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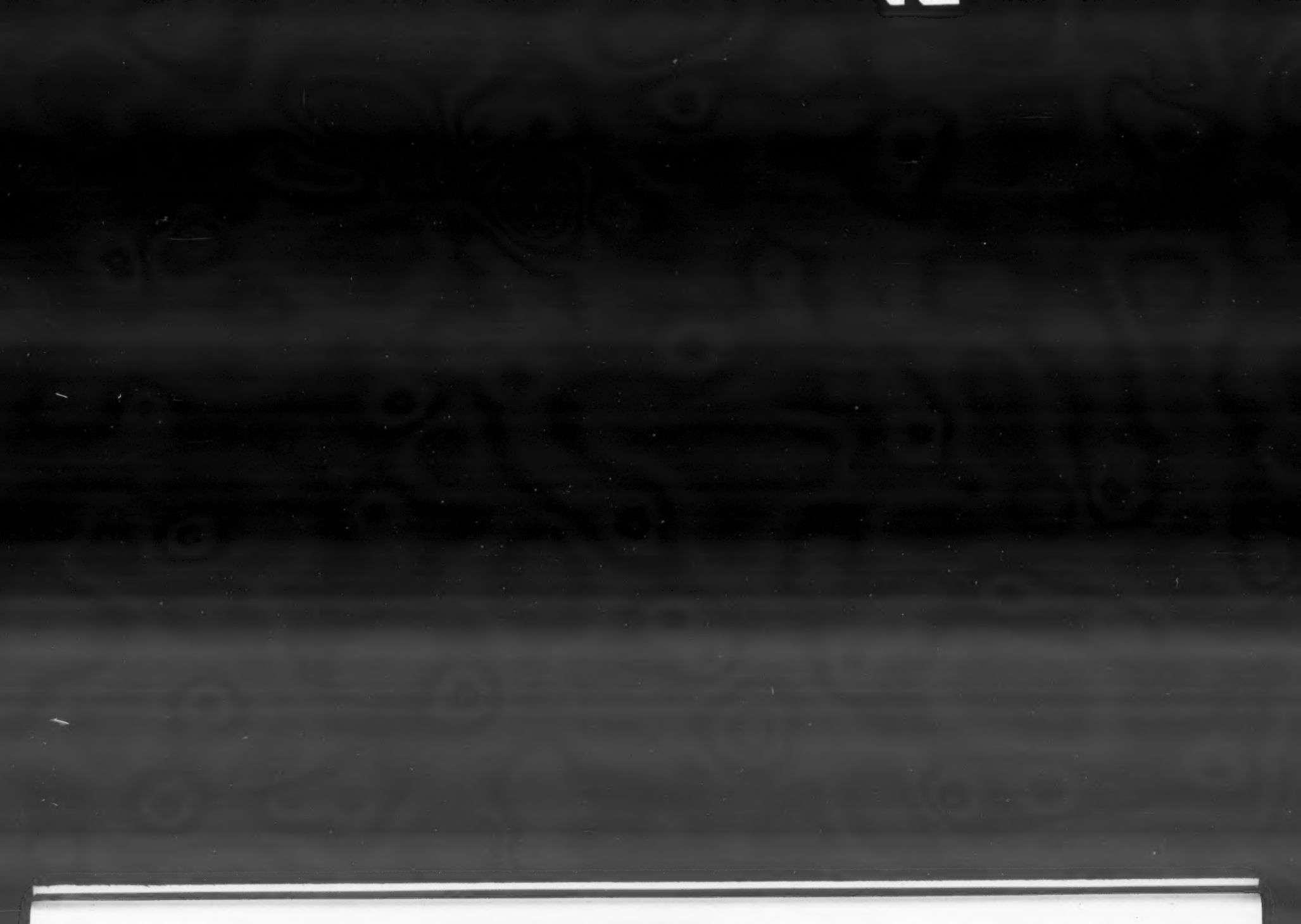

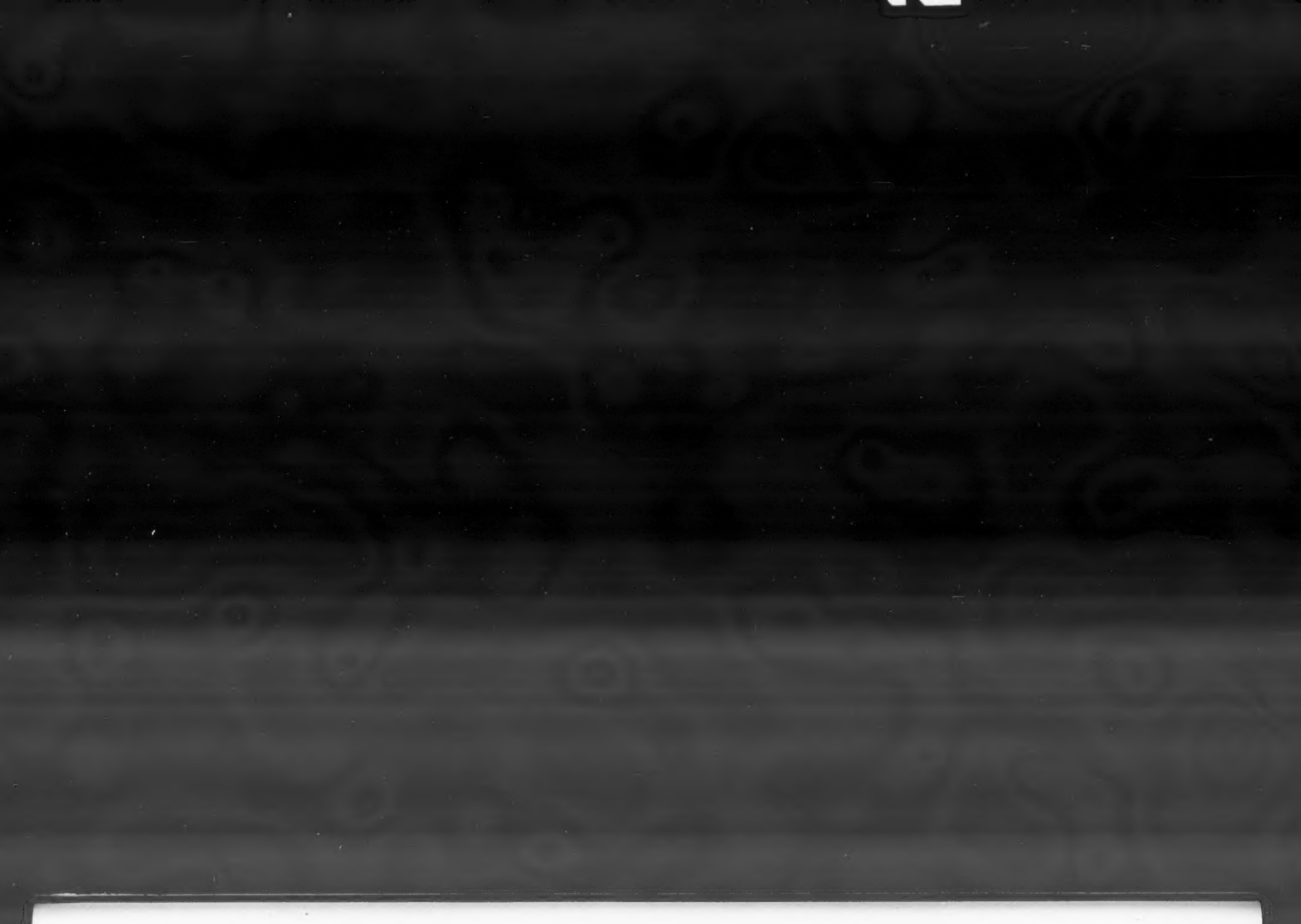

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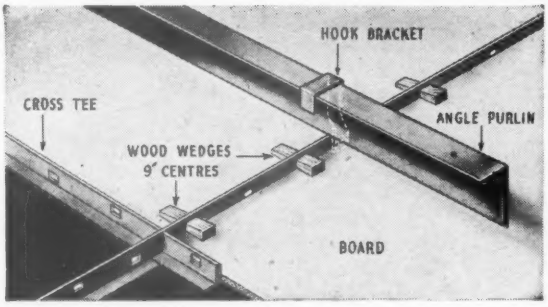

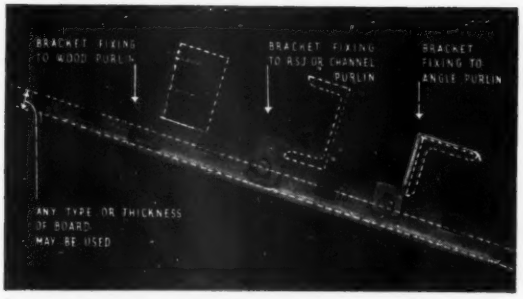

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AN/40

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WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE)
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The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, OCTOBER 8, 1942. NUMBER 2489: VOLUME 96

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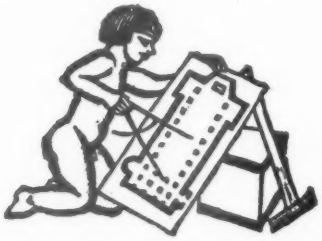
The fact that goods made of raw materials in short supply owing to war conditions are advertised in this JOURNAL *should not be taken as an indication that they are necessarily available for export.*

Owing to the paper shortage the JOURNAL, *in common with all other papers, is now only supplied to newsagents on a "firm order" basis. This means that newsagents are now unable to supply the* JOURNAL *except to a client's definite order.*

In common with every other periodical and newspaper in the country, this JOURNAL *is rationed to a small proportion of its peace-time requirements of paper. This means that it is no longer a free agent printing as many pages as it thinks fit and selling to as many readers as wish to buy it. Instead a balance has to be struck between circulation and number of pages. A batch of new readers may mean that a page has to be struck off, and conversely a page added may mean that a number of readers have to go short of their copy. Thus in everyone's interest, including the reader's, it is important that the utmost economy of paper should be practised, and unless a reader is a subscriber he cannot be sure of getting a copy of the* JOURNAL. *We are sorry for this but it is a necessity imposed by the war on all newspapers. The subscription is £1 3s. 10d. per annum.*



from AN ARCHITECT'S *Commonplace Book*

It was by his extraordinary diffusion of Gothic forms, rather than by any one great building, that Scott influenced the taste of his time. From his well-equipped office he peppered England with churches, and all over the country cathedrals in bright new shells showed his healing touch. The size of practice seems to have given him satisfaction, though to more conscientious builders it might seem a matter of shame. Once when Scott had left town by the six o'clock train, his office, on slackly assembling, found a telegram from a Midland station asking, 'Why am I here?' On another journey he is said to have noticed a church that was being built and to have inquired who was the architect. 'Sir Gilbert Scott,' was the reply—a classical story about busy painters, but I have never heard it told of another architect.

From the Gothic Revival *by Kenneth Clark.*

Though every news item is news to someone, it doesn't follow that all news has the same value for everyone. The stars are used to draw attention to the paragraphs which ought to interest every reader of the Journal.

★ *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 paragraph marked with more than two stars is very hot news indeed.

N E W S

The Government are consistently adopting a policy of SPREADING THE AVAILABLE BUILDING WORK *among as many suitable firms as possible. The methods of achieving this have been worked out with the help of the National organisations and include such measures as extending the lists of contractors invited by Government Departments to tender for work; requiring contractors to put work out to sub-contract: preventing the overloading of individual firms; and using the Works and Buildings Emergency Organisations in drawing up tender lists for contracts under £25,000.*

This statement was made by the Parliamentary Secretary, Mr. George Hicks, as Chairman of the National Advisory Committee, to a deputation from the Federation of Greater London Master Builders received by the Advisory Committee which assists the Government Directorates responsible for the building programme and which comprises representatives of the national organisations of building and civil engineering employers and operatives. Mr. Hicks pointed out that the total amount of new work and the total amount of labour are now not more than 60 per cent. of the normal. The location of war work is fixed by the needs of the Service Departments, and little of the new work is in London. All repairs, alterations, maintenance and private work have inevitably been drastically reduced. Contraction of the industry must become increasingly severe as the present programme is completed and as the demands of the Forces for man-power become more insistent. This matter was receiving close study by the Government and would need close study also by the Industry.

