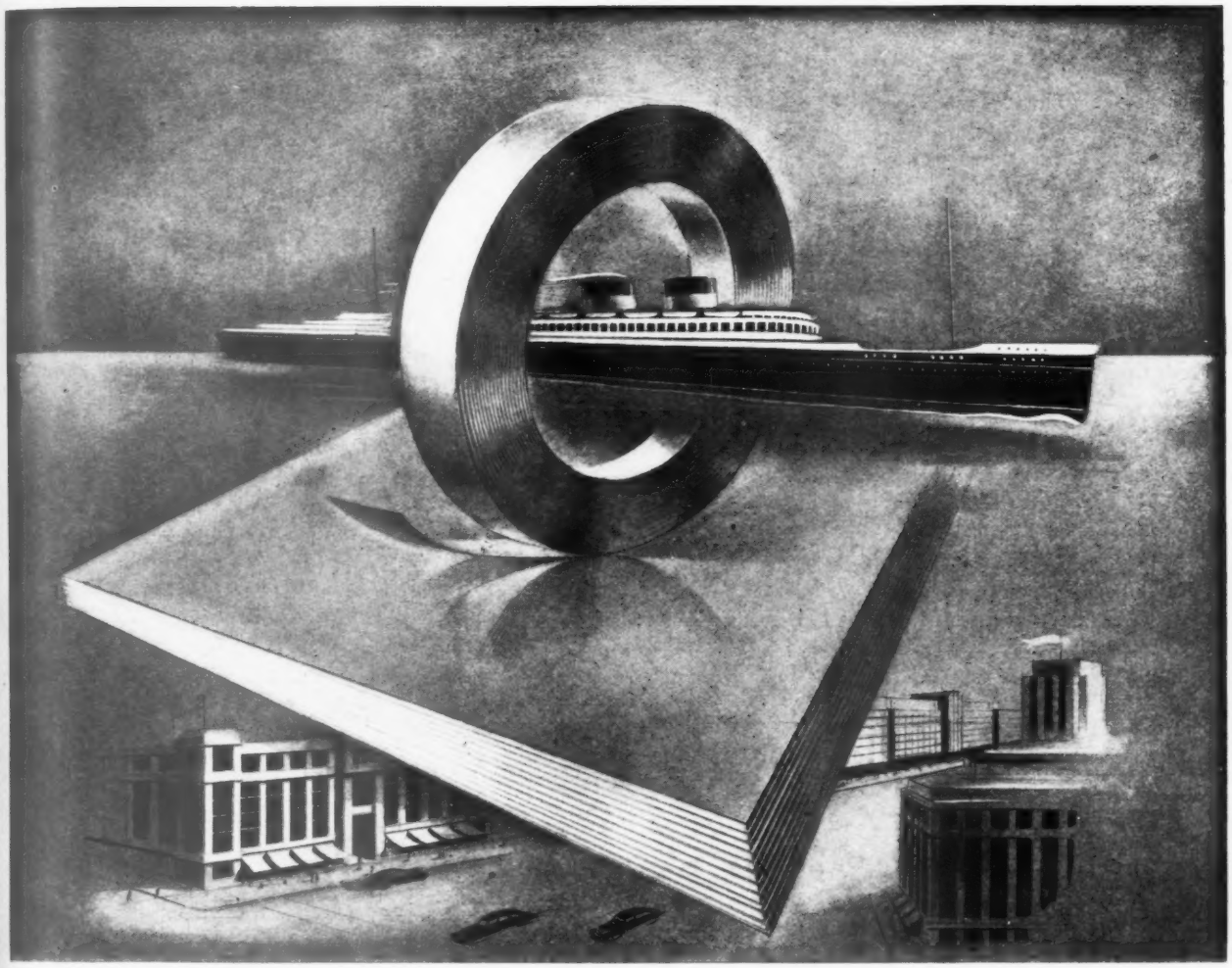
For Appointments (Wanted or Vacant), Competitions Open, Drawings, Tracings, etc., Educational Legal Notices, Miscellaneous, Property and Land Sales—*see* pages xxxviii and xl.



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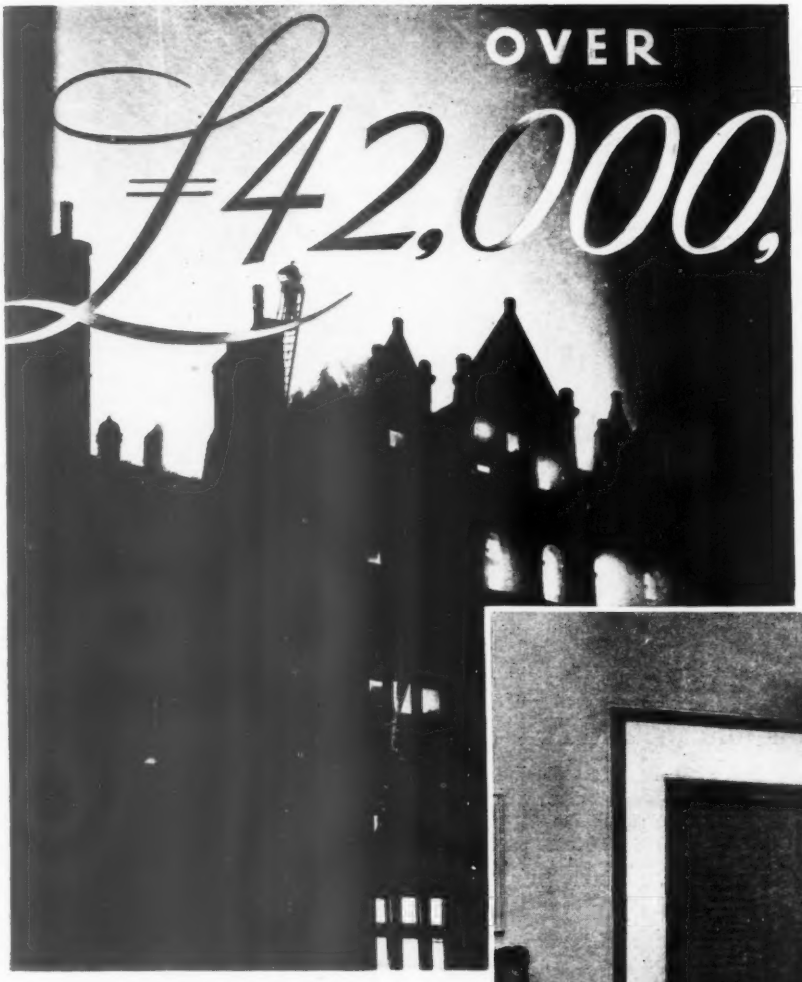

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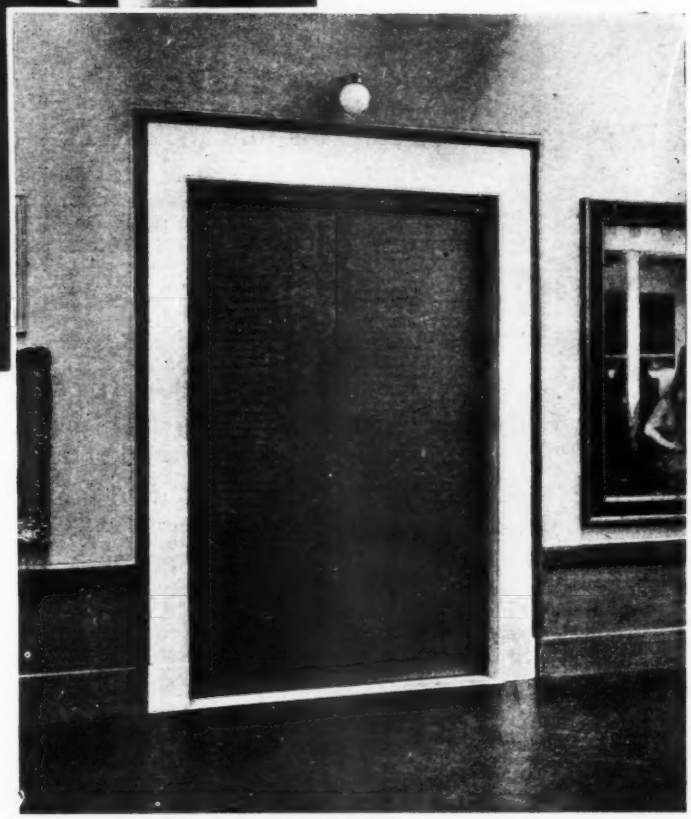

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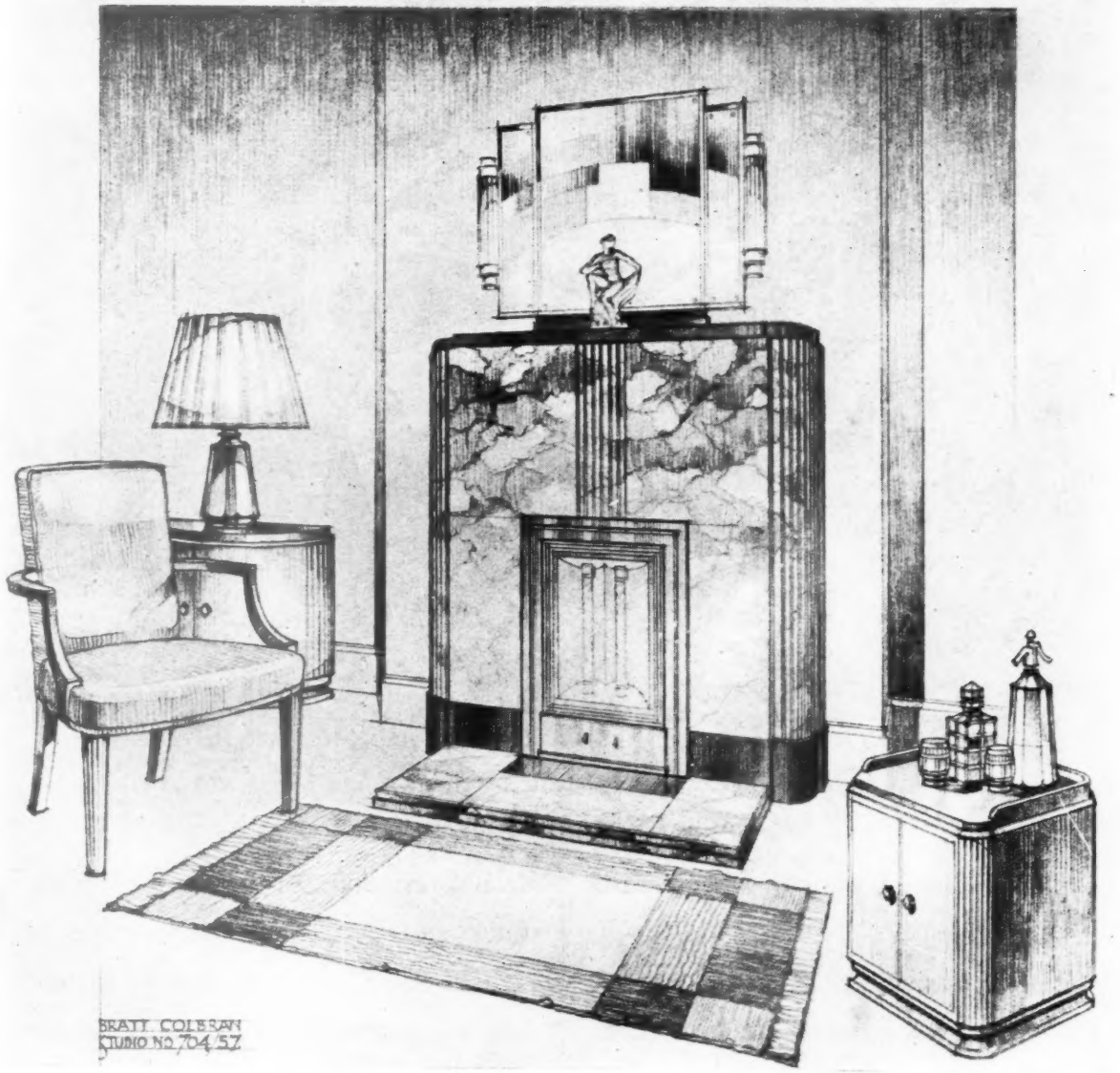

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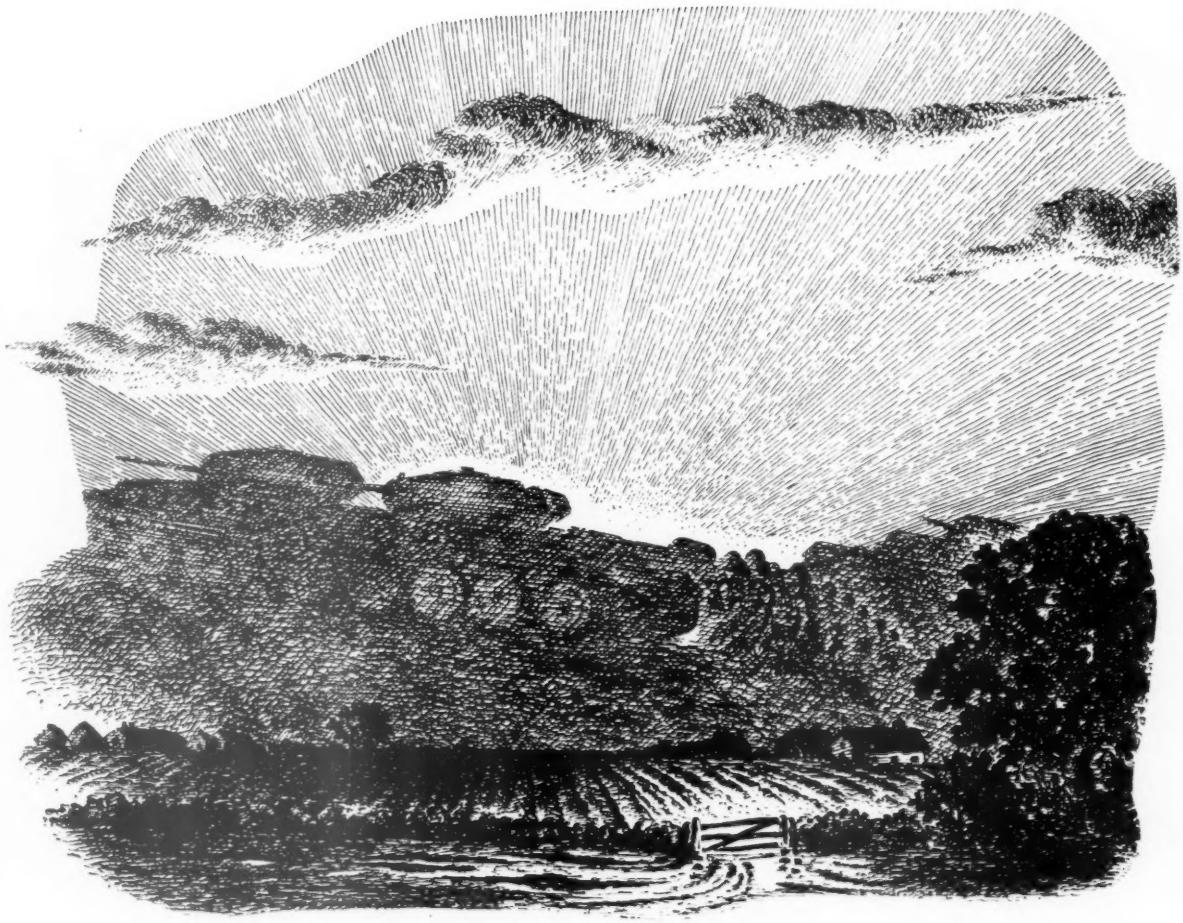

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In common with every other periodical this JOURNAL *is rationed to a small part of its peace-time needs of paper. Thus a balance has to be struck between circulation and number of pages. We regret that unless a reader is a subscriber we cannot guarantee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

DIARY FOR APRIL MAY AND JUNE

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

BILLINGHURST. *Living in the Country Exhibition.* (Sponsor, H.C.) APRIL 6-8

BIRMINGHAM. *Homes They Come From Exhibition.* (Sponsor, HC.) APRIL 6-28

DARLINGTON. *Royal Sanitary Institute Sessional Meeting.* 10.30 a.m. At the Town Hall, Darlington. Welcome by the Mayor. *Housing and Town Planning,* by Mr. Ernest Minors, Borough Engineer and Surveyor, Darlington. Discussion opened by the Town Clerk, Mr. Henry Hopkins. Darlington's colour film, *Health Services.* 1.0 p.m. Luncheon by invitation of the Mayor and Corporation at Spark's Café, Northgate, Darlington. 2.30 p.m. Visit to Greenbank Health Centre, including Maternity Hospital (36 beds), and the Memorial Voluntary Hospital (240 beds); or to Infectious Diseases Hospital (160 beds) and Hunden's Lane War-time Nursery (80 places), open 24 hours. APRIL 29

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

IMPINGTON. *Design in the Home Exhibition.* At the Village College. (Sponsor, CEMA.) APRIL 6-13

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

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

Jacob Miller. *The Scope of Soviet Reconstruction and Its Administrative Framework.* At the London School of Hygiene and Tropical Medicine, Gower Street, W.C.1. Mr. Miller worked for a time in Gosplan (the Soviet State Planning Commission) as a research student. (Sponsor, Society for Cultural Relations with the USSR.) 2.30 p.m. APRIL 15

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

Professor Sargant Florence. *Planning and Industry.* At Essex Hall, Essex Street, W.C.2. (Sponsor, TPI.) 6 p.m. APRIL 20

Eric Godfrey. *The Restoration of Soviet Communications and Essential Services.* At the London School of Hygiene and Tropical Medicines, Gower Street, W.C.1. Mr. Godfrey worked in the USSR for some years as a telecommunications engineer. (Sponsor, Society for Cultural Relations with the USSR.) 2.30 p.m. APRIL 22

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

Arthur Ling. *Housing and Town Planning in the Soviet Liberated Areas.* At the London School of Hygiene and Tropical Medicine, Gower Street, W.C.1 Chairman, Professor C. H. Reilly. (Sponsor, Society for Cultural Relations with the USSR.) 2.30 p.m. MAY 6

George Laws. Chief Sanitary Inspector to the Richmond Corporation. *A Hundred Years of Sanitary Progress.* At the Royal Sanitary Institute, 90, Buckingham Palace Road, S.W.1. Chairman, Kenneth R. Hay. 2.30 p.m. MAY 9

AA Election of Officers and Council for Session 1944-45. At ordinary general meeting at 34-36, Bedford Square, W.C.1. 6 p.m. MAY 16

Dr. J. H. Paterson. *The Welding of Plastics.* At Institution of Civil Engineers, Great George Street, S.W.1. (Sponsor, Institute of Welding.) Dr. Paterson's paper will be followed by a demonstration. 6 p.m. MAY 17

L. L. Waide. *Planning and Social Statistics.* At Essex Hall, Essex Street, W.C.2. (Sponsor, TPI.) 6 p.m. MAY 25

RIBA Council Election Results. To be announced at general meeting at 66, Portland Place, W.1. Followed by informal meeting at which Sir Malcolm Trustram Eve, Chairman of the War Damage Commission, will talk on *The War Damage Act and Architects.* (Sponsor, RIBA). 6 p.m. (See page 253). JUNE 27

MOLD, FLINTSHIRE. *Twenty Women at Home Exhibition.* (Sponsor, HC.) APRIL 6-18

PLYMOUTH. *The Present Discovers the Past Exhibition.* At the Museum and Art Gallery. (Sponsor, BIAE.) APRIL 6-11

NEWS

THURSDAY, APRIL 6, 1944
No. 2567. VOL. 99

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

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

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

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

★

London Builders' HOLIDAYS ARE TO BE STAGGERED.