★

The Minister of Agriculture has appointed DR. L. DUDLEY STAMP, ADVISER ON RURAL LAND UTILISATION. *He will advise on the agricultural aspects of Town and Country planning schemes.*

Dr. Stamp, who is 44 and brother of the late Lord Stamp, carried out pioneer work as Director of the Land Utilization Survey of Great Britain. He was vice-chairman of the Scott Committee on Utilization of Land in Rural Areas. See Astragal's comments on p. 228

★

To be given on October 10 and 17, R.I.B.A. LECTURES ON BUILDING DEVELOPMENTS, *scientific and technical, affecting architects. They are the first of three groups, each comprising four lectures, arranged for the winter months. The course is being arranged by the R.I.B.A. Architectural Science Board with the co-operation of the Building Research Station and other interested Government Departments and the military authorities. Admission to the lectures is free, and architects serving with the Forces are specially invited. The programmes and synopses of the first four lectures are given on page 239.*

★★★

Mr. Churchill, the Prime Minister, stated in the House of Commons that he had arranged for the PAYMASTER GENERAL TO EXAMINE THE UTHWATT AND SCOTT REPORTS *and other proposals for amending planning legislation. Mr. Churchill said he had done*

To Organize Job Committees

A big campaign for the complete reorganization of all salaried workers in the building industry is to be undertaken by the A.A.S.T.A. Its object is to enable the salaried workers to play a more effective part in the war effort. The National Organizer is Mr. Birkin Haward, A.R.I.B.A. The most urgent and vital need is for the immediate formation of job committees under the leadership of architects or technicians. This is emphasised most forcibly in the report of the A.A.S.T.A. discussion on page 238 and Astragal's notes on page 229. Mr. Haward has been appointed to the post by the unanimous vote of the Council because of his exceptional organizing abilities, his comprehensive knowledge of the building industry and his long experience in Association work. He has worked on large R.O.F. and other jobs. In this way he has become well acquainted with the problems of all building technicians and with the organizational difficulties of the building industries. As hon. secretary of a large A.A.S.T.A. branch he has had excellent experience in trade union work.

this in view of the heavy responsibilities now falling on MOWP.

He was answering a question by Mr. Mander whether it was now proposed to adopt and put into effect the recommendations in the Reports of the Uthwatt Committee and the Committee on Land Utilization in Rural Areas; and when legislation would be introduced setting up a central planning authority.

Other points from Mr. Churchill's reply were: These reports cover a very wide field, on which consultation will be necessary with several Government Departments. No change is involved in the current administration of the Town and Country Planning Acts, but the Paymaster-General will be able to call upon the Planning Staff of MOWP as well as on the other Departments concerned, for such assistance and advice as he may find necessary. I am confident that he will receive valuable help from the Joint Parliamentary Secretary of MOWP.

The National Federation of Building Trades Employers has unanimously decided NOT TO ACCEPT THE NEW STANDARD FORM OF GOVERNMENT CONTRACT, *pending negotiations with the Government Departments concerned. The Federation of Civil Engineering Contractors has made a similar decision.*

Both Federations, though they fully accept the Government's view that a single form of contract is desirable, have represented to the Ministers concerned that the new form, upon which the industrial organisations have not been consulted, is based upon principles which they regard as very unfair. A memorandum on the subject issued jointly by both Federations appears on page 240.

Mr. Francis Lorne, F.R.I.B.A., ASSISTANT DIRECTOR (STANDARDS) *in the Directorate of Post-War Building has resigned owing to ill-health. His successor is Mr. G. Grey Wornum, F.R.I.B.A.*

There is, in certain quarters, a misapprehension with regard to the manner in which the rights of the various parties to receive payment from the War Damage Commission may be affected by the SALE OF WAR-DAMAGED BUILDINGS *or land.*

The War Damage Commission state: If a property is so seriously damaged as to be a total loss within the meaning of the War Damage Act, a value payment is made to the persons who hold proprietary interests in it at the time of the damage. If, on the other hand, the property is not so seriously damaged as to be a total loss the usual payment is a cost of works payment. This is made to the person who actually incurs the cost of repair. This person would normally be the purchaser if the sale is effected before the damage is made good.

Any person, therefore, who sells property which has suffered war damage at a price based on the assumption that he will receive from the Commission a payment representing the difference between the value of the property before the damage and the sum at which he sells it in its damaged state, is liable to suffer serious loss if in fact it is eventually found that the property is one which can, and should, be repaired, since it is the purchaser who will be entitled to claim from the Commission the cost of the repair.

★

In a letter to Mr. W. E. Rice, the President of the London Master Builders' Association, Mr. Hugh Beaver, the Director-General of MOWP, issues the warning that GREATER REDUCTIONS IN THE RANKS OF THE BUILDING INDUSTRY *must shortly be faced.*

The question remains, says Mr. Beaver, as to how the industry is to face the contraction that must become increasingly severe as soon as the special urgency building programme is completed and when the demands of the Forces for man-power become more insistent. Extracts from Mr. Beaver's letter appear on page 240.

★★

To be shown at the R.I.B.A. on October 21, at 6 p.m. the TALKIE FILM ON PREFABRICATION, *brought back from America by Mr. Jellicoe, which unfortunately failed to arrive at the meeting on September 30. All members of the R.I.B.A. are invited to attend.*

The Government's decision on the Scott and Uthwatt Reports, published in the Journal, *August 20 and September 10, is still pending. Both have been referred to the Paymaster-General.* Normal procedure would have been to submit both reports to Lord Portal, successor to Lord Reith who appointed both Committees. Does this mean that these important issues are to be shelved? It is obvious that proposals as far-reaching as these require some time for consideration, but the hour is approaching when we can reasonably expect an authoritative pronouncement on them. The leading article below deals with major issues of the*

UTHWATT REPORT

THE most surprising part of the Uthwatt Report is the part which deals with principles of Compensation. The Committee's recommendations are not novel; their possible merits have been discussed by innumerable writers. But this report has completely altered the perspective in which these matters have been viewed till now because the men responsible for it, unlike most writers on Town and Country Planning, are authorities on English Common Law. It comes as something of a shock to one who has waded through volumes of inconclusive argument on this seemingly insoluble problem, to read the following sentence. "When the regulatory power of the state limits the use which an owner may make of his property but does not deprive him of ownership, whatever rights he may lose are not taken over by the State; they are destroyed on the grounds that their existence is contrary to the national interest. In such circumstances no claim for compensation lies at common law." In other words no claim at all to compensation lies at common law unless the State requisitions land for its own use, and in fact only a small fraction of the total number of claims for compensation, actual or potential, that have till now prevented the carrying out of town and country planning schemes, fall into this class.

The Report continues that when real hardship might otherwise result the state *may confer* the right to compensation. The Restriction of Ribbon Development Act, 1935 and the Town and Country Planning Act, 1932 are examples of this type of State intervention on behalf of the land-owning class. This principle of common law has made it possible for the committee to steer clear of politically awkward suggestions such as immediate nationalization of the land, without sacrificing any of the advantages that might be expected to accrue from such a step. The negative powers necessary for

* details of this action are given on page 225.

Town and Country Planning can, it is suggested, be secured by the simple expedient of forbidding development that is not in accordance with Town and Country Planning schemes and giving the Minister power to exclude compensation in all but four types of case.* As, however, efficient control of development would in many cases result in great hardship and involve inconsistent treatment as between individuals, the Committee recommend the purchase of development rights of all undeveloped land. But they make it clear that such a payment would be an act of grace. "Whether or not in all the circumstances which will obtain after the war compensation *should* be paid in respect of the imposition of the restriction on development is *a matter of policy* upon which it is not for us to express an opinion." Assuming that compensation will be paid they recommend that a global sum be fixed, based on the State's economic prospects.

Town and Country Planning however cannot be carried out entirely by negative means. It is necessary not only to prevent development in the wrong place but to make certain that it takes place promptly when and where it is wanted. Where positive powers of this kind are needed the Committee recommends compulsory purchase, at the price which a willing seller might be expected to realize in the open market. If these recommendations are accepted there will be virtually no limit to Town and Country Planning Authorities' power to purchase land; they will be allowed to purchase (i) for acceleration of planning (ii) in advance of requirements (iii) for recoupment and (iv) for adjustment of boundaries. The Report does not, however, look forward to the authorities themselves undertaking to develop land on any considerable scale. In fact it states quite definitely "the authority should have compulsory powers to purchase land for positive development or redevelopment by the authorities themselves, but only when this is essential to accelerate the carrying out of the scheme."

The tremendous increase in State ownership which the Uthwatt Committee suggests as the cure for the compensation problem in built-up areas is to be financed by (i) the collection at five-year intervals of a 75 per cent. tax on increased land values (ii) by drastic limitation of the sums that can be claimed as compensation on other grounds (see above). The latter have in the past been the town planners' most formidable stumbling block.

The tone of the report, which is both radical and fair, is summarized in the following sentence, "Objectors to the principle of assessing compensation on the bases suggested by us are compelled either to object to the acquisition being necessary in the interests of national planning, or to object to national planning itself, or to assert that a payment known to be too much should be made or to assert that no sum at all should be paid."

* (i) Permanent reservation against building (ii) prescription of building lines (iii) termination of a non-conforming user by the action of the authority before the end of its "life," (v) prohibition of mineral working.

The Architects' Journal
War Address: 45, The Avenue, Cheam, Surrey
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NOTES & TOPICS

THE ALL IMPORTANT REPORT

It seems very hard to explain why so little attention has been paid to the Uthwatt Report in the four weeks since its publication. We had believed that a very large number of the public were keenly interested in reconstruction and knew the need for effective preparation for it. Yet the Uthwatt Report, which deals with the most important of all preparations, has been dismissed, after the first two days, with a few short and not very enthusiastic reviews in the weeklies.

★

The Report is, of course, tough reading. Possibly only a hundred or so experts in land valuation and acquisition can comprehend the full meaning and intention of its detailed proposals. But most persons who have had any experience of town planning and its legislation can, with determination, understand its main recommendations and their potential consequences; and many such people are at the disposal of the Press. Yet their services have not been used.

★

The reception of the Report by the left wing progressives has been particularly depressing. Nationalization of all land in a nice grand sweep is not advocated; and one can't help thinking that this has served as excuse to avoid some hard

mental effort. It has been prophesied already that Transport House may offer more opposition to worth-while reconstruction than all except the most die-hard minority of Conservatives ; and the prophecy may soon have to be extended to include the intelligentsia.

★

Those who find leisure to study the Report carefully will most certainly come to the conclusion that its signatories are not only experts but have by sheer hammering at the hard facts, reached conclusions which would not only allow reconstruction and future development to be fully planned, but also give full consideration to all rights of ownership which have a firm basis in law and equity.

★

Consider only the first of the two big recommendations—the acquisition by the nation of the development rights in all undeveloped land. Of this one can only feel what many motorists have felt about a differential gear : a wonder that anyone could ever think of something so odd, so simple and so competent to fulfil its purpose.

★

The recommendation would give the Central Planning Authority all the power it needs to plan while sidestepping both the political opposition and the immense financial and administrative difficulties involved in public purchase of all land. The owner of a farm and farmland still remains its owner ; he can sell it, improve it and if need be rebuild or extend its buildings. He pockets a sum representing the value of its development rights at a given date, and he can leave it freehold to his grandchildren (as farmhouse and farmland).

★

The only thing he cannot do is what 95 per cent. of landowners either do not want to do or have no opportunity of doing—sell it at several times agricultural value as jostling space for speculative semi-detacheds. Any development for housing or for any other purpose will be planned by the nation and the profits will go to the nation.

★

One does not see what more anyone can want, unless one holds that landowners ought somehow to be punished just for being landowners. Those who believe that the shortest cut to Utopia is for " the State " to own almost everything*, have the solace that as each piece of land is developed the State will become its owner. While if the Minister of Agriculture retains after the war power to see that rural land is well used (and many people believe that he should and must), then the use of the whole land surface of Britain will be under public supervision, and, one hopes, skilful public supervision. That is what is needed. That is all that is needed, and the Uthwatt Report recommends that it should be obtained.

DR. STAMP'S APPOINTMENT

An interesting postscript to the Scott Report is the appointment of Dr. Dudley Stamp as permanent adviser to the Ministry of Agriculture on rural land utilization. Dr. Stamp, director of the Land Utilization Survey of Great Britain, is said to have been largely responsible for the report in question.

★

Dr. Stamp has said that the basic idea behind his appointment is that agriculture should be an essential partner of all future planning. But without being New Statesmanish it is difficult to see how this partnership is to be made effective until the recommendations of the Uthwatt Report are put into operation.

VERDICT ON MESSRS. WIMPEY

The Report of Mr. J. L. Clyde, K.C., on the allocation of Government contracts in Scotland to Messrs. George Wimpey† is reassuring and satisfactory. It starts by saying :—

" The considerable share of the total contracts placed by the Government departments during the war with Messrs. Wimpey & Co. is essentially attributable to their own proved merit,"

and comments on the efficiency of the organization the firm have built up, and on the low proportion of cost plus contracts secured by them.

★

Having cleared the character of all parties concerned Mr. Clyde goes on to say that throughout the enquiry he has felt that *some of the Government departments concerned* have paid too little attention to the need in the national interest of keeping smaller firms alive :—

" Wherever it is practicable to entrust separable and less extensive items of work on a large site to these smaller firms it appears to me ultimately to be in the national interest to supply them."

INEVITABLE CONTRACTION

In the meantime Mr. Hugh Beaver's reply to the London Master Builders' Association seems likely to line them up with the Federation of Greater London Master Builders, who protested to Parliament some weeks ago because so many of their members were being left without work to do.

★

In so far as idleness results from bad distribution of work, the building industry seems to have a case. But reading between the lines one cannot help feeling that their real grievance is what Mr. Beaver calls the inevitable contraction of the industry. One of the suggestions of the Greater London Federation of Master Builders was that permits should be granted for more repair work and rehousing.

★

In fact the policy of having a garrison with no work to do is not proving any more satisfactory than the JOURNAL prophesied it would many months ago.

★

There are two possible courses of action (i) to make work for the emergency reserve of small builders, which means making more materials and more labour available ; (ii) to abolish or drastically reduce the emergency reserve by telescoping or by closing and compensating superfluous firms. It's time MOWP and the industry agreed to pursue one or the other. The time when we could afford to allow large numbers of idle people to stand around holding stretchers, manning fire brigades or petitioning Parliament is now over—if there ever was such a time.

JOB COMMITTEES

Mr. Cruikshank's contribution to the discussion* on job committees, organized last week by the

* A view likely to be increasingly opposed unless the servants of " the State " show themselves far more competent than they have done during three years of war.

† C.M.D. 6393 Stationery Office, 6d.

* Reported page 238.

A.A.S.T.A., made it clear how badly the leadership of technicians is needed if these committees are to bring about a further increase of output to offset the inevitable shrinkage Mr. Beaver predicts. Mr. Cruikshank, a contractor's labour officer, spent most of his time talking at the trade unions whose main concern, he lamented, was not production but their own conditions of employment.

★

His speech provoked what Mr. Jack Ryan, replying, described as the inevitable boomerang. The latter, spokesman of the Amalgamated Union of Building Trade Workers, dared, even at this stage of the war, to talk of the threat of unemployment — astonishing boldness considering the fight now raging over the bodies of the few remaining building trade operatives.

★

Unless technicians take an interest in job committees and exert themselves to change the tone of the conversation, it seems unlikely that they will turn out a new breed of Stakhanovitch.

R.I.B.A. TALKIE FILM

Dear Astragal,—I do not know if you were present* at the farce of the much-publicized meeting at the R.I.B.A. last Thursday to see and hear the talkie film of American prefabricated houses.

One felt sorry for Mr. Jellicoe, but nevertheless it was not good enough, and when we were finally dismissed, in the melee to get our hats and coats one overheard expressions that the whole affair was indicative of us as a nation.

It is all very well to say that MOWP have 13,000 (or was it 130,000) staff, but I believe the L.M.S. have 300,000, and it would go hard with them if the engine driver turned up to run the express and there was no engine. There we were, a goodly crowd of us, with screen, loud speaker and projector, and everybody nicely anticipatory, and after an hour's wait, which was filled in very adequately by Mr. Jellicoe and Captain Reiss giving descriptions of their experiences and opinions of the prefabricated houses they had seen in America, it was most disappointing to hear that the film had been mislaid and was not available.

Finchley. A. P. LLOYD.

ASTRAGAL

*No, but the film is to be shown on October 21. I have shown this letter to Mr. Jellicoe, who states that the Ministry allowed him to show the film in a private capacity and he wishes therefore to take full responsibility for its non-appearance.

LETTERS

Ninety Members of MOWP and the L.C.C.

John Gloag

F.R.I.B.A.

Hugh Davies

R.I.B.A. Election—the Next Step?

SIR,—The ninety members of the architectural staffs of MOWP and the L.C.C. Architect's Department who signed the letter calling for an R.I.B.A. election, welcome the support which your leading article of September 17 gives to our request. While we would be quite prepared to collect the necessary signatures required for a postal poll of the membership, and our experience shows that this would be a relatively simple matter, we agree with your observations that a move on the part of the Council or War Executive Committee "would be preferable by far."

The forthcoming series of lectures on "Recent Developments in Building Science affecting Architects" and the showing of the film on prefabrication indicate that at last there are signs of movement and interest in the important issues of to-day. But we want more than this, we want a policy for the architectural profession which is vigorously pursued and commands the support of the membership; this necessarily involves an R.I.B.A. election.

As you do, Sir, we look to the Council for initiative in this direction, but we are not prepared to wait indefinitely. If the Council does not take action, the Members must and will.

H. L. BARTON (A),
L. F. RICHARDS (A),
Members of the staffs of MOWP and the L.C.C. Architect's Dept.

Mass-Production Technique as applied to Housing

SIR,—At the meeting held at the R.I.B.A. Headquarters on September 30, some matters of far-reaching importance were discussed concerning the application of the technique of mass-production to the building of houses. In the course of a singularly informative impromptu talk, Mr. G. A. Jellicoe succeeded in making a large audience forget that the original purpose of the gathering was to view a film on prefabricated housing that he had recently brought back from the United States: indeed, the fact that, through some oversight, the film was not available for showing, hardly mattered, for no film could have expounded with Mr. Jellicoe's lucent clarity the principles upon which American builders and architects are operating vast schemes of war-time housing.

It is a fact that the application of mass-production to house building has in the past been tentative: an infiltration of new ideas has, from time to time, furnished a considerable variety of standardized house parts, progressively convenient and, if used in sufficient quantities, comfortingly economical. But hitherto standardized window frames, doors, plumbing units, kitchen equipment, and so forth, have been thought of as separate items, unrelated by any common system of dimensions which would enable them to be assembled with the maximum of speed and the minimum of labour.

Mr. Jellicoe described an entirely different approach to the building of houses. I had become familiar with it myself when I was in California in 1939; but now, under the impetus of war housing needs, it has apparently gained wide acceptance. It is the machine conception. The mechanical parts of the house, the plumbing, heating and cooking units, are regarded as the *engine*. The house is the *body* which is activated by this engine. If the analogy appears outrageous to those who believe, as Wren believed, that "Building certainly ought to have the Attribute of Eternal," they should remember that to Mr. Jellicoe's descriptions of such pre-fabricated machine houses the word "demountable" was discreetly attached. Mas-production which has affected such diverse things as ships, shoes, cars, chairs, combs and aeroplanes, and has influenced the organization and character of so many industries, has only affected the building industry in a piece-meal way.

Now, the benefits of this potentially beneficent technique can affect the whole house. If the architect directs the making of houses from mass-produced, prefabricated "engine" and "body" units, we shall have design; if the speculative builder gets to work, we shall have disguise.

Seldom have architects in Britain or America had such an opportunity—or such a responsibility.

London. JOHN GLOAG.

Unity in the Profession

SIR,—In the mood of "All's well that ends well" Mr. J. H. Bradford asks what matter which particular designation an architect puts after his name so long as his work is good; he misses the fact that the two aspects are not unrelated.

"Designations" are indicative of the standard the architect has reached in his professional education, the object of which should be to ensure that his work shall be good in all

respects. The value of the designation varies according to the severity and thoroughness (or otherwise) of the tests applied before its award, and ranges in degree from the hallmark of the high standards of the R.I.B.A. to those affixes which signify nothing more than the payment of an annual subscription (and even that does not reach R.I.B.A. standard).

Mr. Bradford affects a lofty contempt for examinations yet agrees that they are desirable in the exact sciences connected with building. His acid test for qualification as an architect—the production of a building worthy to be called a fine piece of architecture—reminds me of the parent who would not allow his son to enter the water until he could swim. He appears to consider that there are no standards by which creative ability may be judged but nevertheless he is able to commend the work of many unqualified architects living to-day.

The simile of the wounds that were beginning to heal betrays little knowledge of the original diagnosis or the history of the case. I suggest that the position as between a professional body incorporated by Royal Charters granted by William IV, Victoria, Edward VII and George V, and the mushroom societies which sprang into existence a few years ago to dispense affixes to those who had hitherto found them unattainable, is better described by the title of the famous canine study by Landseer.

Mr. Bradford's considerable amusement in contemplating the title of this correspondence is shared by me when I read that none of my letters has had any connection whatever with unity.

Unity by association between the R.I.B.A. and the mushroom alternative societies is impossible ; the Institute's high standard of qualification will never be lowered to their level and their ultimate extinction through the operation of the qualifying test under the Registration Acts can only be a matter of time. True unity, one professional institute embracing the whole profession, will be achieved in the next generation in any case; my proposals have indicated how that event might be expedited.

Cheshire. F.R.I.B.A.

Architectural Registration

SIR,—For the past three years I have styled myself " architect," although refused admission to the Register. I have repeatedly informed the Registrar of my waywardness, but maybe my case defies repression, for I was discharged from the last war as an architect. I have registered for this war as an architect and now style myself " Registered Architect."

Catterick. HUGH DAVIES.

On September 30 a film called the HOMOSOTE HOUSE *was to have been exhibited at the R.I.B.A. The film* shows 653 employees of Armor Products Inc. completing a contract for 900 houses in 40 days. In the article below the methods of this type of American firm are examined.*

Prefabrication in AMERICA

THE principle of applying prefabrication to building is not new. In the strictest sense bricks, doors, windows and much of the equipment of a house are prefabricated in conventional construction. Now, however, the term prefabrication is generally understood to mean the application of the same principle to larger units. More of the work is done in the factory or shop, and site erection is generally notable for " dry " rather than " wet " construction. The development is a logical one, a good example of industrial progress in building.

Recently prefabrication has become news. From the discussions in the technical press and the spirited correspondence in *The Times*, it is evident that a wide range of people is interested in the subject. Technical novelty alone is not the reason for this interest. Nor are the dramatic savings in time, labour and money achieved in the American defence housing schemes by the use of prefabricated construction. The main reason is that of all the widespread and powerful interests which go to make up the building industry, there is scarcely one which would not be affected in some way by the development of prefabrication in this country.

Architects themselves are intimately concerned in all building developments, and many are earnestly discussing the possible effects that prefabrication may have on their future. The purpose of this article is to look once more to America, to examine the growth and methods of two firms which are now making prefabricated houses, and to examine their relationship with the architectural profession.

The struggle to prefabricate houses has been going on for more than twenty years in America, and from all the experiments made and all the enterprises started, a few concerns have survived to operate on a commercially successful basis. These concerns are now an established fact in the American building industry, and through the defence housing programme are making a valuable contribution to the war effort. One of them is the Gunnison Housing Corporation.

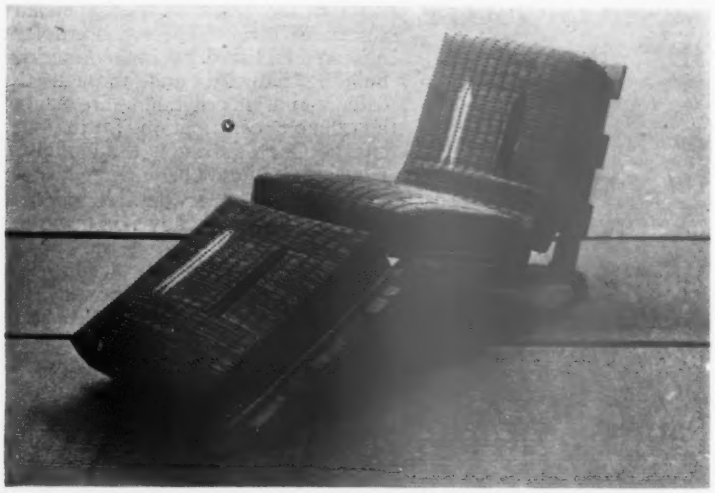
Among the first to be a commercial success, this company is now the largest of its kind in America. Foster Gunnison was originally trained to be a journalist. He never followed the profession, but bought a small lighting business which, in a few years, he had turned into a flourishing concern. He then abandoned lighting and went into prefabrication, backed by Owen D. Young, of the General Electric Corporation. He was to act as a co-ordinator of a group of experts. After four years they produced a house, but it was too much like a laboratory product, and though it excited a lot of comment, no-one wanted to buy it. It was then Gunnison realized they had been looking at the problem too much from the technical point of view, and had been trying to adjust house design to machines, instead of the other way round.

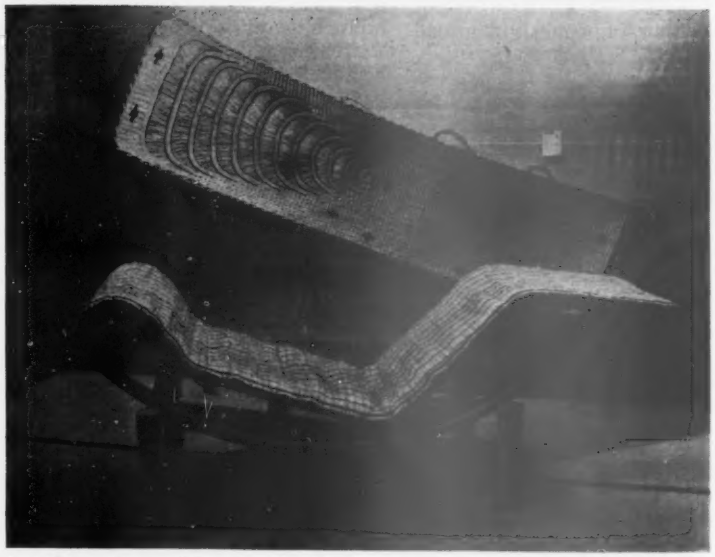
He made a fresh start, this time asking his backer to release him from using any particular materials or equipment, and in two years had produced a type of house to which the public was more accustomed. The basic structural panel is timber framed, packed with mineral wool insulation, and covered both sides with sheets of phenolic resin and resin-bonded plywood. The panels are placed in hot presses, in which the phenolic resin bonds the parts together without the use of nails. Gunnison now makes nine standard sizes of house in two price ranges, and provides " architectural features " which can be added to taste, which may include a garage, connected by a covered arcade, a porch, window boxes, paths, drives and fencing. In war-time the firm is producing a third range of houses to suit the requirements of America's defence housing programme.