Holidays in the building industry in London, instead of taking place during the week starting on Monday, July 10, as previously announced, are to be staggered between July 10 and August 19. And no employer shall allow more than 25 per cent. of his employees to take their holidays at the same time. These decisions are announced by the London Regional Committee of the National Joint Council for the Building Industry. On representations from the Government, the Committee reconsidered the whole question of holidays in the London area. The decisions are designed to avoid having more than a certain proportion of men in the building industry on holiday at the same time in case of serious air raids. To meet the new situation, the following clause is to be inserted in the London Working Rule Agreement: "That the week's holiday to which each workman is entitled under the Holidays with Pay Scheme be taken in 1944 by arrangement with the employer concerned, in the period commencing July 10 and ending on August 19. No employer shall allow more than 25 per cent. of his employees to take their holidays at the same time." In view of the week's holiday with pay which operatives in the building industry are to receive this year, the Committee also decided that shops and jobs would not be closed on the Saturdays preceding Easter Monday, Whit-Monday and the August Bank Holiday. The official resolution on the subject is as follows: "Having given due regard to all the circumstances concerning the building industry in relation to the national interest, this London Regional Joint Committee decides that shops and jobs be not closed in 1944 on the Saturdays preceding Easter Monday, Whit-Monday and the August Bank Holiday."

from AN ARCHITECTS' *Commonplace Book*

SOMETHING OF LOS ANGELES. [*From* Where Shall John Go? *by Anthony Bourne* (*Article in* Horizon, a Review of Literature and Art, *January*, 1944]). I think I have probably sufficiently discouraged you about New York, and by this time you will want to see something of Southern California. If you arrive by train your first impressions will be of row upon row of orange trees laid out in rigid pattern on a wide flat plain. As you approach the coast, the distant mountains gradually converge and the increased incidence of white frame houses, gas stations, drive-ins and bill-boards displaying their larger- and lovelier-than-life-consumers of Coca-Cola, Camels, or Budweiser Beer announce the proximity of the city. By the time you reach the station your impression will still be clouded in oranges, but the station itself will give you a sharp push into the unrealities of the film city, a hint of what is in store . . . it is a vast hacienda, inside all marble and mosaic, outside the ultimate in pseudo-Spanish . . . the link between the preconceptions and the actualities of the place. To travel in by car would break the shock a little less gently. The outskirts announce themselves by degrees, an occasional formless lump of frame and stucco houses, suddenly an endless main street expanding sideways into nothing. . . . Suddenly you enter a broad four-lane highway, no houses within sight, a wonderfully planned entrance into what must be a wonderfully planned city, you plunge over a viaduct, through a long tunnel and all at once you are in Bedlam, among a holocaust of hooting automobiles, clanking street-cars and people hurling themselves in mass suicide attempts in front of every vehicle; you are in the horizontal Babel, the city of Los Angeles.

At a meeting of the RIBA on March 21 SIR IAN MACALISTER was elected Hon. Associate.

★

The Dartington Hall Trustees invite registered Architects to submit designs in COMPETITION FOR COTTAGES to be erected in the post-war period. Competitors should comply with the regulations of the RIBA. A First Prize of £150 and other prizes to a total value of £150, are offered, together with a special premium of £100 for the best design submitted by an architect serving with the Forces. The Promoters have appointed Mr. Charles Holden, F.R.I.B.A., and Mr. Lionel Pearson, F.R.I.B.A., to act as their Assessors. Designs must be submitted not later than August 31, 1944. There will be an entrance fee of 5s. payable by each competitor. This should be sent to the Secretary of the Dartington Hall Trustees, Dartington, near Totnes, Devon, who, on receipt of the fee, will forward a copy of the Conditions and Site Plan. Members of the Forces will not be required to pay a fee, and if they are desirous of competing, they should arrange to obtain particulars from their own Service Department responsible for dealing with such matters.

★

The Nomination list for the RIBA COUNCIL ELECTION will be issued on April 29 and the result of the Election announced on June 27. The full arrangements made by the Council for holding the election are as follows: (*a*) The Council Nomination List will be issued to members on April 29. (*b*) The Annual Report will be printed in the April number of the RIBA Journal. (*c*) The Annual General Meeting will be held on Tuesday, May 16, at 6 p.m. Note.—Additional nominations for membership of the Council under Bye-law 35 may be submitted before the close of the Annual General Meeting. Such nominations must be signed by at least seven members and must be accompanied by a written undertaking by the nominee to serve if elected. (*d*) The RIBA Journal containing the discussion at the Annual General Meeting will be issued on May 27. (*e*) The Voting Papers will be issued on June 8 and must be returned by June 19. (*f*) The results of the Council election will be announced at the General Meeting on Tuesday, June 27. The General Meeting will be followed by an Informal Meeting at which Sir Malcolm Trustram Eve, K.C., Chairman of the War Damage Commission, will give a talk on *The War Damage Act and Architects.*

Mr. Henry Wilson, F.R.I.B.A. is TO TOWN PLAN FALKIRK. He will also act as consultant to the Council for the development of the town. Mr. Wilson's firm, Messrs. Wilson & Wilson, of Falkirk, architects, is also planning the eastern area of Stirlingshire.

Mr. P. M. Powell, whose winning design in the Northamptonshire Rural Cottages Competition was published in our last issue. Born in Middlesbrough 35 years ago he joined the architectural staff of the Air Ministry in 1934, *was transferred as senior assistant to the Chief Architect's Division at MOW in* 1937, *and is at present in the Directorate of Post-War Building. He has travelled extensively in Norway, Sweden and Denmark to study construction and house design.*

For families with children the flat must always prove A POOR SUBSTITUTE for a HOUSE. This is one of the conclusions reached by the Conservative Party's sub-committee on housing. The chairman of the sub-committee is Mr. John F. Watson, chartered surveyor, and agent for the Marquess of Northampton's London estate. Other members include Lord Balfour of Burleigh, the Earl of Dudley and Mr. Henry R. Selley, M.P., past president, House Builders' Federation. The committee states: Flats are noisy. There is an incessant awareness by every tenant of what is happening around and above him. There is a lack of privacy, which tends to make people mind each other's business, and there are rules against keeping pets. None of these things are conducive to happy family life. Above all, they have no private gardens. After 1,100 interviews with working people in London and certain Midland towns, it emerged that 92 per cent. are averse from living in flats. Out of many thousands of men and women in the Forces 95 per cent. were against flats. Still, they suggest, flats have come to stay. In certain areas, notably the centres of existing towns, there is not, and will not be for many years, any alternative means of rehousing some parts of the population. That being so, there should be unremitting research and bold experiment in such methods of design and construction as may tend to mitigate disadvantages. The committee states, inevitably there will be a surplus of factories when the war is over. Those in suitable positions and with adequate facilities might well form the nuclei of new towns.

MOL and MOW have worked out a scheme to provide MAN POWER FOR TWELVE YEARS HOUSING. Mr. Ernest Bevin, Minister of Labour, made this announcement while speaking at a meeting of the Institution of Production Engineers at Cardiff. He said: Many measures are being worked out that will change the character of the country. We are determined to house the people decently. With the Ministry of Works we have prepared a scheme for the man-power that will be needed for a 12-year programme. An announcement will be made soon relating to the land problem and on reconstruction and redevelopment.

A Job in Welded Steel

The tennis and exhibition hall Apollo, at Amsterdam, designed by Ing. A. Boeken, shows how fine a character can be achieved by the combination of glass with uncovered steelwork of welded rigid frame construction. This building is described and illustrated in detail on pages 263 to 266 and accompanies in this issue an abstract of the lecture by Mr. R. Moon on new developments in welded steel construction which was among the ASB series recently given at the RIBA. (See page 269). Readers who wish to understand something of the technique of rigid (or continuous) steel construction, to which welding is particularly applicable, should refer to Dr. Hajnal Kónyi's illustrated article on *Continuity in Construction* which was published in the JOURNAL of July 1 and 8 of last year.

★ *Captain H. S. Goodhart-Rendel has GIVEN THE NATIONAL TRUST his house, Hatchlands, with 421 acres of land, situated near East Clandon, Surrey.*

Captain Goodhart-Rendel, who is now serving with his old regiment, the Grenadier Guards, has been president of the R.I.B.A. and Slade Professor at Oxford. Hatchlands lies on the north side of the main Leatherhead to Guildford road. Hatchlands is, in fact, the first house where an entail has been broken to enable it to be taken over by the Trust. It is also the first house acquired by the Trust definitely to be associated with the name of Robert Adam, who in 1759 began on the interior of Hatchlands, finishing his work in 1761. Adam's internal decorations here are his earliest known work. Signed and dated drawings of them are preserved in the Soane Museum. They include seven rich plaster ceilings and the most ambitious of his caryatid chimney-pieces. When Adam came on the scene the red brick shell of the house was nearly completed from designs of unknown authorship. At the close of the eighteenth century certain alterations were made from designs by Joseph Bonomi, and the Victorian period brought only a few changes, in which the original work was carefully respected. Readers of the book *Admiral's Wife* will recognize that Hatchlands was built for Admiral Boscawen, to whom the French Fleet surrendered at Louisburg in 1758. The admiral did not long enjoy his new home, for he died there at the early age of 50 in 1761, and his widow continued to live there until 1770. Hatchlands later became the home of the late Lord Rendel, the grandfather of the donor.

Mr. W. Bentley Purchase, the St. Pancras Coroner, CRITICISED THE TRAFFIC CONDITIONS at the Cobden Statue, Mornington Crescent, where five roads meet.

Mr. Purchase was holding an inquest on a taxidriver, who was killed there when his cab was involved in a collision with a bus. He said: Many people who drive about London will think that the traffic layout at this spot is not ideal. I do not think so myself. This accident ought not to have happened. It was stated by a police witness that traffic in one direction could travel on either side of the statue. The verdict was accidental death.

Mr. Attlee, Deputy Prime Minister, told the County Councils Association at Westminster that he does not anticipate any decrease in the responsibilities of LOCAL COUNCILS IN PEACETIME.

On the contrary, I think, he added, there will be an increase, though there may be changes and adaptations. He said: Local responsibility can not be divorced from that for finding the money. Few will deny that grants in aid from the centre are necessary, but that system should not be pushed too far. He did not believe there is any intention to depart from the system of locally elected bodies in favour of a deconcentration of the central government. He did not believe in whole-time paid service on local authorities. That, he said, is only disguised bureaucracy. On the other hand, neither employers nor employees should suffer loss through public service.

FIRST PWB REPORT

IN the autumn of 1941 the Directorate of Post-war Building of MOW was established to control and direct the many unco-ordinated committees that were springing up to consider post-war building technique. In April of 1943 the Directorate issued a statement on the progress of the twenty-three temporary Study Committees whose main object was to gather knowledge and make recommendations for the use of the permanent Committees of Standards and Codes of Practice.*

Now the most important of the PWB committees, the Inter-departmental (Burt) Committee on House Construction, convened by MOH, MOW and the Department of Health for Scotland, has issued its first full report,† which is also the first of MOW's Post-war Building Studies. Since preparing the report, the committee has been reconstituted on a broader basis with fresh terms of reference as a permanent advisory body with its *venue* at MOW.‡ But its report is based on the original terms of reference which were "to consider materials and methods of construction suitable for the building of houses and flats, having regard to efficiency, economy and speed of erection, and to make recommendations for post-war practice in the light of all relevant findings of the Study Committees co-ordinated by the Directorate of Post-war Building of the Ministry of Works."

The first of the tasks the committee set itself was to investigate the methods of house construction alternative to traditional ones used in the inter-war years, and "to advise on such methods as may be capable of application or suitable for development in the post-war period." Its findings are recorded in the new report. The report is divided into three parts. The first puts forward basic technical considerations of house construction on such matters as strength and stability, thermal insulation, moisture penetration and condensation, on which the merits of alternative forms of building can be assessed. The second part describes, illustrates and comments on the alternative forms of construction used in the inter-war period, and is sub-divided under the headings of concrete, timber, steel-framed, and metal-clad houses. The third part comprises notes on materials, such as floor finishes, light-weight concrete, and external renderings. The report closes with a summary of findings and conclusions,§ and an appendix on the use of no-fines concrete.

Most of the so-called experimental houses now being erected at Northolt for MOW are based on those dealt with in the report. All these types are therefore non-hazardous; none are entirely new in conception or truly experimental. It might, therefore, be asked what useful purpose the large amount of effort the report has called for can serve. Is there any advance here on the Tudor Walters Report of 1919, and

* See A. J. leader, April 22, 1943 and page 292, A. J., April 29, 1943.
† *House Construction: Post-war Building Studies No. 1.* (H.M.S.O., 2s.)
‡ See A. J., March 23, 1944, page 234. § See page 268 of this issue.

the resulting reports of 1920 and 1924 prepared by MOH? The answer is given in the new publication:

". . . we have recognised the extreme urgency of the situation and of the need to report at an early date on such alternative methods as are immediately available and can be considered satisfactory for post-war use. Much can be learnt from experience gained with alternative methods used during the inter-war period. No extensive survey of these special methods had been made before, and we felt it essential to study them and put on record the lessons to be drawn from them; obviously methods that have stood the test of time can be proposed with more confidence for use than new and untried methods. We requested the Building Research Station to supply information on materials likely to be associated with the development of new forms of construction and such as might assist in the attainment of the suggested standards, having regard to a possible temporary shortage of certain conventional materials as a result of the war. . . . The problem of the production of materials is not likely to be so formidable as that of the supply of trained building operatives. Attention will have to be directed to supplementing conventional building operations by the use of methods of construction which will employ labour as yet unskilled in building."

In brief, the contents of the report, useful facts and comments which could hardly have been produced except under state ægis, are, as Lord Portal states in a foreword, "authoritative and cannot but be of great value to all concerned with preparations for building after the war." The committee is contemplating the preparation of a second report on the same lines covering alternative methods used abroad. We suggest, however, that a far more valuable contribution at this point would be a report, less unadventurous than the first, on entirely new experiments especially those concerned with prefabricated, temporary and demountable houses.

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

NOTES & TOPICS

JAM TO-MORROW?

Mr. Churchill could have derived little satisfaction from the recent debate on planning and reconstruction in the Lords or that on housing in the Commons. On the other hand those who want not only houses after the war but reasonable planning as well, and who see planning not as a means of regimentation but of release, could have derived very little satisfaction from Mr. Churchill's BBC talk.

★

A *Times* leader of March 28 gave an excellent critique of the talk. Commenting on Mr. Churchill's remark that "nobody need be deterred from planning for the future by the fear that they may not be able to obtain the necessary land," the leader said: "Yet this assurance is incomplete. Not only the '1939 ceiling' but the difficulty over 'shifting' and 'floating' land values and the need for a new basis for compensation and betterment are also involved, even in the short run; and three weeks ago Mr. Willink made the disconcerting announcement that the Government do not intend to sanction public acquisition of land required for development beyond the 'interregnum' period until decisions have been reached on the major questions of planning which are still under consideration . . . Underlying all the public uneasiness is the consciousness that community planning is something far greater than the mass production of houses."

For four years experts have agreed on the initial step that must be taken if we are to achieve order and not chaos. The Government may regret that the Barlow, Scott and Uthwatt Committees were ever appointed. But they were. Their reports are restrained and logical documents; their members were level-headed and experienced men. They had one common conclusion, that some sort of Central Planning Authority is needed to supervise reconstruction if Britain is to be the kind of country in which returning Service men and women will care to stay when the war is over. In the country at large dissentient voices have been few, and, generally speaking, the public accepts that Britain cannot be planned on a parochial basis.

★

The latest voice crying from an area that can no longer be called a wilderness, owing to the number of its inhabitants, is that of the Conservative Sub-Committee on Housing, a committee unlikely to be initially biased in favour of planning as such. Its interim report, *Looking Ahead*, which I mentioned last week, reaches quite definite conclusions. One is that, ". . . only by creating effective machinery for the attainment of the three main objectives agreed upon unanimously by the Barlow Commission and by solving in one way or another the problem of compensation and betterment, can the Government lay the foundation of a successful long-term housing policy."