The organization is a large one, including departments dealing with research, engineering, production, erection, advertising, sales, mortgage financing, estate management, legal questions and accounting. A significant point is that when evolving a type of house, its plan and equipment are laid down by the sales department. When agreement is reached it goes to the industrial designers, who develop drawings from which templates, machines and plant lay-out evolve. The whole effort is given its direction by considering what sort of house the public will buy, and the advertising campaigns of the firm are not focused on technical aspects at all, but on the virtues of the houses as houses to live in.

*The film will now be shown on October 21. See page 227.

SHADES OF BREUER





In Japan the traditional method of eating, resting and sleeping on the floor is being gradually abandoned in favour of westernised furniture. These three pieces in bamboo by Madame Charlotte Perriand show the strange way modern European furniture, which owes so much to Japanese, is being re-absorbed by a nation resolved not to be left behind by the West.

It will be noticed that industrial designers have been mentioned. The Gunnison Corporation, and other firms of the same type, have tried using the services of architects trained for general practice. It has been found that only those who are temperamentally suited are able to adapt themselves to the specialized, co-operative function required. Trained industrial designers have been found much more willing to work in close harmony with the sales and production departments before attempting to do anything in the way of design. As this is an essential feature of their organization, such firms as these have tended to give up architects in favour of industrial designers.

There is another branch of the work to which architects are in some ways suited, namely site planning. In fact Foster Gunnison has been approached by several architectural schools in America who are anxious to modify their courses, to enable students to have a basic training in architecture, to be followed by specialized courses in either industrial design or site planning.

The other firm to be discussed is Armor Products Incorporated. Starting from the same idea as Gunnison, they have closely studied public tastes and based their products on the results of their research, though the methods they have adopted are somewhat different. Armor Products were originally large exporters of engineering specialities and building materials. Instead of going in for a finished factory-made product they have attacked the prefabrication problem by specializing in what they call "pre-engineering." They have devised two standard methods of construction, one using steel framing members and the other timber. Whichever system is chosen the client's plan is taken as a basis, and if necessary modified slightly to fit the standard construction. Since a 4 in. horizontal modular system is used, generally speaking dimensions need not be altered by more than 2 in.

In the case of steel construction all members are cut to size in the factory, and packed with nails, screws, putty, etc., and erection notes, in one compact delivery to be erected at site. In the timber system sections of walling are built up in a timber merchant's yard, under cover, as near as possible to the site. They are carried by lorry to the place of erection. The firm makes a wide range of wall panels for cladding the steel or timber framing. The principal of these is called "Homosote," which uses a paper base reprocessed chemically to make a highly efficient board.

Armor Products claim that their systems, not prefabrication in the fullest sense, have two main advantages. Firstly, as the firm exports a great deal, transport costs and duties are cut

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TABLES SHOWING COMPARATIVE EFFICIENCIES OF CENTRALLY LOADED COLUMNS COMPOSED OF STD. & NON-STD. SECTIONS.

Table 1 : l = 10 ft., N = 60 tons.

PLAN OF COL.MN	Weight ℔/run, lbs.	Excess capacity.	Efficiency coefficient.
7½'.x 7/16' circular.	33·0	3·2%	0·88
6'.x 5/8'. circular.	35·9	4·0%	0·82
6'.x3½'. channels.	32·96	2·8%	0·79
9'.x7'. R.S.J.	50·0	28·0%	0·73
5'.x3'. R.S.J., 8'.x ½'. plates.	38·2	7·9%	0·72
6'.x6'.x½'. angles.	39·1	19·5%	0·78
4½'.x4½'.x¾'. angles.	42·08	11·0%	0·68
8'.x3½'.x⅜'. angles.	46·22	1·0%	0·56
5'.x 4½'. R.S.J.	40·0	11·2%	0·75
6'.x¾'. plates, 3'.x⅜'. plates.	38·2	1·3%	0·60

Table 2 : l = 16 ft. N = 60 tons.

PLAN OF COL.MN	Weight ℔/run, lbs.	Excess capacity.	Efficiency coefficient.
8'.x7/16 circular.	35·3	1·0%	0·81
6½'.x¾'. circular.	46·1	1·0%	0·62
9'.x3½'. channels.	44·54	11·4%	0·65
9'.x3'. channels, 3'.x3'.x⅜'. plates (battens) @ 30'.ct.	34·92	5·0%	0·63
8'.x3'. channels, 4'.x⅜'. plate.	37·0	5·8%	0·68
12'.x8'. R.S.J.	65·0	11·8%	0·49
8'.x5'. R.S.J., 9'.x½'. plates.	58·5	19·1%	0·51
7'.x7'.x½'. angles.	45·9	23·0%	0·66
6'.x3'.x⅜'. angles, 5'.x 1'. plates.	56·0	1·0%	0·41
5'.x4½'. R.S.J., 5'.x 3'. R.S.J., 5'.x4½'. R.S.J.	51·0	3·4%	0·46
7'. x 1'. plates, 3'. x ⅜'. plates.	55·3	2·0%	0·42
8'. x ⅜'. plates, 6'. x ⅜'. plates.	35·8	0·5%	0·63

Table 3 : l = 16 ft., N = 120 tons.

PLAN OF COL.MN	Weight ℔/run, lbs.	Excess capacity.	Efficiency coefficient.
11'. x 5/8'. circular.	69·3	5·0%	0·86
9'. x⅜'. circular.	75·9	7·3%	0·80
15'. x 4'. channels.	72·74	5·2%	0·73
13'. x 4'. channels.	66·36	4·0%	0·72
12'. x3½'. channels, 6'. x ½'. plate.	63·0	1·0%	0·80
10'. x 1'. plates, 8'. x⅜'. plate.	78·0	3·1%	0·67
12'. x5'. R.S.J. 12'. x ⅝'. plates.	83·0	4·9%	0·63
8'. x 8'. x¾'. angles.	77·78	11·1%	0·72
6'. x3'. x⅜'. angles, 12'. x 1'. plates.	103·5	0	0·45
5'. x 4½'. R.S.J.	100·0	1·2%	0·43
10'. x ½'. plates, 9'. x ½'. plates.	64·6	1·0%	0·69
14'. x 1'. plates, 3'. x ⅜'. plates.	102·5	0	0·44

The welds between individual members of compound columns have not been indicated. (See previous Sheets of this series).

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INFORMATION SHEET : STEEL FRAME CONSTRUCTION 84 : WELDING 40.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1

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INFORMATION SHEET • 880 •

STRUCTURAL STEELWORK

Subject : Welding 40 : Comparative Efficiencies of Columns consisting of Standard and Non-standard Sections.

General :

This series of Sheets on welded steel construction is a continuation of a preceding group dealing with riveted and bolted construction, and is intended to serve a similar purpose—namely, to indicate the way in which economical design as affected by general planning considerations may be obtained.

Both the principles of design, and the general and detailed application of welded steelwork are analysed in relation to the normal structural requirements of buildings. The economies in cover and dead weight resulting from the use of lighter and smaller steel members and connections are taken into consideration in the preliminary arrangement of the building components, in order to obtain maximum economy in the design of the steel framing.

On Sheets No. 37, 38 and 39 of this series Efficiency Coefficients were given for circular columns, and columns made up of two channels and of two angles. In addition, Efficiency Coefficients for columns consisting of an R.S.J. and plated joists can be taken from Sheet No. 11 of the riveted series.

This Sheet of detailed considerations of design in welded steel, is the fourth of a group giving the comparative Efficiency Coefficients of columns, and deals with standard and non-standard sections.

Plate Columns :

Columns can be made up of plates in various forms but the range of sections is so extensive that it would not be practicable to give Efficiency Coefficients for all of them. As a general rule it should be kept in mind that the smaller the load and the longer the column the more important it becomes to make a careful choice of section, while the variation in the value of the Efficiency Coefficient is much smaller in the case of heavily loaded, stocky columns.

Comparative Efficiency :

To give some idea of the comparative merits, different sections have been made up for three cases of central loading :—

Table (1). For a length of 10 ft. and a load of 60 tons.

Table (2). For a length of 16 ft. and a load of 60 tons.

Table (3). For a length of 16 ft. and a load of 120 tons.

Table 1. The example in Table 1 is typical for a comparatively stocky column, although the load is not very heavy ; while Table 2 refers to a slender strut with a large range of Efficiency Coefficients.

Choice of Sections :

It will be seen that the same type of section is not the most suitable in every case. Although the circular column has the highest Efficiency Coefficient in every instance allowance must be made for the difference between the price of tubular sections and that of R.S.J. channel and angle sections. For a strut 10 ft. long a column composed of two channels, toe-to-toe, is very suitable, for a length of 16 ft. two spaced channels give a better result and a column built up from four plates is also very suitable, requiring even less material than the circular column. In Table 3 with a heavy load, a combination of two channels and a plate is very economical, while two angles toe-to-toe are but little more expensive.

Dimensioning :

In many cases it is necessary to reduce either the overall size or at least the dimension in one direction. Invariably this causes a reduction in economy. Examples may be collected from Information Sheets Nos. 37 to 39, but a few instances are given on the face of this sheet to simplify comparison. For instance, the circular column 11 in. $\times \frac{5}{8}$ in. in Table 3 may be reduced to 9 in. $\times \frac{7}{8}$ in., which gives a decrease of roughly 10 per cent. For very long sections columns reduced in this way can be produced either by adding a number of R.S.J.'s using four plates welded at the corners, or by adding unequal angles, toe-to-toe, plated. In this way the smaller dimension can be reduced to 5 in. in all three cases, but while in Table 1 the Efficiency Coefficient is only slightly reduced, with the increased length, in Tables 2 and 3 the reduction is approximately 33 per cent. In Table 1 the smallest dimension can be reduced to $3\frac{1}{2}$ in. by using unequal angles toe-to-toe, unplated, and the Efficiency Coefficient is still larger than that of any R.S.J.

Excess Capacity :

It is, of course, to a certain degree a matter of chance whether an exact section can be found, as sections are standardised. To allow for the slight differences an extra value is introduced, excess capacity, and this gives the amount which a column can carry above the load which it is intended to carry.

Calculations :

The Efficiency Coefficients are calculated in accordance with the notes given on Sheets Nos. 37, 38 and 39, and allowance has been made for the variation in the amount of labour required for the fabrication of the different sections, but not for any difference in the prices of the sections themselves.

Previous Sheets :

Previous Sheets of this series on structural steelwork are Nos. 729, 733, 736, 737, 741, 745, 751, 755, 759, 763, 765, 769, 770, 772, 773, 774, 775, 776, 777, 780, 783, 785, 789, 790, 793, 796, 798, 799, 800, 801, 802, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 816, 819, 821, 822, 823, 824, 826, 827, 829, 830, 832, 836, 837, 838, 839, 840, 842, 843, 845, 847, 848, 849, 850, 851, 852, 853, 855, 856, 857, 859, 860, 862, 863, 865 revised, 867, 869, 870, 871, 874, 875 and 877.

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down. Secondly their systems require the co-operation of local builders, timber merchants, estate agents and architects.

To take the architect's function in particular, he is only concerned if the client either comes to him in the first place, or is particularly anxious to have his house individually designed. It is, however, the "lumber dealer," or timber merchant, whom the public is invited to approach, and he has available "syndicated" plans designed by leading architects in all parts of the country. An architect whose design is thus syndicated receives a predetermined fee in return for the complete details of the job. But supposing the client prefers to have an individual architect, and they agree the design shall be on the Armor Product system, the firm provides the architect with amazingly complete standardized details and reference tables. His finished detailing may be checked over by the firm. It is claimed that the reduced overhead costs of this system enables an architect to handle houses of moderate cost at a profit.

The foregoing is a brief survey of the methods of two American firms, and gives some indication of their relationship with the architect. It has only touched on one small facet of a very complicated problem, and it is not suggested that firms of the type described are necessarily suitable to conditions in Britain.

Some architects may feel from what they have read, here and elsewhere, that prefabrication as a development is not entirely favourable to the interests of their profession. Two points are worth consideration in this connection. Firstly, in the immediate post-war reconstruction period, the factor of speed is likely to be of paramount importance. Prefabrication is no longer an experiment and, since probably no other system can combine really high production rates with efficient construction, prefabrication may have to be adopted in spite of all arguments that can be brought against it. Secondly, after the immediate shortage of houses has been overcome, prefabrication may or may not become established as a permanent factor in the building industry. If it does, its probable field of operation would be the type of houses built, during the inter-war period, by speculative private enterprise and, to a smaller extent, by the Local Authorities. This is not a field in which architects have previously been able to make a dominant contribution.

Prefabrication is *potentially* of value to the community as a whole. Whether it actually becomes so may depend upon the number of far-sighted and æsthetically trained minds which are applied to it. If this is true it is, in a sense, a challenge to architects.

Mr. Aslan's Ring Road around King's Cross and St. Pancras. King's Cross and St. Pancras should jointly form a central terminus station for railways from the North and North East. By general re-planning a circus has been formed at this important junction of many major roads. As shown on the plan, the east west Ring Road absorbs Pentonville Road to the east of this circus, where there is an access to the Speedway under, whilst to the west the Ring follows a new route through back property to Euston Station, where another access to the Speedway is made. This by-passes Euston Road and ultimately Marylebone Road, leaving these roads for the local traffic, whilst the Ring Road takes the east west through traffic. The Speedway accesses to the Ring Road are specially planned to avoid any interruption in the flow of the traffic in the Speedway. It is possible to go all round the central area of London in the Speedway without having to go through a traffic crossing.

An unpublished street plan *for* LONDON

The Royal Academy Plan for London is to be exhibited at Burlington House next week. To judge it one needs to know something of the previous history of London Schemes. It might be thought that the scheme prepared by Sir Charles Bressey in 1938, correctly known as the Greater London Highway Development Survey, was the only existing road plan for London worth looking at. But it happens that a very good scheme predated it by two years—a London Improvement Scheme submitted by Mr. N. Aslan as thesis for the Diploma in Town Planning and Civic Architecture at the University of London. There is an interesting similarity between the two schemes, the detailed survey work undertaken for the Bressey Report having confirmed the need for many steps suggested two years before. Mr. Aslan's scheme is reproduced on the next page together with a description of it in his own words. For the benefit of those whose memory of the Bressey Report is not as fresh as it might be, that also is reproduced on page 236, to the same scale, together with a brief commentary listing the main points on which the two differ and also showing the extent to which they correspond. The R.A. Scheme will be considered against this background by Mr. Aslan, an expert on London street plans, in the* Journal *for October 22.*

* Oct. 15 onwards.

Mr. ASLAN'S PLAN DESCRIBED

Mr. ASLAN'S PLAN DESCRIBED

The planner should not be satisfied with to-day's requirements only—he should plan for the future also. The plan described above is intended to provide a sound and permanent basis for future development.

London's road system is divided into two parts: 1. The Main Trunk Roads. 2. The local streets serving the central area. These two are defined and made to work independently and yet be interconnected. London is composed of many centres which are inter-related, but the network of roads thus formed in the central area requires a ring road, from which the trunk roads can radiate, and from which traffic can be discharged into the central area. This gives a sense of enclosure to the heart of London. The Ring, as illustrated, is to be developed as a parkway with controlled elevations on both sides rising to a height of 130-150 ft., which would not affect the angle of light to the road itself.

All the main terminus stations—except Victoria—are connected by the Ring Road which excludes them from the central area: the Ring thus takes all traffic from the trunk roads and railways.

The Elephant & Castle, centre of the Thames loop, is a suitable starting point for a description of the Ring.

This, a junction of many important roads, has been made the main feature of South London, with a large "Place" and a wide avenue with clipped trees leading out of it, in keeping with the important development to be erected on both sides. This Avenue passes St. George's Circus and continues northwards to connect with another "Place" at the junction of York and Stamford Roads which run parallel to the river. Here the Avenue branches in two directions, (1) northwards to Waterloo Bridge and via a new road to the British Museum, (2) N.W. to the new Charing Cross Bridge. Thus a new open space is formed adjacent to the river opening up the vista from Victoria Embankment and the bridges.

St. Paul's will terminate the vista from the Elephant & Castle, via the new St. Paul's Road and Bridge. The Ring from the Elephant & Castle absorbs Newington Causeway and Borough High Street and continues N.E. to a "Place" W. of London Bridge Station which has been extended to take over the traffic from Blackfriars, Holborn Viaduct and Cannon Street Stations. These are to be made underground, thus making London Bridge Station the S.E. suburban terminus. At this point where the Ring leaves London Bridge "Place" to connect to a roundabout at the junction of Eastcheap, Gracechurch, King William and Cannon Streets, the speedway tunnels under the Thames, surfacing again at the junction of the new Mile End–St. Paul's Road. From this new road St. Paul's will be visible for over two miles. Continuing N. the Ring contacts Liverpool and Broad Street Stations, which will be combined and extended to form N. and N.E. suburbans Terminus, and take over the traffic from the redundant Fenchurch Street Station. An open space west of Liverpool Street Station is reserved for a bus and coach terminus. To the N.E. the Ring joins City Road at the junction of East Road and Old Street.

Further west a circus is made at the junction of Pentonville, Goswell and Essex Roads and St. John and Upper Streets. From this circus the Ring absorbs Pentonville Road running westward to King's Cross and St. Pancras Stations where another large circus is made at the junction of Caledonian, York, Euston and Gray's Inn Roads (see detail plan p. 236). Continuing west the Ring passes south of Euston Station to join the roundabout at Tottenham Court Road and Hampstead Road, and then to the junction of Albany Road and Baker Street. Further west it passes south of Marylebone Station to Edgware Road junction, where the new terminus to Harrow Road is planned, thus by-passing the congested area of Edgware Road.

The Ring then passes north of Paddington Station, absorbing Bishops Bridge Road, to a roundabout which is connected to Western Avenue; then through Westbourne Grove and Notting Hill Gate, absorbing Brunswick Gardens to Kensington High Street. Here the Town Hall and the shopping centre have been by-passed east to west by running the road over the low-level District Railway.

Further south, the Ring crosses Cromwell, Brompton and Fulham Roads to a circus at the junction of Kings Road. Here roads branch off to South West London across Albert and Battersea Bridges, which the speedway tunnels under the Thames.

Continuing S.E. the Ring crosses the river from the roundabout S.W. of the Royal Chelsea Hospital, on the new Ring Bridge, then it forks E. to the junction in Queens Road, proceeding S. of Battersea Power Station to a roundabout where a bridge is to be constructed giving direct access to Victoria Station.

The area surrounding Nine Elms Lane is mainly occupied by Railway Sheds, Goods Depots, Gas Works, Power Station, etc., with the river to the north and Battersea Park to the west. By zoning this area for suitable industries it is possible to build over it an Elevated Air Port—London Air Terminus—which has excellent communications to every part of London. The Terminus has the river as a landmark and is away from the congested City and West End. This is an ideal position for an Air Port and prevents the sacrifice of London's parks which have so often been suggested for the purpose.

From this roundabout the Ring absorbs Nine Elms Lane running eastwards to a circus at Vauxhall Station, an important road junction. The railway lines to Waterloo go underground. The Ring continuing through Kennington runs into the Elephant & Castle again from the west.

GENERAL DEVELOPMENT

The central area has been comprehensively re-planned, but for lack of space, only a few items can be summarized. St. Paul's Cathedral is given a generous open space to contain it, connected directly with the Strand, British Museum, Mile End Road, and Elephant & Castle through St. Paul's Bridge. Westminster Abbey and Whitehall are opened up and connections with other parts of London improved; the area generally is reserved for Government Offices. Buckingham Palace is given a direct access to Lambeth Bridge, Westminster, and St. James's; this area is reserved for the Royal Household, Embassies and clubs.

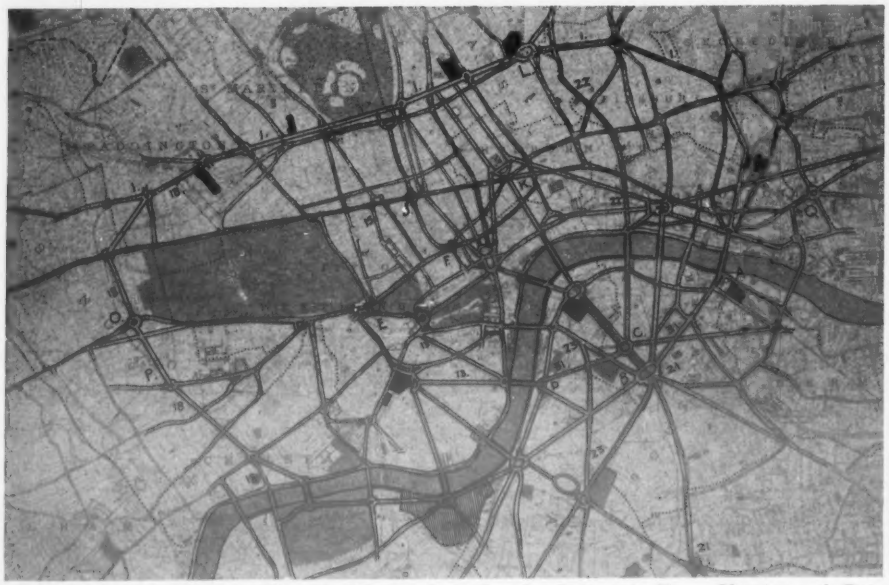
A "Place" is created in front of the British Museum directly connected to the National Gallery, Waterloo Bridge and St. Paul's. The area contained in this island up to the Ring is reserved for Academic Institutes. The National Gallery, standing on its own hexagonal island, is given direct access to Portland Street (relief to Regent Street), Oxford Street and the British Museum.

Piccadilly and Oxford Circuses are enlarged to give a sense of enclosure, and to contain a roundabout.

Hyde Park Corner is adjusted and a roundabout formed. Charing Cross Station and Hungerford Bridge are scrapped, and a new Charing Cross Bridge constructed. This eases traffic congestion considerably, having good exits at both ends.

Victoria Station is enlarged to take Charing Cross traffic, with "Place" and bus terminus on the north side and connected directly with the new Air Port and Lambeth Bridge through Horseferry Road extension. Relief roads are made for Bond Street, Baker Street, Oxford Street, Tottenham Court Road, Southampton Row, and many others.

Open spaces are increased and evenly distributed. The Avenue at the Elephant & Castle is a great relief to that barren area, the Ring, Parkway, "places," circuses and additional squares also reduce the need for open spaces. The Embankments, partly reclaimed, and extended east to London Bridge and west to Hammersmith and Battersea bridges, provide another green stretch for London. N. ASLAN.



A *Scheme prepared by Mr. N. Aslan as thesis for the diploma in Town Planning and Civic Architecture at the University of London in 1936. Until recently the drawings were retained by University College for Exhibition purposes.*

B *Scheme prepared by Sir Charles Bressey in 1938. This scheme forms part of the Report correctly known as the Greater London Highway Development Survey. Sir Edwin Lutyens acted as Consultant and Mr. V. Chamberlain of Scotland Yard assisted in the preparation of the scheme.*

PLANS A & B CONTRASTED

1. *Long* v. *Short Term Policy.* "A" scheme is intended to serve as a permanent basis for redevelopment. "B" scheme only aims to obviate congestion for the next couple of decades. So, while the former plans new roads wherever they appear to be needed, the latter is content to give existing roads another lease of life by constructing short lengths of tunnel or viaduct to by-pass the worst bottlenecks. Mr. Aslan has no objection in principle to either above- or below-ground roads but maintains that the surface road system should be put right first.

2. *Combined Traffic Plan* v. *Road Traffic Plan.* As a corollary of the above, the first scheme deals with the problem of London traffic as a whole, while the second considers road traffic only. For instance "A" emphasizes the need for main line stations to be connected by a clear and unmistakable

point rivalled only by the City itself. "B" scheme constructs a viaduct between Blackfriars and Camberwell to keep South London traffic clear of existing highways. "A" scheme rebuilds the Elephant and Castle itself on ample lines with a wide avenue to traffic leading north to the North Road—Stamford Street junction. Sir Charles Bressey's reason for failing to redevelop the Elephant and Castle was that it would make the existing position worse to encourage further concentration of traffic in a district from which there was no satisfactory exit.

5. *Charing Cross and St. Paul's Bridges.* For a similar reason "B" scheme shows no new bridges at Charing Cross or St. Paul's. "A" scheme, on the other hand, uses new bridges at these points to carry traffic from the Elephant and Castle across

COMPARED

Passages in roman type refer to Mr. Aslan's, passages in italics to the Bressey Report. To facilitate comparison paragraph numbers and road numbers of the Bressey Report have been quoted.

1. Oxford Circus: A roundabout to be constructed. *Similar scheme. Para. (18) (i).* **2.** Gardiner's Corner, Aldgate: Junction to be reshaped and roundabout to be constructed. *Similar scheme. Para. (18) (ii).* **3.** High Holborn–Kingsway: Junction to be replanned and island to be formed. Hart Street–Southampton Row–Theobalds Road: Replanned for the new St. Paul's–Museum Road and an island is formed. *A circus is suggested with two islands. This will also be the terminus of the new Soho–Mayfair Road. Para. (18) (iii) (a and b). also para. (74).* **4.** Hammersmith Broadway: Adjustment in replanning and roundabout to be constructed. *Similar scheme suggested, but failing that a traffic signal control is recommended. Para. (18) (iv).* **5.** "Place" at London Bridge Station: This is formed between—west—the station and the Ring Road, to function as an open space, bus station and parking place. *Large "Place," west of the station is suggested to contain two circuses. Para. (93).* **6.** King's Cross and St. Pancras: Two new roundabouts. **7.** Kennington Triangle: The junction S.E. of the Oval, S.W. of Kennington Green, to be replanned, providing roundabout containing the existing church. *Similar treatment has been suggested slightly to the north in Kennington Road, providing triangular island for roundabout traffic movement. Para (18) (v).* **8.** Camberwell Green: Junction reshaped, providing roundabout. *Similar scheme. (ix), also para. (83).* **9.** Elephant and Castle: Replanning the junction and constructing a feature "place" on grand scale. *Also replanning the junction but on smaller scale. (xi), also para. (83).* **10.** Condition of the Embankment; Embankment on the north side of the Thames

traffic as a whole, while the second considers

Paul's. "A" scheme, on the other hand,

scheme. (*ix*), *also para.* (*83*). **9.** Elephant and Castle: Replanning the

road traffic only. For instance "A" emphasizes the need for main line stations to be connected by a clear and unmistakable route. "B" leaves rail traffic to filter across the town. "A" provides space for an air port on the edge of the inner ring. "B" merely aims to improve road-rail connections to existing air ports—mostly about ten miles out of town. "A" scheme distinguishes between arterial roads and lesser roads that link together the subcentres of inner London, by cutting one off from the other by a ring road the appearance of which is unmistakable. "B" allows them to merge.