★

Nor does it stop there. It continues with a hope that the Government's White Paper will contain proposals for the early creation of a Central Authority, that the Authority will make their first duty an immediate survey of all war-time factories, and it concludes by stating that if no single comprehensive policy is adopted we shall inevitably drift back to the old cycle of promiscuous growth of towns and progressive depletion of the countryside.

★

Lord Woolton has promised the answer to all this "after Easter." He had previously promised it after

Christmas, and he is fortunate in that there are still a good number of Church festivals left in the year with which to pave his onward road. He also, in what sounded like a fit of petulance, said that the Cabinet would be very busy after Easter with major military events of greater importance. This is not the place to discuss military operations, but if the Cabinet's war plans for this year are still under discussion and if the Cabinet, having appointed its military leaders, intends to spend the days of the invasion exclusively in ordering events in the field, the invasion itself looks more hazardous than it had hitherto seemed. It would be interesting, too, if depressing, to know what part the Minister of Town and Country Planning is taking in these military operations, to the apparent detriment of the duties he was appointed to perform.

★

The answer to Lord Woolton is simple. The invasion is not an end in itself. It is a means to bring back, in peace, as many as possible of our youth to a country for which they have fought and in which they can be happy. "To have everything that made life easy and pleasant was formerly one of the great characteristics of the English people," thundered Plough-boy Cobbett. "Good eating, good drinking, good lodging; without these, people do not really live; it is staying upon the earth." To acquire these things again, we must not only release the full power of modern technical methods from artificial restrictions but we must also Plan with a capital P, both physically and economically. As *The Times* leader concludes: "In his Mansion House speech last November the Prime Minister defined 'winning the war' as a combination of two types of planning—for war and for peace—and accepted the responsibility for both. It is indeed inescapable."

WAR DAMAGE DILEMMA

I see that the War Damage Commission are capable, on occasion, of exercising a very statesmanlike discretion and reticence. The Treasury Direction authorising them to make a cost of works payment in respect of houses that have been totally destroyed by enemy action applies to houses which were built before March 31, 1914, only when the Commission is satisfied that the design, layout and amenities were reasonably equal to those of similar houses built since 1914. The Auctioneers and Estate Agents Institute asked the Commission for an interpretation of the words "and the design, layout and amenities were reasonably equal to those of similar houses built since 1914."

★

The reply of the Commission is charming. Whilst anxious, it says, to take the public into its confidence, it feels that the difficulties involved in publication would outweigh the advantages. How often do public bodies find themselves in that unhappy dilemma. The answer seems to be that you must tell the Commission all about your house, with plans or sketches, where possible, and they will let you know the result of their decision, if not the method by which it is reached. It would be discourteous for any profession likely to benefit from such a decision to utter one word of criticism.

POETS' CORNER

EMERGENCY MEASURES

or

BARKIS IS WILLINK

War workers cry for houses, of many different kinds,
Several millions, one or four,
The Government's not very sure,
And it's several million months they'll be making up their minds,
O, there isn't time to plan, boys,
There isn't time to plan!

"There are many strong objections to the full Uthwatt idea,"
The Blimp of Landed Acres cried,
"And why this hurry to decide?"
So the arguing will last for many another year,
O, there isn't time to plan, boys,
There isn't time to plan!

There's a shortage of cement, and there aren't too many bricks,
And as for pre-fab on the way
Decisively, a year's delay,
And who can tell, it might extend to four or five or six?
O, there isn't time to plan, boys,
There isn't time to plan!

Now don't waste time in thinking, is Winston's housing creed,
Just chuck five hundred thousand down,
And trust to luck they'll make a town,
For haste is what we're after, we don't give a dam for speed,
O, there isn't time to plan boys,
There isn't time to plan!

E.L.

ASTRAGAL

LETTERS

Kenneth J. Lindy
B. A. P. Winton Lewis
E. S. W. Atherton, A.R.I.B.A., A.M.T.P.I., Dip.T.P.
William Kirk

City of London Sketch Plan

SIR,—The accuracy of your article dealing with our sketch plan for the City of London is confined, we respectfully submit, to its opening paragraphs.

You purport to criticize a sketch plan for the City of London but you do not show your readers the plan to which you refer, nor do you publish the report or any part of it. You select almost all the pictorial views and one subsidiary diagram and then accuse the authors of being mainly concerned with the visual aspect at the expense of overcrowding. Had you seen fit to reproduce the plan which you have sought to criticize, together with the report which was designed to be read in conjunction with it, most of the points you raise would be answered and your readers would have an opportunity to judge this plan alongside Mr. Aslan's or any other including any collective or communal efforts if they do indeed exist. As it is, by omitting the main plan and report together with the diagrammatic development of a building block (which latter drawing disposes of the overcrowding bogy) and by concentrating upon the purely pictorial aspects it would seem that you yourselves have fallen into the very pit in which you profess to see us.

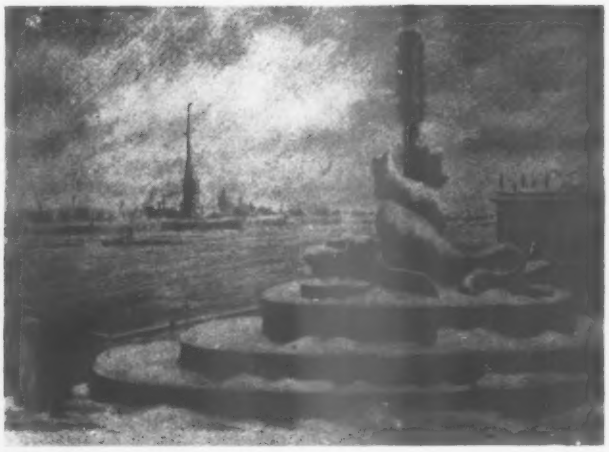
While welcoming criticism we feel that your readers have been misled by the omission of the very basis of the scheme, and in view of this we cannot but agree with those of your readers with whom we have spoken that your criticism is of little value, and share their amused surprise that professional men (not amateurs) should be condemned for using their hard-earned spare time in, what is considered by well-informed persons in the City and elsewhere, a useful direction.

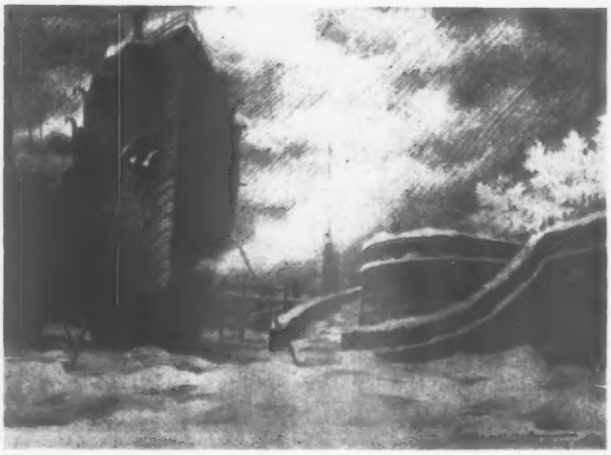
In view of the tone of your criticism, we are somewhat surprised at the generous space devoted to a mere "individual sketch phantasy." Like the mountain which laboured to produce a mouse, surely the ARCHITECTS' JOURNAL, after a fortnight's travail, has produced . . . a doodle (?).

KENNETH J. LINDY,
B. A. P. WINTON LEWIS

London

WAR SKETCHES OF LENINGRAD





Sketches by Leningrad architects on active service during the siege of the city. *Top (left),* Tamers of Wild Horses, *by Igor Yavein. These bronze groups, by the sculptor Klodt, have stood on the parapet of the Anichkov Bridge, in the centre of Nevski Prospect, the main street of Leningrad, for over a hundred years. The sketch shows the statues being removed for safety from bombing. Top (right),* A Winter Scene, *and above* A Leningrad Night *and* Ships at their Winter Berth, *by Michael Shepilovski.* A Winter Scene *is sketched from the roof of the Admiralty Building. In the distance is the spire of the Cathedral of the Peter and Paul fortress, the first structure to be put up when St. Petersburg was being built in the first part of the eighteenth century. In the foreground are a wing of the Admiralty, built at the beginning of last century from the designs of Adrian Zaharov, dolphins struck out of sheets of copper and a solitary sentry. In* A Leningrad Night *flames of fire and columns of smoke rising from the bombed wood structures in the Park of Culture and Rest, on the bank of the Neva, are pierced by the Russian searchlights. On the right is the Portico of the Exchange, built in the early nineteenth century by Thomas de Tomon ; on the left a rostral column, by the same architect, on the slope leading down to the Neva and in the distance the spire of the Cathedral of the Peter and Paul Fortress. In* Ships at their Winter Berths *defending warships of the Baltic fleet, up from the sea, stand ice-bound in the Neva, lit by the winter sun.*

SIR,—The publication in your issue of March 23 of the replanning scheme for the City of London, prepared by K. Lindy and B. Lewis, together with your admirable leading article, has served the cause of planning well.

This scheme for the replanning of the City should be a warning to all architects who imagine that *ipso facto* they are town planners. The scheme suggested is not town planning in even the widest interpretation of that term, nor is it even a study in civic design, the architecture of the buildings being of the palatial insurance building type, in fact the architecture of a decadent capitalism.

As pointed out in your leading article, if architects wish to fly into the realms of fantasy they are at liberty to do so, but they should not put the results forward as serious efforts in town planning, to the detriment of future planning schemes. This scheme must be allowed to drop into oblivion as soon as possible.

Harrow-on-the-Hill E. S. W. ATHERTON

Planned Poverty

Sir,—We have recently read the official details of the Conservative Party's plans for the post-war world of industry, and, strange to relate, identical with those of the Labour Party.

WORK and MORE EXPORTS !

The reward of the masses for their years of Blood, Toil, Tears and Sweat : the best that these Men of Yesterday can offer.

Work, Toil and Drudgery !

Woolton and Bevins, Morrisons and Temples, Normans and Smutses—they've all the mentality of a Workhouse Governor. Their main idea of the Britain Rebuilt is a Labour Corps planned and enforced by a Gestapo of "democrats." Creeping Fascism !

Out with the Work Gang ! Down with Planned Poverty !

Let our National Press follow the splendid example of the JOURNAL and lift the ban on the New Wisdom of Social Credit, giving the people a New Vision, without which they perish !

Establish Social Credit—Make the Home Market effective—Master the Machine—Release Men from Toil—Build a New Britain—Stop the mad scramble for Export Markets and thereby eliminate THE CHIEF CAUSE OF WAR !

Leeds WM. KIRK

Ah ! no ; we refuse to be lined up on the party front. Suffice it to say that we heartily agree with the Social Credit maxim that what is physically possible must also be financially possible.—Ed., A.J.

1143

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NATURAL LIGHTING : CALCULATION OF SKY FACTOR.

DIAGRAM A : THEORETICAL WINDOW GIVING BASIC DIMENSIONS FOR CALCULATION OF SKY FACTOR.
(for explanation and formulæ see reverse of this Sheet).

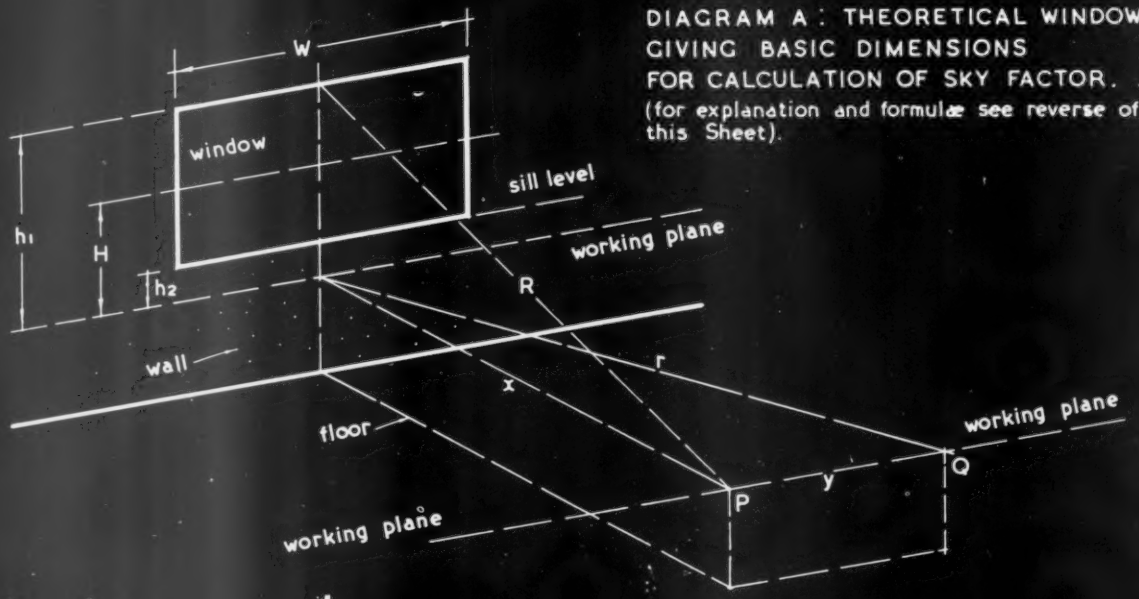
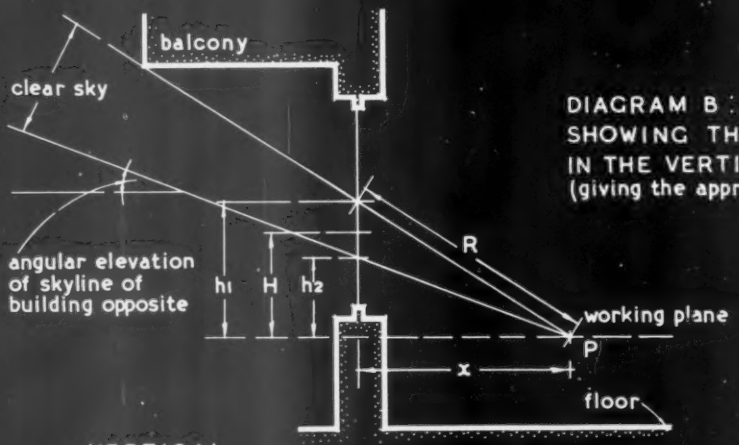
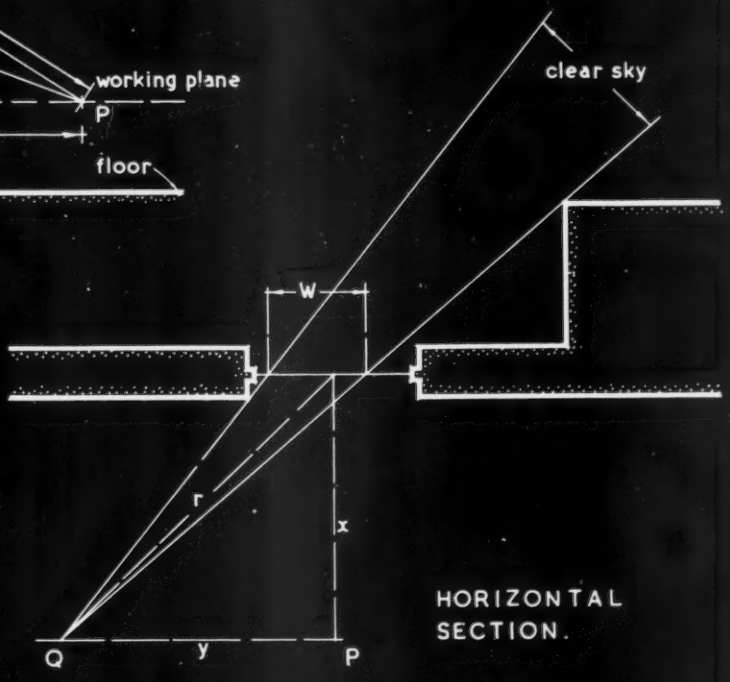


DIAGRAM B :
SHOWING THE EFFECT OF OBSTRUCTIONS IN THE VERTICAL PLANE (balcony etc.)
(giving the appropriate dimensions for calculation).



VERTICAL SECTION.

DIAGRAM C :
SHOWING THE EFFECT OF OBSTRUCTIONS IN THE HORIZONTAL PLANE (thick walls etc.)
(giving the appropriate dimensions for calculation).



HORIZONTAL SECTION.

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THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 934 •

GLASS: No. 6

Subject : Light : Daylight Factor and Sky Factor.

General :

This Sheet is the sixth of the series dealing with glass and glass products, and sets out the principle of calculating the Sky Factor. Some of the points to be considered in respect of Daylight Factor are mentioned.

Natural Lighting :

The adequacy of the natural lighting at a point in a room is best expressed by the Daylight Factor which is the ratio of the actual illumination on a horizontal surface at that point to the illumination which would be given if walls, ceilings and obstructions were removed, and the light were received from an unobscured hemisphere of sky. This Daylight Factor depends to some extent on the light transmission of the window, the distribution of obstruction within the room, the decoration and cleanliness of the walls, ceiling and floor, etc., and is accordingly difficult to calculate or predict.

It is therefore usual to calculate the Sky Factor which is a purely geometric function of the size and position of the windows relative to the point under consideration. The Sky Factor at a point is the ratio of the calculated direct illumination at that point from the sky through unglazed windows, relative to the calculated illumination from an unobscured hemisphere of sky of uniform brightness. This ratio, which is in general an excellent measure of the adequacy of fenestration, unaffected by aspect or interior decoration, is a matter of the geometry of solid angles. It may be calculated for unobstructed rectangular windows and skylights or their equivalents by the approximate formulae given below, due to Mr. T. Smith,* or ascertained graphically by the Dufton Protractor obtainable from the Building Research Station, Watford.†

Calculation of Sky Factor by the Smith Formulae :

See diagrams A, B and C on the face of this Sheet.

If h_1 = Height of effective window head above the working plane.

h_2 = Height of effective window sill above the working plane.

Then : H = Average height of the window above the working plane

$$= \frac{(h_1 + h_2)}{2}$$

Also, let W = Total effective width of window.

A = Total effective area of window after correction for external or internal obstruction.