3. *Two Ring Roads and the Hyde Park Tunnel.* Bressey's ring road is formed by two north-south routes—King's Cross - Camberwell and Notting Hill - Parsons Green—crossing the two main east-west connections — the Marylebone - Euston Road and the South Orbital Road; Aslan's, as mentioned above, by linking up the main line stations, all of which, except Victoria, are outside but on the ring. In "A" scheme the ring road is reconstructed for its entire length (see the plan on p. 234). In "B" scheme the sections of roadway which do duty as inner ring receive no special treatment; in fact many of them are existing roads already loaded to capacity, i.e., Marylebone-Euston Road. As a result of this difference, Mr. Aslan is able to rely on his ring road to divert and distribute incoming traffic. Sir Charles Bressey, on the other hand, is obliged to tunnel under Hyde Park in order to relieve congestion that would otherwise be caused by the termination of three arterial roads in the Paddington area.

4. *Elephant and Castle.* The Elephant and Castle, sometimes described as the natural centre of London, is at present a congestion

uses new bridges at these points to carry traffic from the Elephant and Castle across the river and relieve existing bridges at Waterloo and Blackfriars. This involves scrapping Charing Cross Station (amalgamated with Victoria) and Hungerford Bridge.

6. *North-south Relief Roads.* "A" scheme shows wide new roads to relieve existing north-south routes wherever necessary, i.e., Bond Street, Baker Street, Oxford Street, Southampton Row, etc. These complete the Elephant and Castle development by providing cross-river traffic with adequate exits. "B" scheme, as mentioned above, relies on diverting this traffic to Blackfriars.

7. *The City.* "B" scheme by-passes the City partly on the grounds that it is a unit which should not be broken into, partly because land values there are exceptionally high. "A" scheme passes a ring road from London Bridge northward through the middle of it in order to provide a good connection between London Bridge Station (enlarged and made S.E. suburban terminus) and other main railway stations. In this way the City is bisected so that the commercial centre remains part of inner London, while the industrial area is excluded from it. Incidentally London Bridge, where the ring road crosses the river, is the terminus for large ships.

8. *Mayfair Tunnel.* An outstanding feature of "B" scheme is a tunnel under Mayfair starting in High Holborn and running eastward to Hyde Park, where it ends abruptly. "A" scheme shows nothing to correspond, the reason being that in this scheme the ring road runs parallel to, but north of, the Euston–Marylebone Road, which is left to act as relief road to Oxford Street.

junction and constructing a feature "place" on grand scale. *Also replanning the junction but on smaller scale.* (*xi*), *also para.* (*83*). **10.** Condition of the Embankment; Embankment on the north side of the Thames to be extended eastwards to London Bridge and westwards to Hammersmith Bridge; on the south side to stop at Battersea. *Embankment to extend eastwards to Tower Bridge and westwards to Putney. Para.* (*19*). **11.** Bridges: Almost all bridge heads have been provided with adequate roundabouts. (*a*) *Preferably each bridge head should have a full-size roundabout*; (*b*) *or at least at Vauxhall, Chelsea and Albert bridges. Para.* (*19*). **12.** Parking: Underground parking suggested, especially under existing and new open spaces, also over and under the new Ring Road. *Underground parking; under squares and providing small scattered parking places. Para* (*21, 22, 23*). **13.** East–West Connection: Suggested road from Western Avenue, Wood Lane, North Kensington, Paddington, north of Marylebone and Euston Road, King's Cross, then it branches north and east outside the Ring Road, to join the eastern avenue. *Exactly similar road except that it absorbs Marylebone and Euston roads. Para.* (*70*), *No. 13.* **14.** Lambeth Bridge–Horseferry Road: Horseferry Road continued straight on to Victoria which terminates vista to this road from Lambeth Bridge. Approach from South Kensington district to Westminster will be direct through the Ring Road, in a south-easterly direction. *Westminster–Lambeth Bridge–to Victoria, the same route then continued to South Kensington district to give to the latter adequate approach to Westminster. Para.* (*73*), *No. 13.* **15.** Mayfair traffic improvement.—Mayfair–Soho Road: Park Lane, Grosvenor Street, Regent Street, Soho terminating in Kingsway; this is mainly to relieve congestion from Oxford Street. *Same road except in Soho it turns in a north-easterly direction to join the new Holborn–Kingsway Circus. Para.* (*74, 75*), *No. 14, 15,* (*i*). **16.** Relief to Bond Street: Davies Street, Berkeley Square and on to Piccadilly. *Davies Street then to Dover Street and Albemarle Street and on to Piccadilly.* (*ii*). **17.** Piccadilly Circus: Enlarging the Circus to oval shape—425 ft. by 325 ft., and to include further exit to new road connecting Trafalgar Square–Charing Cross Bridge to Great Portland Street and north London. *Enlarging the Circus —rectangular shape—to 400 ft. by 250 ft. Para* (*76*), *No. 16.* **18.** Hyde Park Corner: To regulate traffic and relieve congestion rectangular island suggested. *Similar scheme. Para.* (*77*), *No. 17.* **19.** Buckingham Palace: To have direct access to Lambeth Bridge with the Palace as the vista to the new road. *Direct access suggested, but through a new road joining the Horseferry Road extension.* **20.** N.W. to S.W. London Circular Connection: This has been planned through the Ring Road, i.e. Marylebone, Paddington, Kensington, Chelsea and across Albert Bridge or Ring Bridge to Battersea, Clapham, etc. The Ring Road has been specially planned to avoid Kensington Gardens, running further west, absorbing Brunswick Gardens. N.B.—The Ring Road has a parkway on the ground level and a speedway under. *This link also connects Marylebone, Paddington, Kensington, Chelsea and across Battersea Bridge to Battersea, Clapham, etc., but through a tunnel under Kensington Gardens. Para.* (*79-80*), *Nos. 1, 18, 24.* **21.** Chelsea Embankment Extension: As mentioned on p. 235, the Embankment to be extended eastward to London Bridge and westward to Hammersmith. *This to be extended to Putney Bridge and eastward to the Tower. Para.* (*82*), *No. 20.* **22.** Blackfriars–Holloway Road: This road begins at Blackfriars Bridge, following Farringdon Street, and by passing King's Cross—to the east—and thence northward to Holloway, etc. *Practically similar route. Para.* (*84*), *No. 22.* **23.** Albert Embankment–Lambeth Bridge to Camberwell New Road: This road begins from the roundabout at the south end of the Bridge and joins the Ring at Kennington Road. Then east of Kennington Green joining the roundabout, and following Camberwell New Road to the roundabout at Camberwell. *It follows approximately the same direction except that it tunnels under Kennington Green. Para.* (*85*), *No. 23.* **24.** Lambeth Bridge to London Bridge: (1) From Lambeth Bridge to the replanned St. George's Circus, Borough Road, and to London Bridge in front of the Place west of London Bridge Station; or (2) direct way through the Ring Road to London Bridge. *Follows approximately No. 1 route, i.e. St. George's Circus, Borough Road and to the Palace immediately to the west of London Bridge Station. Para.* (*93*), *No. 31.*

LITERATURE

SPECIFICATION

Specification—1942: Edited by F. R. S. Yorke, A.R.I.B.A. London: The Architectural Press. 10s. 6d.

The 1942 edition brings *Specification* into its forty-fourth year, and although it has obviously been revised and extended very considerably since it was first published, it continues to record the meaningless formalisms of specification writing, and ignores many of the subjects that are more deserving of careful definition.

The layout of *Specification* follows the general arrangement prescribed in the British Standards Specification for sequence of trade headings in specifications, and deals with the subject in twenty-six chapters or sections. Each section contains information about the materials and techniques that come within the scope of the subject it describes, and is illustrated by small-scale drawings and trade advertisements.

The subject of each section is described in a series of short articles which explain the main properties and general characteristics of the materials that are available now, and draw attention to the conditions that must be observed when they are used in buildings. Proprietary techniques and specialized systems of construction are illustrated to show their applications, and numerous other items include news of particular interest to architects and builders alike.

These articles are thorough in their treatment of detail and give information that is not readily obtained from other sources.

The subject of each section is converted into what are called "specification clauses" or "notes." These are framed in the formal terms that have been associated with specification writing for a very long time, and although they contain information that is not given elsewhere, they cover only a small part of the works that should be described in a specification and are misleading in some details.

In the Bricklayer section, a clause states that: "The whole of the water required for the works must be perfectly fresh and clean, and free from chemical or organic taint." It must be perfectly obvious that this clause is unreasonable and would create some embarrassment if it were to be respected in every detail.

Another clause in the Carpenter section states that: "All timber to be free from sap, shakes, large, loose or dead-knots, waney edges, or other defects, and properly seasoned." Clauses of this kind are extremely dangerous and should be abolished.

A specification should be precise, and must give accurate information about the quality of the materials that are to be used. If certain materials are known to be susceptible to particular kinds of defects, the specification should describe the circumstances in which these defects are admissible.

The two clauses quoted above are insufficiently specific, and it will be generally agreed that a certain degree of organic or chemical taint is present in all water obtained from the common sources of supply. It should also be apparent that shakes, waney edges and other defects need not exclude timber from certain carpentry works.

The clauses dealing with workmanship itemise the procedures that cannot as a rule be explained by detail drawings. One clause in the Carpenter section states that: "No joists, rafters or studs to be spaced more than 15 in. apart from centre to centre. Trimmers to be ½ in. thicker and trimming joists to be 1 in. thicker than ordinary joists." This clause is obsolete and unsound. Joists and studs may be spaced 18 in. apart from centre to centre and still provide adequate support and fixing for any of the standard sheet or surfacing materials that are used for floors, ceilings, and walls. It it also a fact that most of these standard sheet and surfacing materials are made in widths that are readily adapted to a joist or stud spacing of 16 in. or 18 in. from centre to centre, and any variations from these measurements will generally involve waste of material and labour.

Clauses such as that explaining the setting-out of "all framing and joiners' work" are not usually respected, and should be revised so that they conform with what is actually required by "the architect or person in charge of the works."

A clause in the section devoted to Brickwork generally, states: "Bed all wood door and window frames solid in lime and hair mortar, and point around in cement mortar on one or both sides as necessary." This clause must be responsible for many of the serious failures that occur round doors and windows. It does not explain whether the frames are to be "built-in" or fixed back to the reveals after the brickwork has been constructed. If the instructions are faithfully observed, space will not be retained between the heads of the frames and the soffits of the openings to allow for subsequent settlements of the masonry in the height of the reveals.

Many of the clauses included in the Joinery section describe works and details that are normally the subject of individual design. These clauses are valueless in their present form, and should be omitted altogether if they cannot be made to deal with the subjects more appropriately.

It is to be hoped that future editions will bring the specification clauses of this valuable reference book abreast of the times by embodying all the information necessary for intelligent and up-to-date specification writing.

G. F.

The need for joint Production Committees on large building jobs, and the valuable contribution that technicians could make to their success, was stressed at a meeting held in Westminster called by the Ministry of Works and Planning House Branch of the A.A.S.T.A. The subject for discussion was "Production Committees for Tanks–Why not for Building?" *The three principal speakers represented in turn the contractor, the operative and the technician. Mr. Gordon Stephenson presided.*

WHY NOT JOB COMMITTEES?

Mr. Cruikshank said his views were personal ones built up from experience gained as a contractor's labour officer. He said that the principle of Works Committees was good, and that nowadays they were essential on large sites. He doubted, however, if the stewards who composed Works Committees were the best people on the site to discuss production problems; their method of election in the early stages of a job meant that they did not fairly represent the bulk of the men who arrived later, and, moreover, they had not, in his opinion, the right mental attitude to production.

He gave instances to support his view that the main concern of the operatives was not production but their own conditions of employment. In one case, the rubber boots issued to the brickies while on ground level were later needed for other men on foundation work, and by this time the brickies were working on scaffolds. Even though supplies were short, the brickies refused to part with the boots, and the other men continued to work in the water.

The employment of women in the building trade provided another source of trouble. By anticipating the formal ratification of the agreement as to conditions for women between the Federations, his firm had been able to save precious months at a time of acute shortage of men. But although it was explained to them that the agreed conditions were well-known to the firm, the men threatened to strike when the female labour was introduced, and it was only by obtaining written confirmation from the N.F.B.T.O. that work was not interrupted. Mr. Cruikshank said that he found women labourers as good as the men of pre-war days, and there were few genuine bricklayer labourers among the men employed to-day.