To calculate the Sky Factor Fp at a point P on the working plane perpendicular to the centre of the window, let R be the distance from P to the centre of the window head.

$$\text{Then : } Fp = \frac{H.A}{\pi \cdot R^3}$$

To calculate the Sky Factor Fq at a point Q on the working plane at co-ordinates x and y as shown, let

$$k_1 = h_1^2 + \frac{W^2}{12},\ k_2 = h_2^2 + \frac{W^2}{12} \text{ and } r^2 = x^2 + y^2$$

$$\text{Then : } Fq = \frac{(k_1 - k_2) \cdot W \cdot x}{2\pi[(r^2 + k_1)(r^2 + k_2) - y^2W^2]}$$

This second formula may be used readily for plotting contours of Sky Factor by varying the values of x and y.

Graphical Determination of Sky Factors by Measuring Diagrams :

Cases in which the shape of windows or skylights or external obstructions prevent conversion into the equivalents of rectangles of unobstructed sky, can be dealt with by one of the two measuring diagrams described in the D.S.I.R. report.‡ Of these the Waldram diagram is probably the best known and most convenient. This report has recently gone out of print, but a description of the diagram and of its application to practical problems is given in a paper by Mr. P. J. Waldram on "Daylight Illumination in Factories and Workshops."§ of which reprints can be obtained.

General Considerations :

The Daylight Factor is likely to be greater than the Sky Factor in a room with light decorations which promote multiple reflection of light, and less than the Sky Factor in a room with windows whose transmission is low owing to the use of unsuitable glass or heavy obstruction by the window bars. It is therefore wise to use the Sky Factor as the measure of fenestration and to endeavour to obtain the greatest possible Daylight Factor by suitable choice of the variables mentioned above.

A Sky Factor below 0.2 per cent. (the "grumble point") means that the lighting is inadequate for most purposes, and a room is not therefore adequately lit unless the majority of its area is above 0.2 per cent. Sky Factor on the working plane. Higher minimum values are specified for certain purposes such as schoolrooms, kitchens, etc.

When the external obstruction is substantially horizontal, the 0.2 per cent. contour corresponds closely with the "no-sky line" which is the contour from which the sky just cannot be seen directly.

The height of the window head is of great importance and more effective lighting is given by a high, narrow window than by a wide, low window of the same area.

The effective area of the window is reduced by obstructions or buildings opposite to it, by return walls or buildings at the side of the window and by a canopy or balcony above it. Thick walls reduce the area in the room above the limiting Sky Factor unless they are well chamfered. The effect of such obstructions is illustrated in Diagrams B and C.

Bay windows give a high Sky Factor within the window, but a lower Sky Factor in the rest of the room than would be given by a flat window in the same aperture, due to the canopy effect in the bay.

The Daylight Factor is reduced by excessively thick glazing bars.

The Daylight Factor is reduced by the reflection loss and the absorption of light by the glass in the window. The difference between the losses in figured and translucent glasses (see Classification B on Sheet No. 3) and those in clear sheet glass (Classification A) is generally negligible in comparison with the effect of dirt on the glass or with other factors. The effect of the diffusion of light by a figured rolled glass is usually to reduce the Daylight Factor close to the window and to increase it at points near the "no-sky line."

The effect of external obstructions may be reduced by the use of a prismatic window glass. For details of Maximum Daylight glass see Sheet No. 15.

* Published in the Trans. of the Illuminating Engineering Society, June, 1943, Vol. 8, p. 110.

† A description of which will be found in the *Journal of Scientific Instruments*, 1940, Vol. 17, p. 226.

‡ *The Penetration of Daylight and Sunlight into Buildings* (Ill. Research Tech. Paper No. 7, 2nd Ed. H.M.S.O.).

§ Published in the *Journal of the Junior Institution of Engineers*, 39, Victoria St., S.W.1. (Vol. 5, Part 3. December, 1943.) (1s. 6d.).

Previous Sheets :

Previous Sheets of this series on Glass are Nos. 914, 917, 919, 922, 925, 927, 929, and 932.

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PHYSICAL PLANNING

31 index

The Job

John Bolland, author of this week's article on Space for Leisure is the nom de plume of a well-known rambler and mountaineer who has been for many years an active member of the open-air and amenity organizations, and a persistent advocate of countryside preservation, revision of rights of way legislation, creation of National Parks and provisions for greater access to mountains and moorlands.

THE JOBS TO BE DONE

On November 30, 1943, the Minister of Town and Country Planning gave a long written answer to a question in the House of Commons on the Scott report. Mr. Morrison said the recommendations of the Scott Committee "relating to the preservation of rural amenities and the provision of improved access to the conntryside are accepted by the Government; the various detailed proposals are under close review by the several departments concerned with a view to appropriate action." On December 10, in his address to the Council for the Preservation of Rural England, the Minister referred to the holiday and recreational use of the countryside and coastline. Mr. John Dower, he said, had made surveys of several potential National Park areas, and Mr. Steers, the Cambridge geographer, was making a survey of the coastline. It is to be hoped that action will soon follow these surveys for, as John Bolland points out in this week's article, Britain is the only civilized nation which denies its inhabitants legal access to hills, moors and waste lands. The Access to Mountains Act, which reached the Statute Book in 1939, is a sorry travesty of the original Bill. New legislation is needed that will grant the harmless walker the right of air and exercise on his native hills.

WE MUST PLAN LEISURE SPACE FOR THE USE OF ALL

by John Bolland

One of the most remarkable social developments of the inter-war period was the way in which town-dwellers in ever-increasing numbers were seeking recreation in the country-side. Some indication of the extent of this movement may be gauged from the history of the Youth Hostels Association of England and Wales. This organization, founded in 1931 to provide simple hostel accommodation at modest charges for young people touring the country-side, had by 1939 attained a membership of 83,000. In the first year of the war, as was to be expected, the numbers slumped to about 40,000. Since then they have steadily risen, and at the end of 1943 were more than 100,000. This year a membership of 140,000 is expected, and within a year or two after the war it will probably rise to quarter of a million.

The YHA hostels are only available for walkers and cyclists, and no provision is made for married couples or for young children. On the other hand, many people prefer less spartan accommodation than that of the hostels, and it is doubtful if the YHA caters for more than about 5 % of the people interested in this form of recreation.

Here then is a very large section of the community using the country in a healthy manner worthy of encouragement, and their interests must be considered in any wise planning of the use of the land. The fact that some townsmen behave thoughtlessly in rural areas must not be made an excuse for doing nothing. Let it be admitted that the people of the towns must learn that the countryside is a place of industry as well as recreation, but they will never learn that lesson in city streets. They will go to the country willy-nilly, and while efforts must be made to educate them, they must have, at the same time, adequate facilities for enjoying the scenic features of the land.

For many years voluntary organizations have persistently advocated preservation of the unspoiled natural beauty of

Britain and the provision of greater access to that beauty. Many of their recommendations for this twofold purpose were endorsed by the Scott Committee, and the Minister of Town and Country Planning has announced that "the various detailed proposals are under close review."

national parks

Perhaps the best known of these proposals is that which provides for the establishment of National Parks, though what is meant by this term is not always clearly understood. What is certainly not intended is a glorified Hyde Park complete with iron railings, flower beds and asphalt walks. A National Park has been defined as "an extensive district of beautiful wilder landscape, strictly preserved in its natural aspect and kept or made widely accessible for public enjoyment and open-air recreation, including particularly cross-country walking, while continued in its traditional farming use."

To preserve the natural aspect of such an area would mean prohibiting any disfiguring industries, but it would be equally important to control any building required for the accommodation of visitors. Additional youth hostels would be needed, as well as inexpensive hostels for family holidays, and guest houses of the type successfully conducted by the Co-operative Holiday Association, the Holiday Fellowship, and the Workers' Travel Association. It would defeat the purpose of a National Park if such development were allowed to mar the landscape. In the Lake District, for instance, even at the cost of some inconvenience to holiday-makers, there should be no further building along the lake shores, in the dale-heads, or in extending ribbons along the valleys.

In some areas it may be possible to convert old country houses into hostels and guest houses. The YHA has done this successfully in the past. One of the most popular hostels (recently closed due to damming of the valley for a reservoir) was Derwent Hall in Derbyshire. This beautiful, stone-built hall with richly panelled rooms, erected in 1692 and formerly a hunting lodge of the Dukes of Norfolk, was, in its last years, crowded at weekends and holidays with youngsters. After strenuous days on the hills they would gather there in the evenings and discuss their adventures in a manner which would have been incomprehensible to any lingering ducal ghosts.

There should certainly be no attempt to improve on nature by artificial means, no mountain railways, no conversion of rough mountain tracks into smooth paths. The very essence of the appeal of these wilder areas is the feeling they give of being far from civilization and the satisfaction they afford of gaining the heights by one's own physical prowess. Drive a motor road over Sty Head in the Lake District and at once you destroy the essential remoteness, debase the grandeur and diminish the attractiveness of that mountain fastness. This was illustrated by the conversion into motor roads of old mountain roads over Honister, down the Buttermere Valley, and over Newlands Hause. A few years later the Buttermere Parish Council complained bitterly that motorists rushed through the valley and did not spend any money there, whereas they had driven away those people who formerly stayed in the district for walking and climbing holidays.

In any choice of National Park areas the Lake District would doubtless take first place, and Snowdonia would probably be a close second. Regardless of the fact that they are somewhat remote from populous districts, they would be chosen on their merits as regions of distinctive scenic appeal. The Peak District and Dovedale would be another obvious choice, with the advantage of being accessible to a great industrial population. In evidence submitted to the National Park Committee in 1930, it was said there were 134 cities and towns with a total population of 7,700,000 within easy reach of this district. In the Mid-Pennines the upper reaches of the Wharfe, Aire and Ribble, and including Whernside, Ingleborough and Penyghent would be accessible to the towns of the West Riding and East Lancashire. Similarly the north-east Yorkshire moors and coast would serve Teesside and Durham, while the area from the Roman Wall to the Cheviots would be available to Tyneside.

The map above illustrates the suggestion, first made in 1935 and supported by the Scott Committee, for a 250 mile footpath along the Pennines. A number of youth hostels already exist along this route and after the war the chain will probably be completed with hostels 12-15 miles apart.

To turn south, the Black Mountains and the adjacent Brecon Beacons would be convenient for the people of South Wales. Exmoor and Dartmoor, although not near populous areas, would claim consideration on their natural merits. Some National Parks should include coastal scenery of distinctive character, and areas which have been mentioned include Dorset, Devon and Cornwall and parts of Pembroke.

In addition to these areas of national appeal it has been suggested there should also be Regional Parks on a smaller scale and of more local interest. Among districts mentioned are the North and South Downs, the Lower Greensand ridge from Leith Hill to Hindhead, the Marlborough Downs, the Mendips, the Malvern Hills, Cannock Chase and the Forest of Bowland.

In any ballot for National Park areas the Lake District would head the poll. Nowhere in Britain is there such a concentration in so small a space of scenery of such a high order including smooth-sloped fells and craggy heights, delightful valleys and daleheads of more rugged beauty, lovely lakes and little tarns, and clear flowing streams all combined in a harmonious whole. By good fortune grouse have never thrived in the district, and so the public have long been permitted to roam with a freedom they would not have enjoyed had there been any development of grouse moors. The above photograph taken from the crags above Borrowdale shows the island-studded Derwentwater with the bulky mass of Skiddaw in the background.

rights of way

Since the whole of rural Britain cannot be turned into National Parks, other provisions will be required to provide access to the countryside. One very necessary measure is a drastic revision of rights of way legislation. This is based on the legal fiction that every right of way has been dedicated to public use at some time by some owner of the land. The absurdity of this assumption is apparent when it is remembered that some existing footpaths follow the lines of Roman roads, and others probably had their origins in prehistoric times, possibly before the conception of land ownership had arisen in this country.

It should not be necessary, as it is at present, to undertake expensive and often protracted litigation whenever a landowner attempts to close what has hitherto been assumed to be a right of way.

The Scott Committee endorsed a recommendation of the Ramblers' Association for the creation of a Footpaths Commission with power to investigate all disputed cases and give decisions, thus obviating the need of legal proceedings. The Commission should also be empowered to compile a record of all existing rights of way so that there should be no possibility of any dispute in the future. Another task to be undertaken would be the restoration of the thousands of footpaths closed under Defence Regulations. Many of these have been closed for agricultural purposes, often by the farmer, without complying with the regulations, and without any record being kept. Unless a comprehensive survey is made these paths will be lost for ever.

the pennine way

The Scott Committee also recommended the recognition of such schemes as the proposed Pennine Way. The suggestion of a continuous footpath for 250 miles along the Pennines from Edale, Derbyshire and over the Cheviots to Wooler, Northumberland, was first made in 1935.

At a conference of open-air organizations, at which the Pennine Way Association was founded, it was considered that "the wide, health-giving moorlands and high places of solitude, the features of natural beauty and the places of historical interest along the Pennine Way, give this route a special character and attractiveness which should be available for all time as a national heritage of the youth of the country and of all who feel the call of the hills and lonely places."

Local Committees have surveyed the route which is planned to use, as far as possible, existing footpaths, old packhorse trails and drove roads. To complete the scheme about 70 miles of new footpaths are required, mostly over moorland country.

This long-distance path would be an undoubted boon to the great industrial populations of Lancashire, Yorkshire, Durham and Tyneside. But the widespread interest roused by the project indicates that it also has a national appeal. The total cost of establishing the route, it is said, would probably be less than the construction costs of a few yards of a modern motor road.

Several other routes of this type have been suggested. One would follow the line of Offa's Dyke in the Welsh Marshes. Another would run along the chalk escarpment from the Gog Magog Hills near Cambridge and along the edge of the Chilterns to the Thames at Goring. Thence it would continue by the Berkshire Downs overlooking the Vale of the White Horse, by the White Horse itself, by Wayland Smith's Cave, by Liddington Castle, one-time haunt of Richard Jefferies, and so to Avebury in Wiltshire. Thence the route would continue across Salisbury Plain and through Dorset by the Giant of Cerne Abbas, and finally down to the sea at Seaton Bay. A third route would follow the line of the Pilgrims' Way from Canterbury to Winchester, and another would run along the South Downs from Beachy Head and across Hampshire to Salisbury Plain and on to Avebury.

The Ramblers' Association also recommended the creation of a footpath along the coast. In their memorandum to the Scott Committee they said "British citizens should be able to walk along their own coast and on their own shore. We urge not only severe restrictions on coastal building but also the removal of the legal anomalies which allow individuals to shut off portions of the seashore above high water mark for their own private use." As a means to this end the Scott Committee proposed the re-opening of the old "coastguards' path" as a right of way for walkers round the whole coastline except where building makes this impossible, in which cases inland detours should be clearly indicated.

access to mountains

For many years ramblers have been clamouring for the right to roam on uncultivated mountains and moorlands. This, they say, was a natural and national right up to the nineteenth century.

The Peak District, already mentioned as eminently suitable for a National Park because of its proximity to a great industrial population, has long been the chief battleground on this issue. In that area of more than 200 square miles of moorland there are only 12 footpaths more than two miles long. The Peak itself, a bare peaty plateau of some 13 square miles, is uncrossed by a single footpath. A few miles to the north is the Bleaklow massif, only 16 miles in a direct line from the centre of Manchester, and the same distance from Sheffield. Here are 37 square miles of rough moorland again without a single path. These and the adjacent moors have long been preserved for grouse-shooting, and numerous gamekeepers were employed to eject any ramblers who dared to stray from the few existing paths.

The Access to Mountains Act, which reached the Statute Book in 1939, was a sorry travesty of the original Bill which Parliament had repeatedly rejected in the previous fifty years. The measure was, in fact, so mutilated in Committee that the Ramblers' Association asked Parliament to reject the Bill in its amended form.

This Act, which has never been tried, does not in itself give access to any land, but merely provides cumbersome and expensive machinery whereby application may be made to the Minister of Agriculture for an Order giving access to a specified area. Before an Order can be granted a complicated procedure must be followed, the cost of which must be borne by the applicant.

The Minister may decide to grant an Order, or reject the application, or grant access at certain periods. Under a limited Order the uncultivated moorland becomes better protected than good agricultural land. A person who trespassed on such land could be fined for merely being on the land, whereas if he walked across a cornfield he could only be sued for damage.

Ramblers consider this Act unworkable, overloaded with irksome restrictions and grossly unfair to the applicant. They say any effective planning must confer on the public the elementary right to roam on these uncultivated lands. Britain, they claim, is the only civilized nation which denies inhabitants legal access to hills, moors and waste lands.

opposition

There are two main sources of opposition to this demand for access to the hills—the water undertakings and the sporting interests. The water authorities contend that to allow such access would incur serious risks of water pollution. Whether this is true or not is a matter for investigation, for there are some curious anomalies in the treatment of water catchment areas. In some instances access is permitted. Many reservoirs have busy motor roads alongside them. On the other hand some authorities have sterilized large areas, closed farms and abolished rights of way and barred the public completely. Some authorities have denied the rambler access but have not hesitated to let the moors for grouse shooting. With these facts in mind there is reason to doubt whether there are any scientific grounds for the restrictive action of many of the authorities. The whole question of risk of pollution and possibilities of overcoming it without closing the catchment area should be investigated by a representative commission.

The attitude of the sporting interests appears to be that of the dog in the manger. There are several grouse moors to which the public already have access, and there is ample evidence that the sport has not suffered in consequence. "The real trouble has been," to quote Sir George Stapledon, "that sport has blinded men's eyes to the other uses to which highly esteemed sporting land could be put.

"In so far as the masses of the people of this country are concerned, the glorious general scenery provided by our uplands might as well be on the moon, or in Mars, for the amount of pleasure and health it actually dispenses."

This state of affairs will not be tolerated indefinitely and there must be new legislation granting the harmless walker the right of air and exercise on his native hills.

PLANNING REVIEW

PLANNING POLICY

The Times in a leading article entitled A Plan After Easter, on the House of Lords planning policy debate, describes how in the course of a lively speech which might be taken as illustrating a new strategic principle of defence by digression, Lord Beaverbrook repeated Lord Woolton's pledge that after Easter the Government will present to Parliament a clear exposition of what they mean to do in response to the public demand for a national land policy. Hope, much battered, will draw new strength from these assurances, and nourish the expectation that an unexplained deadlock is at last to be resolved. Although the nature and scope of the Government's intentions have not been precisely indicated, it will be a serious matter if they amount to anything less than a comprehensive and concrete plan to facilitate speedy public acquisition of land needed for reconstruction, to provide a workable solution of the compensation betterment problem, and to make a reality of national planning. Never has criticism in Lords and Commons been as sharp or as general as in the past few weeks. It was stimulated rather than allayed when the Government were recently driven to the dubious expedient of trying to plan a short-term housing programme in isolation from the larger operation of which it should form the first stage. In this matter, as in the handling of the coal-mining industry, Coalition Government has hitherto displayed its least attractive aspects. Military operations conducted in so piecemeal and half-hearted a fashion would have brought the Government to grief long ago. In the present debate Lord Astor was not alone in holding that the future of the Coalition may well depend upon the adequacy of the land policy it is about to propose, since that policy will govern the whole prospect for decent homes and well-planned cities after the war.

Rumour has it, Sir Montague Barlow stated recently, that the proposal to control in some measure the location of industry so as to check the growth of congested urban areas has been rejected as part of a national policy. Neither the proposals of Mr. Dalton, President of the Board of Trade, for the former depressed areas, nor those of Mr. Willink, Minister of Health, for building 300,000 new houses within two years of the armistice indicated the rational planning that was essential.

On March 27 the *Daily Herald* reported speeches by Mr. Arthur Greenwood and Lord Strabolgi in which they criticize the Government's delay in formulating a planning policy. Mr. Greenwood believes that the present Government is not the right kind to deal properly with post-war problems. It has announced a housing scheme, but has not yet made up its mind how it is going to handle the land of the country, where it is going to put its industries, or how it is going to organize its road transport. That is clearly a weakness inherent in a National Government. Once you touch property you will find the Conservative Party all against you. Up to now it looks as if the Conservatives have won. Lord Strabolgi believes that the post-war policies of the Parties should be explained to the public at by-elections; for, as soon as we touch reconstruction, we run into matters of high controversy and this would not affect the coalition, the only basis of which is the prosecution of the war.

MR. CHURCHILL'S SPEECH

A leading article in *The Times*, March 28, on Mr. Churchill's speech, points out that underlying all the public uneasiness is the consciousness that community planning is something far greater than the mass production of houses; that homes, work-places, transport, urban decongestion, and balanced regional economic development must be thought of as a single whole: and that in words which the Uthwatt Committee borrowed from the Government's own spokesman, "national planning is intended to be a reality and a permanent feature of the administration of the internal affairs of this country." Without the fundamental decisions even a short-term housing programme may be a dangerous enterprise, enlarging suburban sprawl and increasing the travelling between home and work. In his Mansion House speech last November the Prime Minister defined winning the war as a combination of two types of planning—for war and for peace—and accepted the responsibility for both. It is indeed inescapable.

NEW LITERATURE

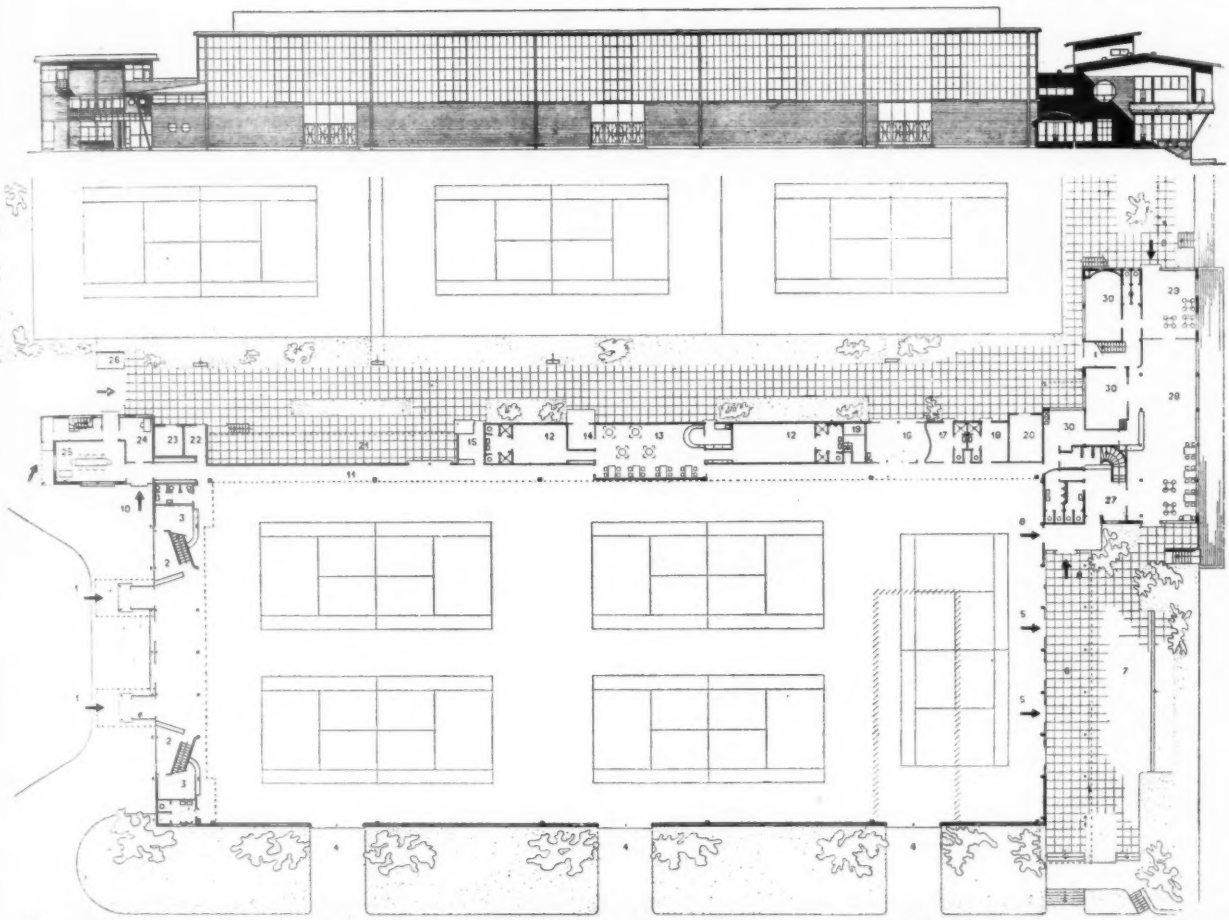
A Residential Unit for Town and Country Planning: C. B. Fawcett, B.Litt., D.Sc. University of London Press, Ltd.; 3s.

Looking Ahead, Foundation for Housing: An Interim Report of the Conservative Sub-Committee on Housing. Published by the Central Committee on Post-War Reconstruction, set up by the Conservative and Unionist Party Organization, 24, Old Queen Street, S.W.1; 3d.

Architecture for Children: Jane and Maxwell Fry. Allen & Unwin; 7s. 6d.

Planning and You: Clough Williams-Ellis. Industrial Discussion Clubs Experiment; 3d.

Industrial Discussion Club: Descriptive Booklet. Industrial Discussion Clubs Experiment; 3d.



Top. south-west elevation showing the three goods entrances to the main hall for handling exhibits ; on the left is the administrative block and on the right the restaurant. Above, general plan ; 1, main entrance ; 2, box offices ; 3, cloakrooms ; 4, exhibition goods entrance ; 5, glazed doors to garden ; 6, glazed covered way ; 7, restaurant terrace ; 8, entrances to restaurant from indoor and outdoor courts ; 10, entrance for tennis players ; 11, gangway ; 12, men's and women's changing rooms ; 13, tearoom ; 14, vestibule to tearoom ; 15, sports shop ; 16, clubroom ; 17, coach's room ; 18, ballboys ; 19, heating chamber for rooms 12 to 20 ; 20, garage ; 21, bicycle room ; 22, groundsman ; 23, transformers ; 24, manager's office ; 25, committee room ; 26, porter and box office ; 27, restaurant vestibule with cloakroom and lavatories ; 28, café-restaurant Pavillon Apollo ; 29, annex to restaurant which can be partitioned off ; 30, secondary rooms to restaurant. The hatched part of the main hall shows the portion of the floor area which has been strengthened to take a load up to 200 lb. per sq. ft. Below, a view of the central skylight of the main hall showing the circular Danish PH lamps, twenty-four to each court, which are adjustable and give a uniform light without glare.

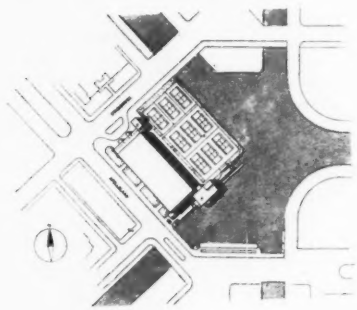
TENNIS AND EXHIBITION HALL, AMSTERDAM

DESIGNED BY A. BOEKEN

The Apollo covered tennis courts and exhibition hall lies in a residential district on the south of Amsterdam. We illustrate it here as an interesting engineering job in welded steel to accompany the Architectural Science Board lecture by Mr. R. Moon given recently at the RIBA on *New Developments in Welded Steel Construction* which appears in abstract form on page 269 of this issue.

The building is confined on two sides by canals and is grouped into (1) main hall, (2) administrative wing, (3) restaurant, and (4) open air courts. It belongs to a private concern and is run as a business, the restaurant being leased to a catering firm.

The main hall serves two purposes —in summer it is used for exhibitions, mass meetings, concerts' etc., and in the winter for tennis. The hall measures 282 ft. by 115 ft., giving a seating capacity of 5,200 people. There are two main entrances in the *Stadionweg* for



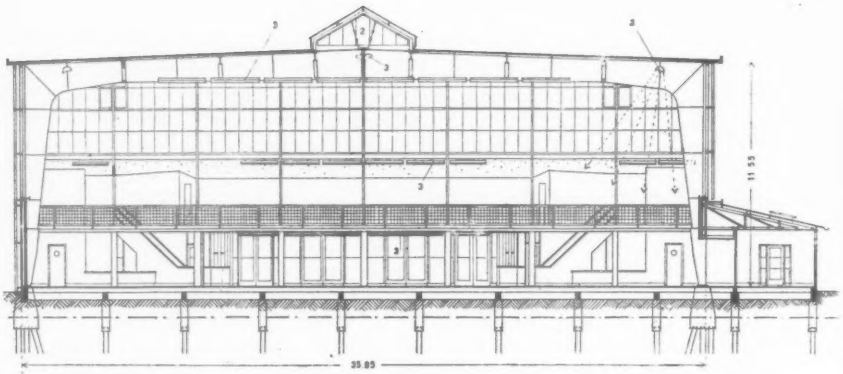
TENNIS AND EXHIBITION HALL AT AMSTERDAM

DESIGNED BY A. BOEKEN

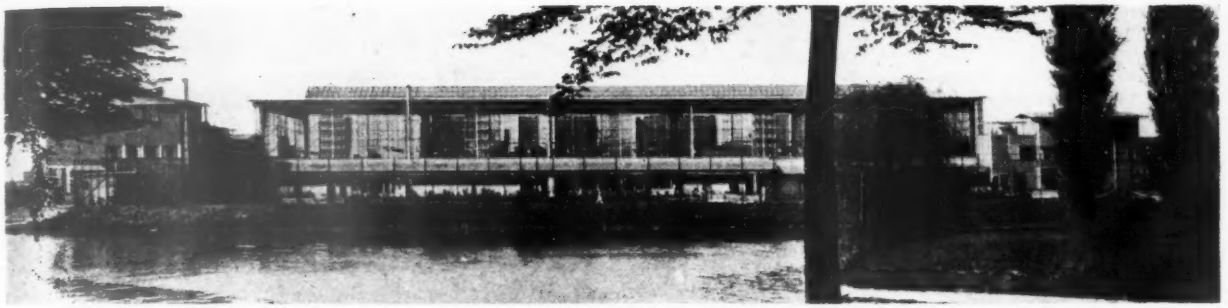
the public, each having box offices, cloakrooms, lavatories and stairs to the gallery. On the *Apollolaan* are three goods entrances with doors 18 ft. by 14 ft. for the handling of exhibits.

The administrative wing is placed at one corner of the building to allow easy supervision of the main entrances, the covered courts and the open air courts. On the ground floor are the committee room and the manager's office, while the first and second floors contain the manager's living quarters.

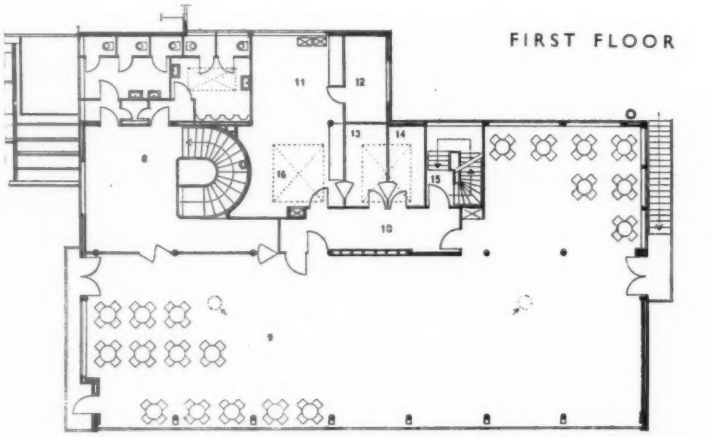
The restaurant, called *Pavillon Apollo*, has its main entrance from the Apollolaan through a glazed covered-way, with a secondary entrance from the open air courts and the landing stage. It is



Top left, plan of the general lay-out showing the two canals and their junction. Above, section through the main hall looking towards the main entrances and the gallery; the dotted line below the floor shows the water level which is only 5 ft. below finished floor level; the concrete foundations rest on wood piles; 2, the central skylight and service bridge; 3, the radiant heating elements. Below, a view of the main hall.



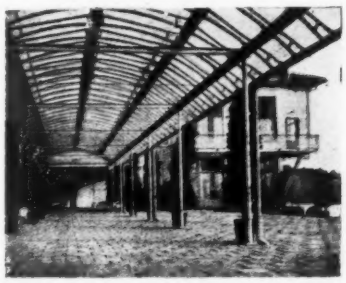
Top, a view from the north-east. Above, a view from the west showing the main entrance and, on the left, the administrative wing. Below, ground and first floor plans of the restaurant; 1, main entrance hall; 2, vestibule with cloak room and lavatories; 3, café-restaurant; 4, restaurant annex with folding partition; 5, secondary rooms; 6, landing stage; 7, ventilation system; 8, landing and lavatories; 9, banquet hall; 10, vestibule to kitchen; 11, kitchen; 12, larder; 13 and 14, stores; 15, service staircase; 16, roof lantern; the second floor, not extending over the area of the building, contains the restaurant manager's flat. Below right, the glazed covered way leading to the restaurant.



also connected to the hall by two separate accesses, one for visitors and the other for the staff. There are cellars below the restaurant for the storage of wine, beer, chairs and garden furniture.

The building is of welded steel frame throughout, the main hall frame being of rigid construction. Most of the steelwork is left exposed throughout and painted in aluminium. The infilling walls are of unrendered Dutch bricks 4½ ins. thick outside with an inside skin of cellular concrete plastered on the inside face. The floors throughout are of wood, the main hall floor being of pitchpine parquet on wood joists laid on top of the concrete beams of the foundations.

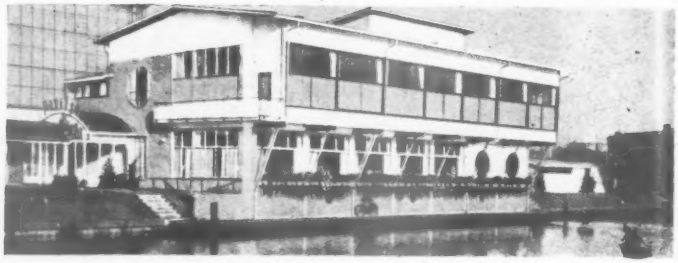
The steel frame of the main hall is constructed of six built-up plate girders. These have a span of 115 ft. and a vertical height of 39 ft., their bases resting on isolated reinforced concrete foundations laid on timber piling which are cross-tied to one another by reinforced concrete beams beneath the floor. Ground water level is 5 ft. below the finished floor level. The roof of the main hall is of 2½ in. deep hollow tiles laid on steel beams and covered with three layers of asphalted

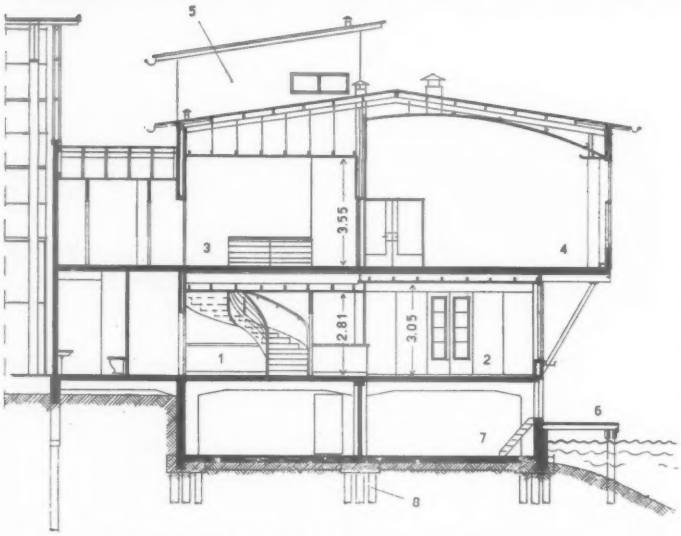


paper sprinkled with powdered aluminium. A central skylight with a service bridge beneath it extends the whole length of the roof. For ventilation, for a width of 10 ft. in each bay, a system of internally opening hoppers run the whole height of the windows. At the bottom of the glazed bays there is a gutter to prevent saturation of the brickwork below. The infilling walls below each window rise to a height of 15 ft. above the floor and were necessitated by the bye-laws which compel steelwork to be encased in a fireproof material up to 10 ft.