He found difficulty in persuading the men to throw two bricks at once, for example, although it could be learnt in half an hour. The difficulty of finding out if the stewards really expressed the wishes of a majority of the men was shown by the instance of a Works Committee which pressed the Contractor for speedier completion of hot-meal canteens, labour being consequently transferred from essential work to meet their demands. It was found that owing to the large area covered by the site, it was impossible for the men to get to and from the canteens within the half-hour meal period then in operation. This period was extended to

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one hour, whereupon the Works Committee immediately protested that this was not agreeable to the men, as only a very small percentage used the canteen, and the remainder were not willing to forfeit half an hour's pay: reinstatement of the half-hour break was demanded.

While agreeing that technicians had an essential part to play in any discussion of production problems, he did not think that their representation on Works Committees would convert the latter into Production Committees. Some other means must be sought.

Mr. Jack Ryan, London District Organizer of the Amalgamated Union of Building Trade Workers, who followed, said that every batch of criticisms levelled at operatives could be capped by an equal number in the reverse direction. Contractors, too, were not free from selfish interests. Production Committees, which should consist of delegates from the Works Committees together with the technicians' representatives and the management, would go far to remove these suspicions and create a more co-operative spirit. He made no apology for referring in this connection to the great work achieved by Soviet workers in such enterprises as the Dnieper Dam, which would have been impossible without the explanation and full discussion among them of methods and plans. They were handling for the first time building plant of a type novel even to British workers, who were among the best operatives in the world. If Russians could do such things, what could not our own industry achieve?

He did not wish to imply that operatives expected to express opinions on matters beyond their experience, such as the sizes of steelwork and architectural technique. They were, however, the first to realize inefficiencies relating to trade following trade, location of plant, supply of materials and details of design making for slow execution. The "skilled man" was a term which defined itself; and the "skilled man" in building should surely be as closely consulted on the carrying out of his work as the R.A.F. crews are in regard to the planes they have flown on an operation.

Mr. Cruikshank's frank remarks were valuable in that they helped him to meet the points raised. He was convinced that the stewards were the best people to discuss production problems, owing to their knowledge and ability in dealing with the intricate details of organization. The method of electing the stewards was thoroughly democratic. Stewards could be removed at any time by an expression of the feeling of a majority of the workers on the job. Mr. Cruikshank had made a great deal of the "wrong mental attitude" of the operatives. Leaving aside the boomerang nature of the remark, he had no doubt at all that, though the bitterness of past struggles died hard in the men's minds, when the facts of a situation were frankly explained to them the operatives responded 100 per cent. Mr. Ryan said that he, too, could quote examples. On a conversion job for offices for the American troops, the men were called together by their union organizer, and the purpose of the job explained to them and the time limit set for completion, with the result that the job was finished in a third of the scheduled time. But the men were then out of work. He managed to get them re-employed, but the point was that they had no guarantee of this, and shortened the job just the same. Resolute action had, he said, been taken by the unions in regard to men who deliberately used the difficulties of transport, for example, as a cover for slackness. Genuine shortage of supplies, like the case of the rubber boots, was a matter for the Works Committee to arrange with the men concerned.

He believed that Production Committees *were* as necessary for building as for Tanks, because without the buildings on time, the tank programme would suffer. He thought that it was necessary to have technicians represented on them, as they would be of great assistance in interpreting the suggestions of the operatives in terms of technique. In reply to a question, he said that separate meetings of the Works Committee and the Production Committee would be quite feasible in practice, and would give the best results.

Speaking on the responsibility of the technicians to face up to the realities of these new developments in building organization, Mr. John Brewster, A.R.I.B.A., said that he believed that the national control of building now in operation had come to stay, and the significant changes due to the setting up of Works Committees should be realized by technicians. Production Committees were the next step. The Technical Committee of the A.A.S.T.A., he said, was preparing a report on this question, which would be published shortly.

Summing up the discussion, the Chairman said that the meeting had succeeded in clarifying an important matter about which there had been some confusion of ideas in the minds of technical people. There had been agreement on the main issue that Production Committees were essential, and that technicians should be represented on them. Mr. Ryan had made clear that Works Committees consisted of stewards, and that apart from such representation as the A.A.S.T.A. might have as the technicians' union in the Federation, the problems of production should be dealt with at separate meetings to which all parties (including the Works Committee) would send representatives.

SCIENTIFIC BUILDING

Lectures at the R.I.B.A.

Following are the programme and synopses of the lectures organised by the R.I.B.A. Architectural Science Board on recent scientific and technical developments in building* affecting architects. Three groups of four lectures each (free to all) are being arranged for the winter months. The first four lectures will be held at the R.I.B.A. on two consecutive Saturday afternoons, October 10 and 17, at 2.15 and 4.30 each Saturday.

Special care is being taken that the lectures shall deal with the various subjects discussed in a practical manner so that the course may give those who attend it a realistic picture of the latest technical advances. Ample time will be reserved for discussion.

The Board particularly wishes to bring in architects serving with the Forces, and hopes that any who read this notice will pass the information on to their friends. All who hope to come are asked to send in their names to the Secretary, R.I.B.A., and tea will be provided for all those who do this at least three days before each session.

Programme and Synopses.

The first session will be opened by the President on Saturday, October 10—2.15 p.m. Councillor G. L. Greaves, A.R.I.B.A., "The Scientific Background to Architectural Practice." Chairman: Alister MacDonald, F.R.I.B.A., Chairman, Architectural Science Board.

Introductory: importance of not belittling ourselves—æsthetic and functional responsibilities of the architect: what is required of the architect: within his control—ability to design well, knowledge of building processes, timing and costing procedures; mainly outside direct control—fostering good taste outside profession; consideration of bye-laws; fostering craftsmanship—economic factors—present position; controls, possible legislation, new building techniques, housing problem, traditional methods and prefabrication.

Immediate problem: technique of practice organisation, relation to assistants, to building industry, to specialists and consultants—organisation to meet legal responsibilities and local government—architecture an art of peace.

4.30 p.m., A. W. Skempton, M.SC., A.M.INST.C.E. and P. C. G. Hausser, B.SC., M.INST.C.E., M.I.STRUCT.E., "Some Consideration of Foundation Design." Chairman: Sir George Burt, Chairman, Building Research Board.

The nature of soils—their examination and testing on the site—the results of recent research in soil mechanics on bearing capacity and the behaviour of foundations. Practical examples on the design of foundations and the effect of the type of foundations on the super-structure.

Saturday, October 17—2.15 p.m. and 4.30 p.m., Ewart S. Andrews, B.SC., M.INST.C.E., M.I.STRUCT.E. and C. S. White, A.R.I.B.A. "The Influence of Recent Scientific Research on the Design of Building Structures." Chairman, 1st Session: George Hicks, M.P., Parliamentary Secretary to the Ministry of Works and Planning.

Mr. White, the architect: his training and background—factors affecting his work, clients' needs, official regulations, design standards—his method of approach—his programme—immediate pre-war improvements—steel and r.c. codes—increasing interest in B.R.S.—recent structural research: lightweight walls and roof coverings—continuity in steel and r.c. frames—fire protection of steelwork—standards of daylight illumination—acoustics and sound insulation—thermal insulation—study committees of MOWP—prefabrication. Desirable improvements (points for discussion), awakening of interest in science of building—bye-law standardisation—increase of factory production and decrease of site work—prefabrication.

*See also page 225.

A PLAN FOR BRITAIN

"A Plan for Britain" was the subject of the presidential address by Mr. Arthur W. Kenyon, F.R.I.B.A., at the annual general meeting of the Architectural Association. He said that all architects could play their part in producing a plan for Britain, a plan which should be a guide to all studying the problem; and he hoped that in their united effort to achieve this great ideal architects would prove their capacity to give a lead in post-war reconstruction. Although the war effort must come first, they were endeavouring to secure a better land in which to live once the war had ended. But what did this better land mean? More beautiful towns, cleaner and tidier industrial centres, better equipped villages, finer roads, less antiquated railway stations, open spaces properly related to living and a countryside and seacoast unspoiled by squalor and untidiness. For this replanning and rebuilding of Britain architects required faith in themselves and faith in their approach to the planning problem. The disappearance as one result of the war of streets which ought to have been demolished long ago had opened the eyes of people to the realization that there must be a new Britain. No one would now be satisfied with putting back what had been destroyed: something was wanted far ahead of what had been done before. What was the architect's part in planning that future? It was to use all efforts to see that a proper plan was produced for Britain. To do this they must first plan themselves—*i.e.*, make themselves orderly and efficient, to enable them to tackle the work before them. No one but architects could do the great replanning work which lay before the country.

Mr. Kenyon appealed for a plan for Britain—a plan as architects visualized it and as architects could do it. He was fully aware that the Government was carefully considering these problems. The Scott Report on Land utilization in Rural Areas, and the Uthwatt Report on Compensation and Betterment were both of them admirable. Architects ought to support with all their power the good intentions set out in these documents, and could do this by producing their plan for Great Britain. This plan would be something tangible on which to build. It could be done. There were twelve Regions and twelve bodies of architects now working in them. These committees should consider the large and small towns. They should plan to preserve, beautify and enlarge the villages, and to improve the appearance of the industrial centres. The districts were not too great to be visualized as a whole to a scale of one inch to the mile. Upon such a map should be traced out roads, canals and railways. Air communications also should be studied, and the roads, canals and railways might require a great deal of amplification and modification. Having considered these essential facts the map could be divided into sections of more convenient areas upon which groups of planners could work. These groups would consist of people who lived and worked in the area, and they would be able to study the villages and suggest in a broad way the development or curtailment of any one of them. They

would know the untidy spots in the main roads and could mark them on the map. In some districts major improvements would be required, but in others there would be only minor matters to be attended to. When the plans had been prepared and considered they would be brought together to see the general effect and, if approved, to receive the agreement of the Main Committee of the Region. Where large towns came into the areas special study would be required, but only after the relationship of the town to the general plan had been decided. Each such town might have to be studied by a particular group who knew the requirements, and the planning would have to be dealt with with boldness and vision. For each town a general plan would be required showing circulation, the positions of industries, housing, amenities, positions of railway stations, etc.; and when the general plan of a town had been made then its physical boundaries could be planned in detail. During the working out of the schemes suggested there would be many interested bodies to consult, but the main objective should be to produce the best possible plan—a plan unhampered by existing laws and preconceived ideas. Any attempt to fit the plan into existing schemes would result in failure.

MOWP REGIONAL PLANT ADVISERS

Six Regional Contractors Plant advisers have been appointed by MOWP—(*a*) to advise on general problems relating to care and maintenance; (*b*) to assist in obtaining plant when this is required on important works; and (*c*) to see that all existing plant is fully employed if necessary by the exercise of compulsory powers.

These officers and the areas (printed in italics) they cover are:—

1. *Northumberland, Durham, North Riding, Yorks.* 2. *West Riding, Yorks., East Riding, Yorks.* L. G. Davies, Regional Plant Adviser, MOWP, 40, Wetherby Road, Leeds, 8. Telephone: Leeds 66892.

3. *Derby, Notts, Lincs., Leicester, Rutland, Northants.* 9. *Staffs, Salop, Warwick, Worcester, Hereford.* R. C. Freeman, Regional Plant Adviser, MOWP, Somerset House, Temple Street, Birmingham. Telephone: Midland-Birmingham 6561.

7. *Gloucestershire, Wilts., Somerset, Devon, Cornwall and S. Wales.* N. Sisson, Regional Plant Adviser, MOWP, 23, Richmond Hill, Bristol, 8. Telephone: Bristol 38457.

4. *Norfolk, Suffolk. Essex, Hunts., Cambs., Beds., Herts.* 5. *London, Middlesex.* 6. *Bucks., Oxford, Berks., Hants., Dorset, Isle of Wight.* 12. *Surrey, Kent, Sussex.* H. Cooper, Regional Plant Adviser, MOWP, Drake House, Dolphin Square, London, S.W. Telephone: Victoria 4477, Ext. 227.

10. *Cumberland, Westmorland, Lancs. Cheshire.* 8. *N. Wales.* O. P. Clement-Davies, Regional Plant Adviser, MOWP, 79, Fountain Street, Manchester. Telephone: Manchester Central 7247.

11. *Scotland.* T. Anderson, Regional Plant Adviser, MOWP, 16, Gordon Street, Glasgow. Telephone: City 6401.

CUT IN GOVERNMENT'S BUILDING PROGRAMME

A warning to the building industry that it must shortly face greater reductions in its ranks is contained in a letter which the Director-General of the Ministry of Works and Planning, Mr. Hugh Beaver, has sent to Mr. W. E. Rice, O.B.E., President of the London Master Builders' Association.* Last July the London Master Builders' Association sent a deputation to Lord Portal on behalf of its small and medium-sized members. Mr. Beaver's letter, extracts from which follow, is the Ministry's considered reply on the subject.

"When the present special urgency programme was initiated in June," writes Mr. Beaver, "a special committee was established of the industry with the widest powers, to advise Lord Portal on all matters connected with the programme. That Committee sits under the chairmanship of Mr. George Hicks, the Parliamentary Secretary; and it has specifically dealt with the procedure and machinery for the placing of contracts.