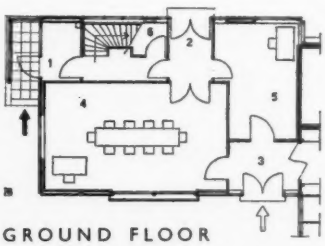
Throughout the building the infilling walls over the doors and windows are not of brick and cellular concrete but of rendering on expanded metal. This avoids cracks, cuts down the thickness of the section and makes for lightness. Horizontal beams on the outside are hooded with bitumen paper or patent lead foil flashing.

Electric radiation heaters warm the courts separately in the main hall, 17 to 18 elements being provided over each court. These are 8 ft. long. The secondary rooms and the two wings are heated by their own independent low pressure hot water systems. Artificial lighting in the main hall gives a glare-free and uniform illumination, each court being fitted with 24 adjustable Danish PH lamps. A microphone and loudspeakers are also installed.

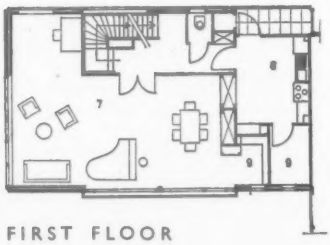




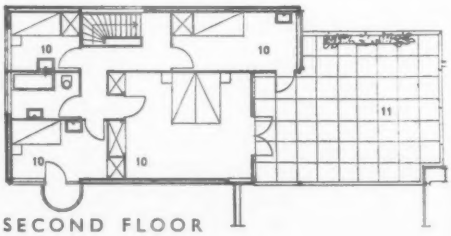
Top, a view of the Pavillon Apollo restaurant from the south. Above, section through the restaurant. Below, plans of the administrative block; 1, entrance to the manager's flat; 2, private entrance to the manager's office; 3, entrance for tennis players; 4, committee room; 5, manager's office; 6, heating chamber; 7 to 11, the manager's private flat. Bottom, a view of the administrative block.



GROUND FLOOR



FIRST FLOOR



SECOND FLOOR

TENNIS AND EXHIBITION HALL, AMSTERDAM

INFORMATION CENTRE

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

PHYSICAL PLANNING

1434 Smoke Prevention

MEASURES FOR SMOKE PREVENTION IN RELATION TO PLANS FOR POST-WAR RECONSTRUCTION. (*Proceedings of the Eleventh Annual Conference, London, 1943, of the London Smoke Abatement Society*, 1*s*.) Representatives of nearly 100 local authorities talked over expensive evils caused by smoke and feasibility and advantages of smokeless zones and smokeless fuel.

Two resolutions were passed, the first in five parts:

1. That the Ministry of Health and the Ministry of Works consider the requirements and means to ensure smokelessness in all new housing.
2. That the Ministry of Health and the Ministry of Fuel and Power consider legislation to ensure that all new installations of fuel-burning plant shall be efficient for their purpose and capable of being operated smokelessly.
3. That the Ministry of Fuel and Power, in considering the development of the nation's fuel and power resources, plan for the increased production and most efficient distribution of smokeless forms of fuel and power, to provide at first for the needs of new and reconditioned housing and other building, and in due course the abolition of smoke from existing sources.
4. That the Ministry of Transport and the Ministry of Fuel and Power in every consideration of the question of post-war electrification of railways give the fullest recognition to the important reduction in air pollution that will accompany every extension of electrification, both suburban and main line; and that this factor be also taken into account in considering the encouragement of electrically driven public service and other vehicles.
5. That the Ministry of Town and Country Planning consider legislation and administrative requirements to make possible the establishment of smokeless central or other zones in towns.

The second resolution urged local government authorities to appoint smoke abatement committees.

1435 Communist Housing Policy

A MEMORANDUM ON HOUSING. (*Communist Party, January*, 1944, 9*d*.) Deals with past, present and future, latter covering principles of Communist housing policy, the short and long-term plans, new methods and materials, quality and standards, flats and houses, ownership of land, finance, control of building industry.

The suggested methods include:

1. Requisitioning of insufficiently used large houses for conversion for use by several families. Wherever possible councils should deal with a number of these big houses as a unit, putting one or more aside for communal purposes—restaurant, nursery, laundry, etc.—with a full-time warden.
2. Wherever there is urgent need prefabricated houses, emergency hutments and other temporary structures should be erected on cleared bombed sites, along developed roads where water, gas, sewage and other facilities exist. These to be recognized as war emergency measures without prejudice to future housing schemes.
3. Better provision for transferred war workers is essential. In reception areas, a clearing centre, a register of available accommodation and a social centre with facilities for both washing and meals should be provided.
4. Prefabrication will involve a severely limited number of types of dwellings, as with utility furniture, but through the employment of skilled technicians in close consultation with the manufacturers, building operatives, housewives, a very high standard of equipment is possible. Scientific production of housing can mean a higher standard of stability, warmth, hygiene and quietness, as well as incorporating refrigerators, vacuum cleaners, metal sinks, modern lighting, fittings, airing, and heating facilities. Under public control and used for the purpose of meeting people's needs, standardization and mass production involving conformity with certain uniform designs would result in far greater architectural beauty and efficiency.
5. Both extra equipment and more space is necessary. Extra equipment itself cannot make up for inadequate space. Space must be a first consideration. In each dwelling for more than two people, whether a house or flat, there must be one living-room not less than 16 ft. by 12½ ft., not to be counted as a bedroom.
6. Kitchen equipment should include two draining boards to the sink, shelving for pots and pans, dry goods and crockery cupboards, a ventilated food cupboard and refrigerator. There should be constant hot water and facilities for laundry, either in the dwelling itself or centrally for a group of dwellings. Each dwelling should have a utility room for odd jobs, housing meters, storing outside boots, etc.

MATERIALS

1436 Load Bearing Materials

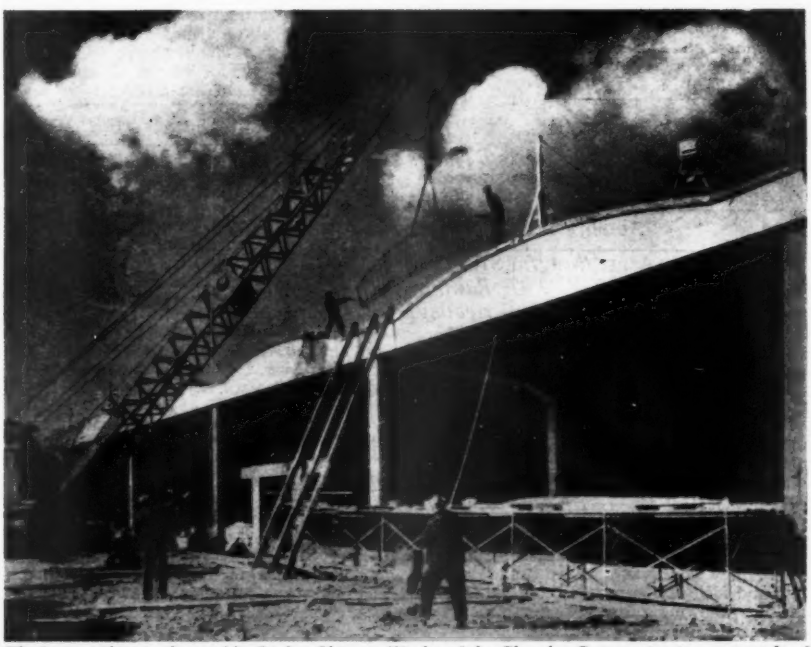
LOAD-BEARING CONCRETE, BRICKWORK AND MASONRY. (Not reinforced.) *British Standard* 1145 : 1943 : REINFORCED BRICKWORK. *British Standard*, 1146 : 1943, 2*s*. (*British Standards Institution*, 2*s*. *each*.) Both issued as interim measure pending issue of Code of Practice; they will then be withdrawn. Both specify minimum strengths required, maximum permissible stresses, methods of testing and quality of materials to be used.

STRUCTURE

1437 U.S.A. Post-war Construction

CONSTRUCTION AFTER THE WAR. *G. A. Bryant*. (*Engineering News Record, Oct*. 21, 1943, *pp*. 616-618.) Expected industrial building activity in USA after the war.

Industrial engineering and construction work in USA is expected to continue after the war at a level well above the 1936-39 average. The government is already taking steps to insure the continued use of all government-financed and government-owned properties which can be economically adapted to peacetime uses. Plants designed for postwar construction will incorporate the cumulative improvements in building materials, equipment and technique. Wartime emphasis on the conservation of steel and other critical materials has stimulated



The largest plant in the world. Dodge Chicago Works of the Chrysler Corporation is an example of a new type of reinforced concrete roof construction suitable for single-storey factories. See No. 1437.

the development of many new systems and structural forms. Wide-span, rigid-frame concrete arches, developed to take the place of steel in several alloying plants where corrosive fumes are present, are proving more satisfactory than the steel they replaced. The extensive use of prestressed concrete tanks for fuel storage and the development of precast concrete systems for construction of marine ramps and other structures has likewise opened up long-term opportunities for the use of concrete for such functions. At the same time, the perfection of new laminating processes has broadened the postwar horizon for timber.

HEATING and Ventilation

1438 Control of Air in Factory

HOW CONTROL OF THE AIR IN INDUSTRY IS HELPING TO WIN THE BATTLE OF PRODUCTION. *G. Midboe* (*Heating, Piping, December*, 1943, *p.* 623). Describes heating and air conditioning services in aero-engine plant.

The aero-engine factory is a windowless block, and has therefore to be mechanically ventilated. Temperature and humidity control is employed as an aid to precision workmanship, and as a secondary result, there is greater comfort in summer. The resultant savings in rejections has justified the installation as well as the greater employee efficiency. "The results observed in the operation of the plant only supplement previous observations by the air-conditioning industry that the trend toward air-conditioned factories is both practical and economically sound."

The main works area is cooled by a central cooling unit, the cooled air being distributed by supply ducts running through the roof trusses. Ceiling outlets are used, and the air is recirculated. Electro-static air filters are used to remove oil drops from the recirculated air, and the dust from the fresh air A spray washer is employed for humidity control.

The office block is cooled by a separate unit, and there is zoned temperature control for each floor. The main duct for each floor runs over the corridor ceiling, and air is discharged through side grilles to the various rooms. The return air travels through louvres in the doors, and along the corridor and thence up the main stairwell to the cooling unit. Electrostatic filters and spray washers are again used.

The gauge rooms are maintained, 24 hours a day, at 70° F. and 35 per cent. relative humidity.

The laboratory, cafeteria, first aid rooms, etc., are also conditioned.

In winter, the same system is used to supply warm air, but unit heaters are employed in some places where there is no air conditioning.

1439 Storing Works of Art

SOME PHYSICAL ASPECTS OF THE STORAGE OF WORKS OF ART. *F. I. G. Rawlins* (*Journal of the Institution of Heating and Ventilating Engineers, November-December*, 1943, *p.* 175). Temperature, humidity and ventilation of storerooms for art treasures.

The author surveys many of the environmental conditions which may affect works of art. Temperature, *per se*, is not believed to be critical, but the relative humidity of the space is of great importance. For paintings, a R.H. of 55 per cent. at a temperature of 60° F. is most acceptable; humidities higher than 70 per cent., and temperatures above 68° F. may cause damage. Mould spores, dust and acid gases are other important factors. In the following discussion the importance of adequate air movement is stressed. The author deduces that, as a result of knowledge gained under war conditions, air-conditioning and washing will become much more common in art galleries.

1440 System in Steel Mill

BIG GRAVITY VENTILATION SYSTEM SERVES KAISER'S NEW STEEL MILL. *G. E. Skaggs* (*Heating, Piping, December*, 1943, *p.* 647). Details of ventilation of large steel mill.

A gravity ventilation system was chosen on account of the flexibility in operation, as the volume of air exhausted is approximately proportional to the temperature difference. A velocity of 250 ft. per minute is maintained at working level. The total area of the exhaust openings in the open-hearth building is equal to 60 per cent. of the floor area; and in the whole mill, the average is about 40 per cent. of the floor area. The inlet area is approximately three times the exhaust area, and is obtained by opening almost the entire power portion of the walls to a height of 8 ft. The extraction is by means of monitors on the roof. 100 air changes per hour are allowed in the furnace section; 60 changes per hour on the pouring floor, and 40 per hour elsewhere.

QUESTIONS and Answers

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

1441 Book on Ventilation

Q *Where can I obtain* Observations on the Natural Ventilation of Dwellings, *by T. Bedford and F. A. Chrenko, if available?*

A *Observations on the Natural Ventilation of Dwellings* has not been published in full yet, due to wartime restrictions; the fullest summary of it published so far is in the *RIBA Journal* of November, 1943, limited numbers of copies of which, we understand, are obtainable from the RIBA.

1442 Half Houses

Q *When Mr. Willink, Minister of Health, visited Speke housing estate at Liverpool recently, he saw "half houses" for the first time. Can you tell me where I can get illustrations and descriptions of the above or if this has been published in the* A.J. *refer me to the issue?*

A We understand that the Liverpool Housing Department has brochures on *Half Houses*. The following short list of periodicals contains references to the subject:—

Building, May, 1942.
Architects' Journal, September 11, 1941.
Builder, September 5, 1941.
Architect and Building News, September 19, 1941.

1443 Gas Flues

Q *Can you let me have the names of manufacturers at present able to supply pre-cast flues suitable for gas fires?*

A We give below the names of three manufacturers able to supply pre-cast gas flues. J. A. King & Co., 183, Queen Victoria Street, London, E.C.4; The Nautilus Fire Co., 7, Stratford Place, London, W.1; J. H. Sankey & Son, Aldwych House, Aldwych, London, W.C.2.

SOCIETIES AND INSTITUTIONS

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

MOW

Burt Report

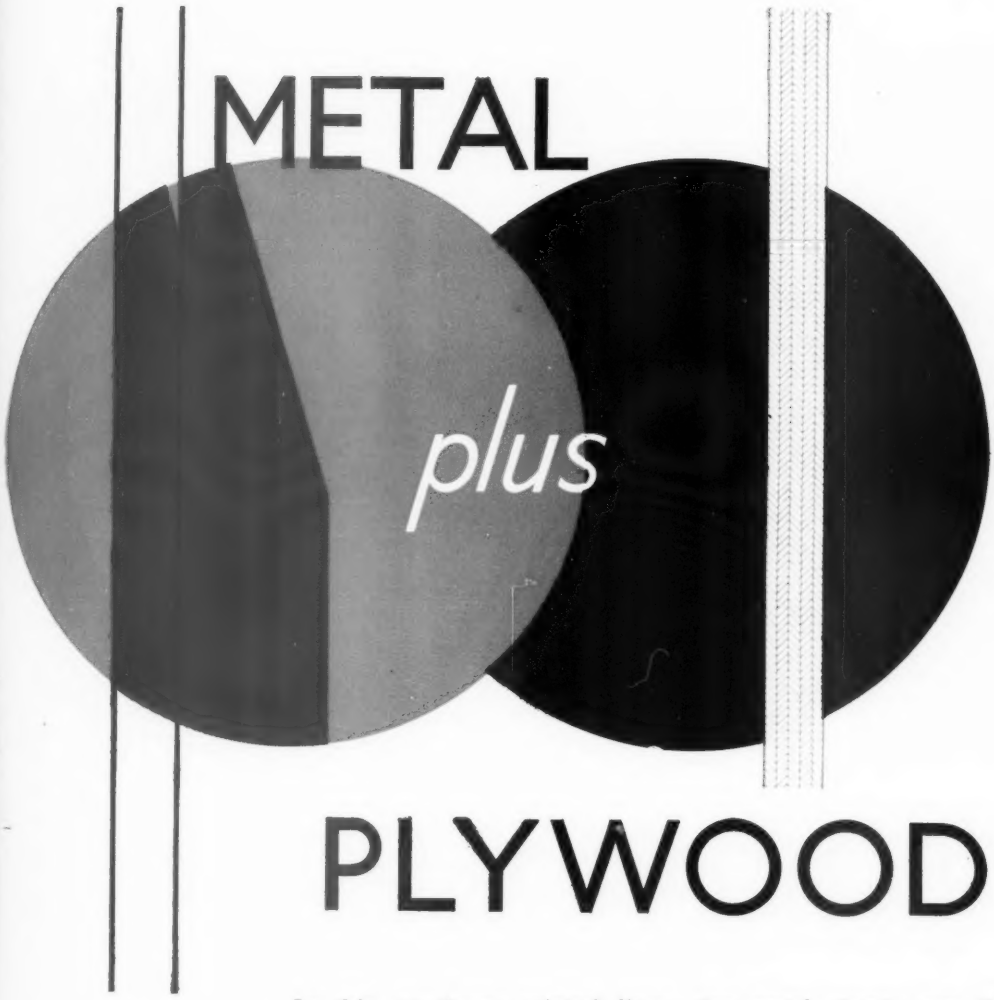
The first Post-War Building Study of the Ministry of Works, namely HOUSE CONSTRUCTION, prepared by an Interdepartmental Committee under the Chairmanship of Sir George Burt and appointed by MOH, MOW and the Department of Health for Scotland was published by H.M.S.O. last week (2s.). The Summary of the Report and Conclusions (paragraphs 851-864) is reprinted below. See also this week's leading article.

The building industry would not be able, in its present depleted state, fully to meet the demands to be made on it after the war. In the immediate post-war period, that portion of the industry concerned with housing will find difficulty in meeting even the most urgent needs, and methods of house construction alternative to the traditional will be required.

The first step taken by the Committee was to survey the methods of house construction adopted after the last war to meet similar circumstances, with a view to selecting those methods which have been tried and found satisfactory and which could be recommended with assurance.

Detailed examination of these systems revealed varying standards of construction. Some are good; some embody good principles improperly applied; others cannot be recommended. The results of the survey (given in Part II) have, however, been encouraging. They disclose ready to hand different types of construction which, subject in some instances to modification in detail suggested by experience, provide good alternatives. Certain of the promoters already have under consideration improvements advised in the reports of the systems.

Some of the systems produced houses that were unattractive; it must be emphasized



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that good architectural advice should be sought in the development of special methods of construction if such houses are to prove acceptable to local authorities and to the public.

It should be noted that most of the experience during the inter-war years was with alternative walling systems. Flooring and roofing systems used were, for the most part, conventional, and these are the subject of further inquiry.

The types of walling systems reviewed are briefly assessed below :

CONCRETE WALLING SYSTEMS

Many concrete walling systems, either as precast or poured *in situ*, are good alternatives. They give scope for the employment of unspecialized labour, with the possibility of some increase in the speed of erection of that part of the building. It must be realized that the success of concrete construction depends on the careful control of materials and workmanship. The use of certain light-weight aggregates and light-weight concretes has been considered and it is thought that they offer scope for development. At the request of the Committee, the Ministry of Works is inquiring into the possibilities of their extended production (pp. 43-67).

TIMBER CONSTRUCTION

In general, timber constructions can be recommended, though limited in application by their liability to greater fire hazard and vermin infestation than normal construction. Experience of the special uses of timber by the aircraft and other industries during the war may well lead to an extension of its application to house construction. The extent to which these types of construction can be used will depend on the availability of suitable timber (pp. 67-73).

STEEL-FRAME CONSTRUCTIONS

The steel frame is most logically used in house construction when combined with light external and internal claddings, the use of which would supplement the output of bricklayers and plasterers. Steel-frame construction opens up prospects for the evolution of new methods of floor and roof construction, as well as of walling. The fullest advantage was not taken of these possibilities in the systems reviewed, and steps have been taken towards further investigation and experiment on these lines (pp. 73-80).

METAL-CLAD WALLS

With the application of the knowledge and experience now available on problems of thermal insulation and protection from corrosion, metal-clad houses provide alternatives to traditional construction. Those systems in which the metal-cladding was used not only as an external surface but also as part of the load-bearing structure are of considerable interest ; a combination of purpose such as this appears to have much to recommend it. The development of both steel-frames and metal-cladding may lead to the employment in housebuilding of labour and factory space now absorbed in war industries (pp. 80-92).

Even the foregoing systems may not go far enough to supplement the capacity of the building industry as it stands to-day. Further systems suitable for labour untrained in the building industry are being encouraged, and several proposals are under examination by the Committee.

Part I of the Report contains discussion on basic considerations affecting house construction, together with suggestions for the guidance of designers for a performance basis to ensure adequate strength and stability, thermal insulation, sound insulation and the like. It is thought that this is the first time that such a basis for house construction has been formulated. It was necessary to do so, as, when constructions departing materially from traditional forms have to be considered, it is important to be clear on the essential technical requirements. The fact that designers after the last war had no such guidance was responsible for some of the difficulties then encountered with new constructions. In the interval, much scientific work has been done and practical experience gained. For one reason or another, it may be difficult, particularly in the immediate post-war years, to realize all the suggested standards ; nevertheless, they should represent the aim until sufficient further experience has been gained to warrant a review of them. A summary of these standards is given on p. 38.

Part III of this Report contains a review of some alternative materials which may be required during a possible temporary shortage of normal materials, and of newer materials which merit further trial with a view to permanent adoption.

A co-ordinated programme of research and experiment is necessary to encourage further development of alternative methods, and such a programme has been recommended. The programme is being carried out by the Ministry of Works and the Department of Scientific and Industrial Research, with the close co-operation of the Ministry of Health and the Department of Health for Scotland. A special programme is being undertaken by the Department of Health for Scotland through the Scottish Special Housing Association. Research may reveal advantages in a greater measure of standardization of units of the structure. Investigation should, therefore, be directed not only to the development of forms of construction and of the use of new materials, but also to that high degree of organization in the workshop and on the site, which will be essential if the full benefits offered by standardization are to be obtained.

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RIBA

ASB Lecture

February 5, at 66, Portland Place, W.1. Lecture arranged by the Architectural Science Board of the RIBA, on NEW DEVELOPMENTS IN THE DESIGN OF WELDED FRAMES, by Ramsay Moon, B.A., M.I.STRUCT.E.

R. Moon : What does welding mean to the architect ? What does it matter to the architect how the steel framework of his building is joined together ?

The significance of welding is not that it offers a different—perhaps better, perhaps more economical method of making joints in steelwork—its interest is in that it presents the architect with a structural material which he as an architect can use effectively for the first time. The masterpieces of work in metals throughout the ages have all involved the manipulation of the metal with the aid of heat and the joining of the parts by means of welding.

When steel came to be used for building the pieces were too large to be heated in the fire for forge welding, and so the practice of drilling holes and bolting or riveting the parts together was devised. The necessity of overlapping the parts to be joined involves serious limitations on the shapes which can be used, and the range of steel sections made for riveting does not lend itself to the production of attractive outlines in the steel structure.

In looking at a riveted building framework we are conscious of the limitations rather than the possibilities of steelwork as a structural material. The members are severely straight and of awkward shapes, the connections are cumbrous and frequently unsightly.

Welded steelwork presents no such limitations. The size and shape of the members and joints can be determined in relation to the function they have to perform.

There are several characteristic features of welded construction. The material can be used in any thickness and any shape ; the joint can always be made the full strength of the pieces joined and without appreciable increase in thickness or size at the joint ; the material can be placed so that it may be used to best advantage both for economy and appearance ; the weld is essentially a rigid joint and the tendency will be to design the welded structure as a rigid framework. Designed as such, a rigid framework tends to be economical in steel and to express the inherent character of steel as a building material. The dominant characteristic of steel as a building material is its strength. It is also fairly expensive. In nature steel has rather the function and character of a spider's web than of the tree from the forest. A well-designed steel structure will give an impression of lightness and slenderness. On account of its cost we would wish to see each cubic inch of steel in the structure working up to its full allowable load and so placed that it is carrying that load to best advantage. In a well-designed welded structure we can approach fairly near to this ideal, and in as much as we do approach it the steel-work starts to develop character.

In a simple building framework welding enables a small but useful saving, usually about 10 per cent., to be made in the weight of steel. This is achieved by the reduction in the amount of connection material and, where convenient, by using hollow columns which have a better radius of gyration than the ordinary rolled sections. A hollow column may save from 10 per cent. up to 40 per cent. in weight of steel as compared to the ordinary rolled section. The hollow shaft may either be two channels welded by their toes or two angles placed so as to form a square box and welded at the corners, or it may be a cylinder. A 20 in. diameter cylindrical column with a $\frac{3}{8}$ in. steel shell filled with vibrated concrete will carry the same load as a 40 in. rectangular reinforced concrete column. For such an arrangement the ratio of weight is 1 to 1.5, the area 1.25 to 5, and the cost 1.3 to 1.85. The possibility of polished stainless steel columns with a very thin shell filled with concrete may well be attractive.

In the simple building structure the appearance of welded steelwork is quite similar to riveted work except that there is not so much connection material. There will probably be square column shafts and the absence of bracket details will simplify the enclosure of the steel. If the beams and columns are in straight lines it is possible to take advantage of the rigidity of the welded joints and design the beams as continuous, and the saving in steel is increased from 10 per cent. to 20 per cent. or more as compared with freely supported riveted steel. When the span between columns is long it is specially advantageous to make the beams continuous because then the depth of the beams can be made substantially less.

When steelwork is to be enclosed the principal advantages of using welding are reduced weight and absence of protuberances, and in the case of continuous frameworks, reduction in the depths of the beams. From the architectural point of view these are useful factors though not necessarily very important. It is when the steelwork may be left exposed that welding becomes really interesting.

The conventional riveted roof truss was never a thing of beauty. Its multiplicity of angle members with their bulky gusset plates obstruct the light and make a satisfactory interior decoration impossible unless the trusses are covered up altogether. With welded roof trusses there need be no gussets and the members can be made smaller, since there is no need to allow for rivet holes, but the general shape remains the same. During several years the tendency has happily been

A neat example of a railway station in welded steel. See Mr. R. Moon's lecture reported here.

to get rid of roof trusses and to use roof frames, and this is where welding comes into its own. For a pitched roof the frame may take the form of a three-pin arch—a frame pinned at the apex and at the supports. The frames will be deep at the eaves and narrow at the apex and the springing. Built up of flat plate flanges and a tapering plate web, the shape of the frame is simple and pleasing, the surfaces are plane and the lines continuous. The shape of the frame expresses the function. If the roof is flat or nearly so, it is probable that a two-pin frame will be more effective. In this case there will be substantial bending moments at the centre of the span and at the eaves, and the shape of the frame will conform to this condition, being deeper at these positions and shallower at the points of contraflecture and at the foundations. By making the outline of the frame follow the shape of the bending moment diagram, a structure is obtained which is both economical and pleasing to the eye.

When the supports are solid or when springing from steelwork below, the roof frame may be made a continuous rib of uniform depth conforming as nearly as practicable to the line of thrust. When this can be done a very light frame results. Owing to the shape of the roof frames, it is usually uneconomical to make them in riveted steelwork unless they are very large, but with welding the frames are easy to construct and reasonably economical. The roof frames are usually slightly heavier than roof trusses on columns but the improvement in appearance is such that in the future roof trusses will be considered old fashioned and unacceptable in anything but the simplest store buildings.

For supporting saw tooth roofs the trusses can be replaced with rigid jointed joist frames. When these are made integral with the columns they form what is known as tree form construction and give a clean and interesting effect.

In bridgework and heavy plated structures, the large smooth surfaces of welded construction are outstandingly superior to riveted structures in appearance and in such structures the full advantages of welded construction are achieved. In a riveted plate girder of long span, the flanges are made up to two angles and a pile of plates—in the welded girder the flange is usually one heavy plate. The elimination of the angles, which join the flange to the web, means that the mass of the metal is concentrated as far as possible from the neutral axis of the girder and so is used more effectively. The saving in weight may be as much as 25 per cent.

In light military bridges, as in most military equipment, the use of welding is now taken for granted. It has led to remarkable savings in material and labour. The number of welders in the country is three times what it was when the war started. There has in the past been a reluctance on the part of steel fabricators to supply welded building steelwork —presumably on account of the possible effect on the value of the riveting plant and equipment already available—but now there is ample plant available and probably more welders than will be needed in post-war industry, there should be no great difficulty in persuading the steel constructors to lift the ban from welded steelwork. By doing so they will give their material to the architect in a form in which he can use it to better advantage and ultimately lead to the use of steel not merely as an unsightly carrying framework which has to be covered up, but as a structural material with an architectural significance of its own.

Discussion: The Chairman said that welding was a natural outcome of electrical research and metallurgy, and that it adapted itself much more to building structures with which architects were concerned than possibly to other methods of building with steel. He thought that it would mean a return to the upward flowing lines such as were seen in the middle ages.

A member asked whether tables of performance of composite members had been worked out.

Mr. Moon replied that there was a handbook on welded structural steel-work issued by the Institute of Welding which gave information of that kind. There was also a handbook which could be obtained from Messrs. Dorman Long.

A member asked why one did not have cylindrical stanchions. A cylindrical stanchion was the right section to have, though it meant a rather more difficult join than the square box type. Would not the economy in the stanchion make up for the cost ?

Mr. Moon pointed out that he had used cylindrical stanchions quite well. If one used tubes one paid £4 a ton more, but one could sometimes still make an economy on that basis. On the larger sections cylindrical stanchions could be used quite often ; they would probably be used more in the future. There was no great difficulty about making joins. One had to put some form of diaphragm through, but there should be no difficulty. It was simply that people were not quite used to the idea of them. There would, of course, be a great difference in the cost if one used stainless steel cylindrical stanchions filled with concrete. Very careful design would be necessary in making adjustments.

A member asked whether the saw-tooth type of roof was not now obsolete. He had used a good deal of glass lately with ordinary symmetrical trusses and that had the effect of giving quite a good north light. It meant that the angle was much flatter and that only about half the amount of glass was required. It gave a well distributed light and represented a big saving in lighting costs.

Mr. Moon said that personally he hated the north light. In his opinion a framework (rigid arch type) was very much more attractive. He would be willing to pay more for the arched type of construction than for the saw-tooth type.

A member asked whether welding joins were 100 per cent. safe, and what the possibilities were of getting a faulty one. Was it possible, on a big job, to have X-ray photographs ?

Mr. Moon replied that it was not necessary to have any particular safeguard, because it was only in the case of criminal negligence that one might get a faulty join. Also, it was surprising how bad it had to be before it would go much below the load it was likely to get. A welded join was a very simple operation and provided that supervision was adequate there was nothing to worry about. In riveting one normally expected to get failure at the joins, but in welding one could arrange to avoid that. Welding was well known now and was just as reliable as riveting.

It was, of course, necessary to arrange that in a structure of importance every weld was eclamped. In that respect it did require more inspection than riveting, and it was necessary to watch a little more closely to see that every weld was put in. On one occasion he had had something to do with a bridge in London, and on inspection it had been found that a butt weld had been left out of the tension cord That sort of thing could happen, but it was all right so long as inspection was carried out. If the work was of a special nature one should examine every run of welding ; it was always a good thing to stipulate in a contract that the work must be carried out under the control of a supervisor and that every run of welding must be inspected.

HC

A. F. Russell

February 8, at the Housing Centre, 13, Suffolk Street, S.W.1. Lecture on HYGIENE IN RECONSTRUCTION, by A. F. Russell, A.R.I.B.A. Chairman : Alfred Bossom, F.R.I.B.A., M.P.

A. F. Russell: The principal factors mitigating against healthy conditions in towns are (*a*) site congestion ; (*b*) overcrowding of dwellings ; (*c*) atmospheric pollution ; (*d*) noise ; and (*e*) pressure of economic circumstances for the ower paid worker who cannot augment his food or fuel. Since a century ago healthier living has been made possible by better water supply and sanitation, improvements in building and preventive medicine ; and alongside these we must now include planning, which can give us more air space about our buildings, better natural light, maximum sunlight, smokeless atmosphere, less noise, more play space and more greenness in the midst of towns. The first prerequisite to the establishment of sound planning based on the requirements of health is the control of land. Next comes right administration, and each town combined with a large area of the surrounding country should be controlled by one local authority. The advantages to the town would be : (*a*) Extensions could be planned so that

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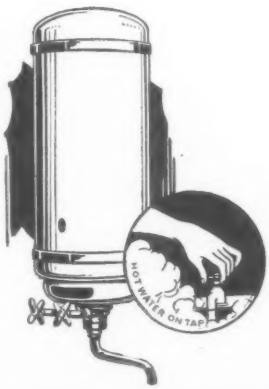

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the country was not pushed further away from the centre of the town than now ; (*b*) agricultural pursuits could be maintained ; (*c*) a proper system of footpaths could be laid down ; (*d*) surrounding villages could be planned as satellites. As for the country, it would get better health and education services and an assured market for maximum food production.

Factories for light industries should be grouped at intervals throughout the town, while as to heavy industries, if the factories cannot be moved, the adjacent houses should be pulled down and a barrier of playing fields inserted between the industrial zone and the nearest houses. In built-up areas space should be found for public enjoyment and exercise by (*a*) taking privately owned spaces of considerable size ; (*b*) conversion of cemeteries into parks and gardens ; and (*c*) vertical building. A first class sports recreational park should be provided on the outskirts of every large town. Schools in central areas could be of three or four storeys, and they should be placed on stilts, i.e. instead of a ground floor there should be a piazza. Such planning would make the maximum provision for play, natural lighting and ventilation and would minimize the noise from the street.

Housing should be standardized. We shall never get the houses needed if we have a different design for each district ; but standardization should not be for its own sake but in order to get the best design we possibly can. We could concentrate on three types of one, two or three bedroom houses for six groups of families earning up to six hundred pounds a year. Thus we could provide eighteen different plans. For this we should need sufficiently large land units ; at present sites are far too small. Aspect should be given more attention than it receives to-day ; health not elevation should be the first consideration.

THE TIMES

Lord Astor

March 29. The following letter on HOUSING PLANS from Lord Astor appeared in *The Times*.

Last week Lord Latham moved a resolution in the House of Lords calculated to elucidate the Government's policy about town and country planning.

After Lord Woolton had spoken, the Government's intentions not being clear, I put two questions to him, i.e., whether the Government would introduce a Bill amending the Housing Acts accompanied by a White Paper with a statement of what the Government intended on planning. Or whether they would bring in a Bill dealing with town and country planning (which, as the greater includes the lesser, obviously would incorporate their housing proposals) accompanied by a White Paper explaining the basis on which compensation, betterment, redevelopment, &c., were worked out. I indicated that a Bill limited to the first alternative would imply the failure of Lord Woolton as Minister of Reconstruction, as well as the Cabinet's non-fulfilment of past pledges by other Ministers.

Lord Beaverbrook, the Government spokesman, when winding up, gave an affirmative reply to both questions. In particular he said :—

"Lord Astor asked : Will the Government bring in a Bill dealing with town and country planning, and will the Bill be accompanied by a White Paper explaining the basis on which compensation, betterment, redevelopment, &c., are worked out ? That was as I understood his question. The answer is : Yes."

As there would not be time this session, at this late date, for two Bills, we are entitled to expect Lord Beaverbrook's promise, made on the Prime Minister's authority, to mean one comprehensive Bill.

This assurance comes as a great relief to local authorities and private enterprise, which cannot put into effect schemes involving the siting of new factory areas and of new streets, new schools, new playgrounds, and new shopping centres, as well, of course, as many of their plans for properly sited housing, until after Mr. Churchill's proposals for town and country planning have been presented to and approved by both Houses of Parliament.

After the last war I was at the Ministry of Health. Prospective needs of service men forced us to urge local authorities and private interests to rush up buildings without previous country planning and guidance on siting. Irreparable damage was inflicted on districts and communities. Only an amending Act can prevent the repetition of a similar calamity.

We look to Lord Woolton to use his great influence to see that this Bill is submitted shortly. As a business man he must recognize that firm contracts, based on a contemplated change in the law, cannot be made until the law has been amended.

TRADE NOTE

Messrs. F. McNeill & Co. inform us that it will not be possible to move to their new London office at 10, Lower Grosvenor Place, S.W.1, by April 1, as previously announced.

CORRECTION

In our issue for March 16 under Publications Received the price of *Heating and Air Conditioning of Buildings* by Faber & Kell (Architectural Press) was given as 25/-. This is incorrect. The price is 45/-.

COMPANY MEETING.

LONDON BRICK COMPANY

HOUSES OF THE FUTURE

The forty-fourth annual ordinary general meeting of the London Brick Company, Limited, was held on March 30 in London.

Sir P. Malcolm Stewart, Bt. (chairman and one of the managing directors) who presided, said that the profit on trading was down by £27,963, after taking credit for the dividend from Clock House Brick Company, Limited, over the past two years. Nothing has been placed to general reserve as against £25,000 in the previous year. Again no provision had been made for depreciation. The board recommended a dividend on the Ordinary Stock of 10 per cent.

Continuing the chairman said : Prefabrication has received much publicity. The Minister of Works, Lord Portal, has accepted this method of construction to meet an emergency in a transitional period. There has been some concern among those interested in the supply of materials for the construction of traditional housing lest the prefabricated house should displace the standard type of house we are accustomed to, or, at any rate, reduce the demand for such houses.

If the problem is looked at in the right light it should be realized that the Government's decision to embark on prefabricated housing is not inspired by any question of choice of type, but is due to the determination to provide as quickly as possible accommodation of a temporary character for those young people returning from the war and others dispossessed of their homes by blitz. In a word, the effort is to provide homes ready for occupation at the earliest moment and on the largest scale practicable. If the matter is thus envisaged it is clear that all concerned should place first this national need in an emergency.

You are doubtless forming the question in your mind, how will the priority and prestige given to prefabricated building under the ægis of the Government affect the manufacturers of building materials, particularly our company, as the largest brickmakers in the world. The degree of detriment to the manufacturer of building materials will, in my opinion, depend considerably on the reaction of the professional services, the building operatives, the manufacturers of materials and particularly the numerous smaller building contractors.

A NEW COMPETITOR

We have to face a new competitor entering the field offering speed of assembly and possibly lower first costs, but whose production, however designed to please the eye and conveniently fitted up, will lack certain fundamental requirements and amenities. The prefabricated house gets a wonderful start while the traditional house gets away later from scratch. How can it win the race ? By confirming to owners or tenants that brick houses are more comfortable and pleasant to live in. It is no good decrying prefabricated structures, it is up to us to produce progressively something better and get it accepted as such by the householder. I am not afraid of the issue, there are several helpful factors in our favour apart from the pleasing results which can be produced by building in brick when an experienced architect is employed.

The public like a brick house ; it gives a sense of permanent security and of solidity not to be obtained from any temporary structure. Bricks have established themselves for domestic construction and have stood the test of thousands of years. They will survive competition so long as they are best fitted to the purpose to which they are put.

While prefabricated buildings could be low in cost if mass produced, it must be remembered that they are not intended to be of a durable character. Their cost has yet to be proven in this country and comparison should be made with the results obtained by those contractors who have operated on a large scale. It must be remembered that though they have built thousands of brick houses these total but a small part of the aggregate number built between the war periods.

There is going to be after the war much competition from a big range of materials, old and new. Many will fall by the way, as they did after the last war despite their being much boosted.

REDUCING COSTS

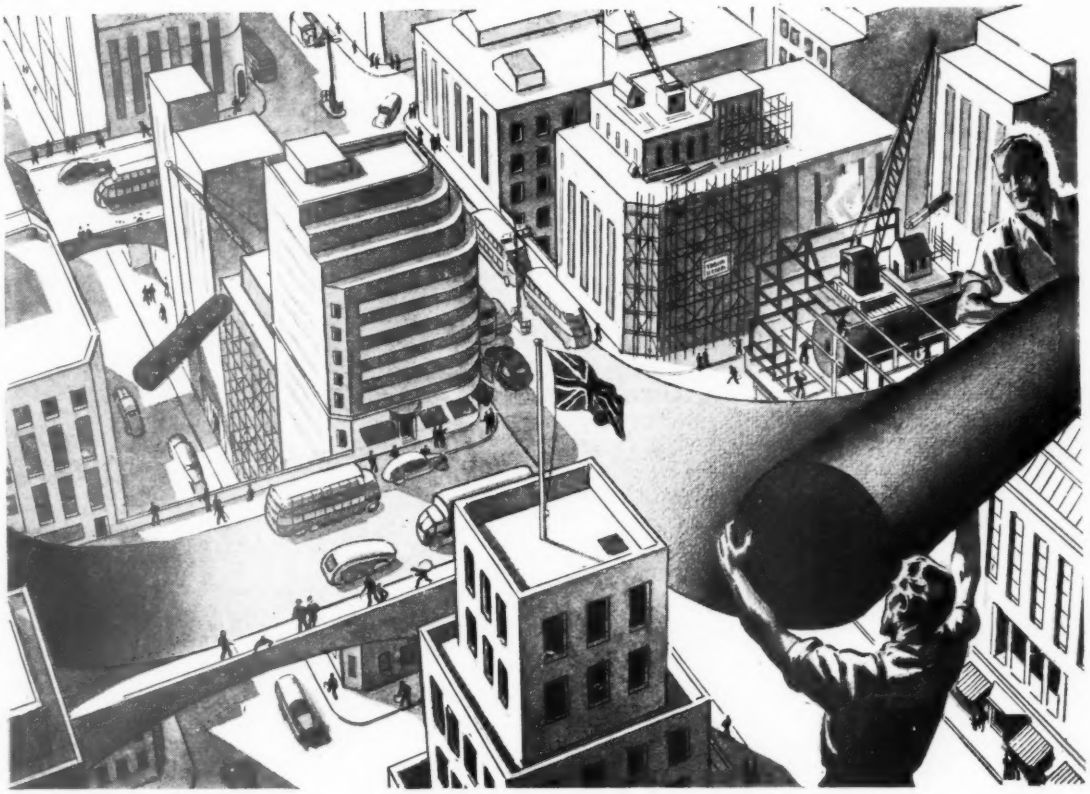
The most pressing need is to reduce the cost of the traditional house. This must be accomplished to the maximum degree to make possible the granting by Government of reasonable subsidies, the finding of sound finance and the establishing of fair purchase price or rent. The most effective method of reducing the cost is to tackle first the heaviest items. Everyone who has had experience of house building on a modest scale will know that while the walls can be run up and the roof placed quickly there is an interminable delay in fitting up and decorating before occupation can be enjoyed. A variety of tradesmen have to fiddle about with fittings which never fit and much time is wasted and costs increased. This is the common experience. I do not say this applies to those large scale contractors who have practised standardization.

Now, to overcome these difficulties it will be essential to apply prefabrication in respect of fittings to the greatest extent possible. Fittings can be much reduced in cost if mass produced and assembled on panels at the factory ready for delivery to and erection on site. But those who manufacture them must be assured in advance of bulk orders to permit of full and continuous production, always essential to low costs. Further, an adequate number of houses must be contracted for at a time by local or other authorities or parties. Lastly, and this is a pre-requisite, the batches of houses to be built must be strictly dimensioned in respect of every part designed to receive the prefabricated fitments. Here lies opportunity for reducing the cost and building-time of traditional housing and of retaining all the comforts to which we are accustomed.

Further, let us not forget the Government over some ten years propose building three to four million houses as part of their permanent programme, and the trade unions are increasing the number of operatives to meet this demand which will require bricks in great quantities.

We are already seriously at work on schemes of expansion to provide for the anticipated increased demand and to proceed with this work during the first two post-war years, which is the period the Minister of Works has stated the building industry will require to get into its full stride.

The report and accounts were unanimously adopted.



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CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

HOUSES IN THE "TARRAN SYSTEM" OF CONSTRUCTION.

The "Promoter" Robert G. Tarran, of Hull, invites architects of British Nationality to submit in open competition designs for four alternative types of Dwelling Houses in the "Tarran System" of Construction.

T. Cecil Howitt, D.S.O., F.R.I.B.A., has been nominated by the President of The Royal Institute of British Architects as the Assessor.

Premiums to the value of 700 guineas, viz.:—

First	100 guineas	For each type Design
Second	50 guineas	
Third	25 guineas	

Last date for questions Saturday, 29th April, 1944.

Last date for submitting designs, Saturday, 17th June, 1944.

Conditions of the Competition available March 27th, may be obtained on application to Robert G. Tarran, Hull.

Deposit £2 2s. (Two guineas) returnable. 581

GLOUCESTERSHIRE COUNTY COUNCIL.

COUNTY PLANNING OFFICER.

Applications are invited for the above appointment at a salary of £800 p.a., rising by annual increments of £50 to £900 p.a., plus war bonus, travelling and subsistence allowances in accordance with the Council's scale. Applicants must have had wide experience of Planning and membership of the Town Planning Institute will also be an advantage.

The person appointed will be required to devote the whole of his time to his duties. The appointment will be terminable by three months' notice in writing on either side and is subject to the provisions of the Local Government Superannuation Act, 1937. The person appointed must satisfactorily pass a medical examination.

Applications, giving age, qualifications and full particulars of previous experience, together with copies of three recent testimonials, must be received by me not later than the 1st May, 1944, the envelopes to be marked "Planning Officer." Canvassing directly or indirectly will be a disqualification.

GUY H. DAVIS,
Clerk of the County Council.

Shire Hall,
Gloucester.
3rd April, 1944. 600

EAST AND WEST MONMOUTHSHIRE JOINT PLANNING COMMITTEES.

Applications are invited for the appointment of two Town Planning Assistants at a Salary of £350 per annum, plus war bonus variable according to the cost of living, at the present £39 per annum. The appointments will be subject to one month's notice on either side and to the provisions of the Local Government Superannuation Act, 1937.

Candidates must have had previous experience in the preparation of Town and Country Planning Schemes, have a good knowledge of surveying and levelling and be neat draughtsmen.

Applications stating age, qualifications and experience, accompanied by copies of two recent testimonials and endorsed "Planning Assistant" should reach the undersigned not later than the 18th of April, 1944.

(Signed) VERNON LAWRENCE,
Clerk of the Joint Committees.

County Hall,
Newport, Mon.
25th March, 1944. 584

CITY OF LEEDS.

Applications are invited for the appointment of a temporary SURVEYING ASSISTANT, preferably with some architectural knowledge, for work in connection with a survey of the Central Area of the City.

Salary £240 per annum, plus cost of living bonus (at present £50 per annum).

Applications on the forms provided, which are obtainable from the undersigned, to be delivered not later than April 26th, 1944, accompanied by copies of not more than three testimonials.

Canvassing in any form, either directly or indirectly, will be a disqualification.

W. S. CAMERON, M.INST.C.E.,
City Engineer.

Civic Hall,
Leeds, 1. 599

Architectural Appointments Vacant

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

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

ARCHITECTURAL ASSISTANT required for Architect's Department of multiple firm. Applicants should have had good general experience in construction, specifications, supervision, etc., and be capable designers and draughtsmen. Good prospects for Assistant with initiative and able to take control during architect's absence. Vacancy would be kept open for reasonable period for suitable applicant. Write giving details of experience, age, salary required and liability for National Service to Box A.9643, 10, Hertford Street, W.1. 587

SURVEYING ASSISTANT required at once for preparation of specifications in respect of war damage repairs and preparation of schedules of condition. Apply, giving full particulars to W. H. Saunders & Son, Architects and Surveyors, 2, Carlton Crescent, Southampton. 591

INTERESTING WORK FOR DRAUGHTSMAN, either sex, industrial design. Applicant must be under or above military age, possibly beginner, but must be neat. Box 592.

ARCHITECTURAL ASSISTANT, experienced, required at once, Scottish Midland Town. Town planning and general practice. Good draughtsmanship essential. Reply stating age, experience and salary required. Please say also if exempt. Box 593. [Architect.]

ARCHITECT AND DIOCESAN SURVEYOR, West country, requires temporary junior assistant. Suit student awaiting calling up. Accommodation with principal. Apply giving full particulars to Box 594. [Chartered Architects.]

REQUIRED DRAUGHTSMEN for Structural Insulation. Knowledge of General Building Details—particularly Structural Steel practice—Male or Female. Future prospects good. Box 597.

SENIOR ARCHITECTURAL ASSISTANT, A.R.I.B.A., or superior qualification, accustomed to design and preparation of all drawings, perspectives, etc., for wide range of Industrial, Commercial and Domestic buildings. Must be energetic, creative designer with initiative and ideas. Apply, stating particulars of age, experience, ability, liability for national service, salary, etc., to Box 596. [Chartered Architects.]

CAPABLE ASSISTANT ARCHITECT required. Apply with particulars, qualifications and salary required to Hadfield & Cawkwell, 279, Glossop Road, Sheffield, 10. [Chartered Architects]. 598

Architectural Appointments Wanted

Architectural Assistants and Students seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice.

ARCHITECTURAL ASSISTANT desires change. Keen, practical. Experience in private, commercial and Local Government offices, and constructional experience. Now studying for R.I.B.A. Age 21. Exempt H.M. Forces. Box 276.

AN EGYPTIAN ARCHITECT and Inc. Quantity Surveyor desires position with an English firm intended to work in Egypt at present or after the war, high qualifications, 12 years' experience in Egypt as an architect and contractor, including about 3 years as civilian quantity surveyor with the W.D. Write to N. Morsy, 167, Khedevi Ismail Street, Cairo, Egypt, stating conditions, etc. 279

ARCHITECTURAL ASSISTANT, A.A.Dip. (25), studying for T.P.I. final exam, wants post with architects and town planning consultants in provinces. Salary £10. Box 281.

Classified Advertisements continued on page xl.

ARCHITECT L.R.I.B.A. (33) requires post (or would assist) on work providing scope for an experience commencing with a practical training in various trades: jobs covering: structural alterations, flat conversions, housing schemes, shop and multiple stores, shopfitting and public buildings up to £18,000 (pre-war), R.O. factories, surveys, schemes, perspectives, working plans and drawings, specifications (Schedules of), dilapidations, war damage, labour and materials, estimates, invalided out of R.E.'s 1942. Present remuneration £455. Box 280.

PROBATIONER, R.I.B.A., aged 17 years, with matric. and knowledge draughtsmanship, taking recognized evening course, requires permanent position in architect's office; London area. Box 282.

ARCHITECTURAL ASSISTANT, member of the R.I.B.A., requires post with architect or group working on post-war design and planning, preferably in country near London. Experienced in housing, schools, civic buildings. Box 283.

ARCHITECTURAL ASSISTANT, 21, Intermediate R.I.B.A. 1941; exempt; four years architectural training at technical college, four years Government, Local Government and private office experience. Box 284.

ARCHITECT'S ASSISTANT, age 24, desires progressive post in Midlands; 6 years' experience in all types of work. Salary by arrangement. Only progressive firms need apply. Box 285.

ARCHITECT, SURVEYOR AND CLERK-OF-WORKS, with over 25 years' theoretical and practical experience in all branches of the profession, seeks permanent and responsible position. Experience includes war damage, dilapidations, property management and maintenance, and a sound knowledge of estate agency; not liable for military service, rendered war service during 1914-18. Box 286.

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JUNIOR ASSISTANT requires position in London Area. School Cert. Two years' experience. R.E.P., 77, Egerton Road, N.16. 288

ARCHITECTURAL DRAUGHTSMAN, willing to prepare and draw schemes for an Architect. Able to work week-ends and evenings. Box 289.

Other Appointments Vacant

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

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

JUNIOR INSTRUCTORS, male or female, in Architectural and Building subjects, required by large London Correspondence College. Previous teaching experience not essential. Any necessary training would be given, 5-day week, suitable for boys or girls interested in architecture. Write, stating age and experience (if any) to Box H, 978, Willings, 362, Gray's Inn Road, W.C.1 577

WOODWORKING FIRM (at present fully employed on No. 1 Priority work) are open to entertain applications from competent furniture designers. Interior decorative experience an advantage. Full or spare time considered. Good remuneration to a really experienced person. Fullest particulars in confidence. Box 585.

Competitions

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

COTTAGE COMPETITION.

The Dartington Hall Trustees invite registered Architects to submit designs in competition, for Cottages to be erected in the post-war period. Competitors should comply with the regulations of the R.I.B.A.

A First Prize of £150 and other prizes to a total value of £150, are offered, together with a special premium of £100 for the best design submitted by an architect serving with the Forces.

The Promoters have appointed Mr. Charles Holden, F.R.I.B.A., and Mr. Lionel Pearson, F.R.I.B.A., to act as their Assessors.

Designs must be submitted not later than 31st August, 1944.

There will be an entrance fee of 5s. payable by each competitor. This should be sent to the Secretary of the Dartington Hall Trustees, Dartington, near Totnes, Devon, who, on receipt of the fee, will forward a copy of the Conditions and Site Plan.

Members of the Forces will not be required to pay a fee, and if they are desirous of competing, they should arrange to obtain particulars from their own Service Department responsible for dealing with such matters. 595

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FOR SALE, First Edition, six volumes Racinet "Le Costume Historique." Perfect condition. What offers? Apply N. Turner, Holly Tree, Sandhurst, Camberley, Surrey 277

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

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WANTED by student, *Building Science* by Barrow, *Builders Materials* by Grundy, *Specification*, 1940, by Yorke. Please write, stating price, to Mr. J. Towner, 9, Ridley Road, Rochester. 583

Educational Announcements

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

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