"Registers have been established to show the reported turnover of the past three years of all registered builders, both large and small, together with their present load. It has been laid down that no firm having in hand work to the value of more than 60 per cent. of its average annual turnover will be eligible for Government work until the value of work in hand is less than 40 per cent.

"In regard to the smaller medium-sized contracts, that is, under £25,000, the Works and Buildings Emergency Organizations are consulted in the drawing up of tender lists.

"Further, we have recognised and assisted in the formation of groups, although it is necessary for all to appreciate the difficulties involved in the group system.

"The same reservation is necessary in regard to the practice of compulsory sub-contracting which, on the advice of the Central Council, we have regularly included in recent contracts of this Department. Neither the other Government Departments nor many of the builders and contractors have taken kindly to this experiment; and, while we think it valuable, it is clear that it can only be a success if the industry itself decides to make it so.

"When all is said, however, there are certain inescapable facts: the total amount of new work and the total amount of labour is now not more than 60 per cent. of the normal. All repairs, alteration, maintenance and private work have inevitably been drastically reduced. Very little of the present programme lies in the London area.

"For all these reasons, the members of your Association are particularly affected.

"The question remains as to how the industry is to face the contraction that must become increasingly severe as soon as the present programme is completed and when the demands of the Forces for man-power become more insistent. This is a matter that requires the industry's close study, as it is already receiving my Minister's."

* See page 227.

GOVERNMENT'S NEW BUILDING CONTRACT

Opposition from Building and Civil Engineering Federations.

At a special general meeting of the National Federation of Building Trades Employers, held in London, and attended by members from all parts of the country, it was unanimously decided to instruct members of the Federation not to accept the new standard form of Government contract, pending negotiations with the Government Departments concerned.† The Federation of Civil Engineering Contractors has issued similar instructions. Letters announcing this decision have been sent by both Federations to the Ministers of the Government Contracting Departments.

The following memorandum on the subject is issued jointly by the National Federation of Building Trades Employers and the Federation of Civil Engineering Contractors:—

The Contracts Co-ordinating Committee of the Government Contracting Departments has introduced a new form of contract conditions for Government building and civil engineering works. The National Federation of Building Trades Employers and the Federation of Civil Engineering Contractors, though they fully accept the Government's view that a new single form is desirable, have represented to the Ministers concerned that the new form, upon which the industrial organisations have not been consulted, is based upon principles which they regard as very unfair.

By way of example, it would deny all right of appeal to independent arbitration upon fundamental matters, with the result that on these matters the officials of the Government Departments would be left, as judges in their own cause, with autocratic powers not only to administer but also to interpret the contract, contrary to general industrial practice.

Another example is that, if the works or buildings develop faults or failures by reason of errors in the design, the responsibility for the mistakes of the Government Departments' designers is placed upon the contractor.

So seriously do the Federations regard this new action by the Government Departments that they have instructed their members to make it clear, when tendering for Government work, that their tenders are subject to adjustment of the terms of contract in a manner to be agreed with the Government Departments. In issuing this instruction the Federations have made it quite clear that on no account must there be any holding up of Government work at this time, and that in every case the actual work must be started immediately and carried out with the utmost possible expedition; but they do maintain that the Government should give effect to the democratic principle of collective bargaining, and the right of the Federations to discuss and agree with the Government Departments the conditions of contract which their members are to be asked to sign.

† See page 226.

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
War Address:
45 THE AVENUE,
CHEAM, SURREY.
Telephone: VIGILANT 0087

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

Q 976

ENQUIRER, MIDDLESEX.—*I am 25 years of age and have been forced to close my former career through a war injury, thus I am very keen to use my spare time in training for a POST-WAR NEW CAREER. I am more interested in the organizing and business enterprise side than in actual apprenticeship, for which I cannot afford the time. I acted for a prominent London architect pre-war for the organizing of new sports club constructions, and I found this to be so interesting that I feel keen to take it up further.*

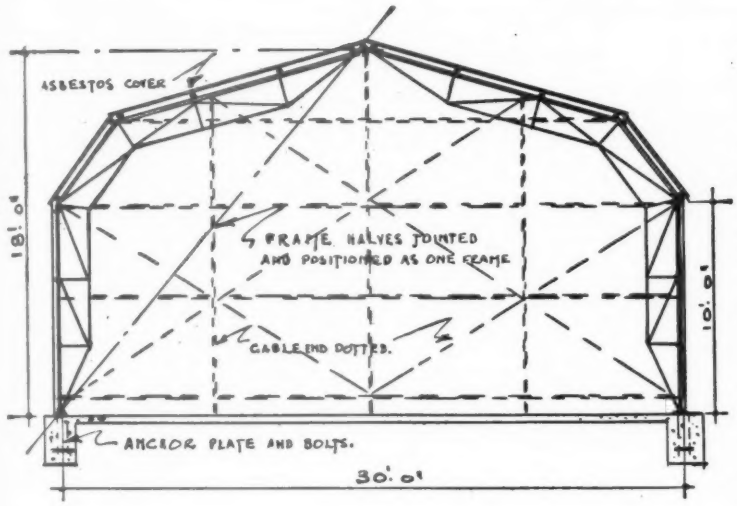
In reply to your enquiry we find it very hard to help you as you apparently have no experience or training to equip you for any of the professions allied to building, and architects, surveyors, engineers and the like do not normally employ a business organizer.

You could undoubtedly learn the business of site organization best by working for a contractor, but contractors normally prefer someone with a considerable amount of practical experience, and the hopes of your getting a job depend entirely upon your personality, initiative and the lack of trained men available.

Should you wish to work for a professional firm we can only suggest that you have a talk with the secretaries of the institutions concerned, or with the Association of Architects, Surveyors and Technical Assistants, which caters for technicians in all sections of the building industry. We give below some addresses, but this list, as you will realize, is by no means exhaustive.

PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 6



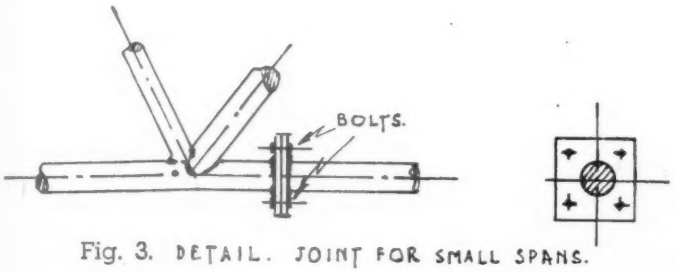


Fig. 3. DETAIL. JOINT FOR SMALL SPANS.

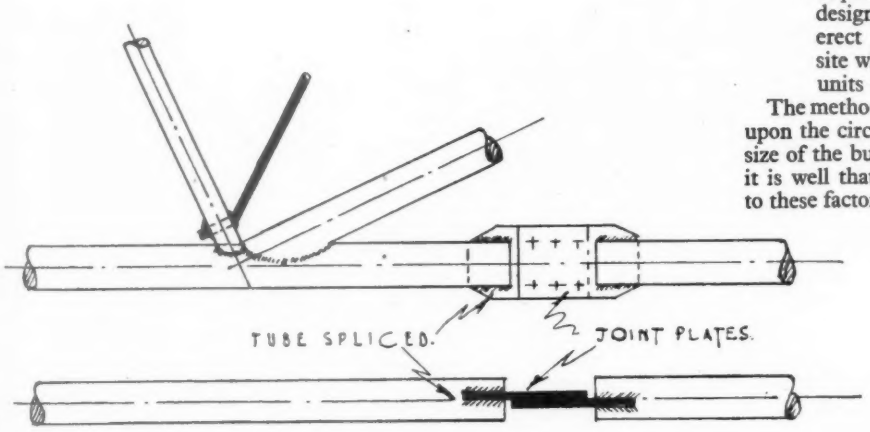


Fig. 4. Bolt connection for larger trusses.

METHODS OF FABRICATION

This form of construction lends itself admirably to the prefabrication of single storey buildings of any size. The standard sections (roof trusses, wall frames and columns, and door and window frames) are light in weight and conveniently transportable. Assembly on the site is simply and rapidly effected, the sections being bolted or welded together according to specification. The buildings can be dismantled with equal facility, and only the loss of foundations is involved since the various sections all remain available for re-erection—thus it may be said that this form of construction has all the essentials of a permanent building plus the facilities of a portable building. A further consideration is the flexibility of the system, allowing alterations or extensions to be made to existing buildings simply and quickly.

Three alternative methods of fabrication are available :—

(1) Complete factory prefabrication, leaving assembly only to be carried out on the site.

(2) Site welding. The welding of the final fixings and connections is sometimes more satisfactorily effected on the site ; where site welding is not practicable or economical special bolt joint or joint plates are supplied for such connections (see Figs. 3 and 4 reproduced from data sheet No. 3).

(3) Site fabrication and welding. In certain circumstances complete site fabrication is advantageous. Though more costly than factory prefabrication, in cases where transport costs are heavy and access to the site difficult, and where the fabricated sections required are large in number and simple in design, it sometimes proves economical to erect temporary portable workshops on the site where the fabricators and mobile welding units can execute the whole of their work.

The method to be adopted is in each case dependent upon the circumstances prevailing, and the type and size of the building, or buildings, to be erected, and it is well that proper consideration should be given to these factors before a decision is made.

NOTE.—These data sheets are appearing weekly in THE ARCHITECTS' JOURNAL *—they will be available shortly in complete Folder form and application for these Folders should be addressed to Scaffolding [Great Britain] Limited, 77, Easton Street, High Wycombe, Buckinghamshire*

The Royal Institute of British Architects, 66, Portland Place, London, W.1.
Institution of Civil Engineers, Gt. George Street, London, S.W.1.
Chartered Surveyors' Institution, 12, Great George Street, London, S.W.1.
Association of Architects, Surveyors and Technical Assistants, 113, High Holborn, London, W.C.1.

Q 977

ARCHITECTS, NORTHAMPTON. — *Please send NAME FABRICATORS foamed slag roof slab and stock R.C. joists.*

Holland & Hannen and Cubitts Ltd., of 1, Queen Anne's Gate, London, S.W.1, manufacture foamed slag roof slabs. We are not in touch with manufacturers all over the country but are indebted to the Cement and Concrete Association for for the following list of firms within reasonable distance of your address, who manufacture stock reinforced concrete units, including beams :

Croft Granite Brick & Concrete Co., Croft, near Leicester.
John Ellis & Sons, Ltd., Welford House, Welford Place, Leicester.
Empire Stone Co., Ltd., Narborough, near Leicester.
Excelsior Patent Stone Co., Ltd., Finedon Sidings, Northamptonshire.
Tudor Stone Products, Nedham Street, Leicester.

It sounds from your enquiry that you propose adopting a roof similar to the Myko form of construction, and should you want beams encased in foamed slag concrete, you would do well to get in touch with Sidney M. Myers, B.SC., M.I.S.E., 48, Vincent Gardens, Dollis Hill, London, N.W.2, who would be in a position to let you have the names of the nearest firms who are accustomed to making them.

Q 978

SURVEYOR, LONDON.—*In the issue of the* JOURNAL *dated February* 5, 1942, *there appeared an article describing a Glasgow Housing Scheme. In this scheme the following different types of precast concrete floors are mentioned* : (1) *Rapid* ; (2) *Hy-rib* ; (3) *Invictus* ; (4) *Girlingstone* ; (5) *Springbank* ; (6) *Myko* ; (7) *Unicon* ; (8) *Siegwart. In addition a flooring material called "Rub-en-tex" is mentioned. I should be glad if you would let me know the names and addresses of the firms manufacturing or marketing these various types of floors and flooring.*

The names of the manufacturers referred to in your enquiry are as follows :

1. Rapid.—Rapid Floor Co., Ltd., Albion House, New Oxford Street, London, W.C.1.
2. Hy-rib.—The Trussed Concrete Steel Co., Ltd., 6, Collingham Gardens, London, S.W.5.
3. Invictus.—Aerocrete (Scotland) Ltd., Victoria Works, Gartlea Road, Airdrie.
4. Girlingstone.—Girlings' Ferro Concrete Co., Ltd., Great West Road, Feltham, Middlesex.
5. Springbank.—The Springbank Quarry Co., Ltd., Airdrie.
6. Myko.—This can be made by any contractor by arrangement with the designers—apply Sidney M. Myers, B.Sc., M.I.S.E., 48, Vincent Gardens, Dollis Hill, London, N.W.2.
7. Unicon.—W. A. Henderson & Partners, 5, Oswald Street, Glasgow, C.1.
8. Siegwart.—Siegwart Fireproof Floor Co., Ltd., 231 & 232, Strand, London, W.C.2.

Rub-en-tex.—R. K. Maclean & Co., 3, Elm Bank Street, Glasgow, C.2.

Q 979

ENGINEER, CUMBERLAND.—*I propose to use an existing DANCE FLOOR FOR a SCHOOL CANTEEN. The floor is of maple boards sprung for dancing and is rather dirty. Can you inform me of any satisfactory method of cleaning it? The use of soap and water would, I presume, be detrimental to the floor.*

The Timber Development Association advise going over the floor lightly with a sanding machine. You will no doubt be able to get quotations from any local flooring contractor. After sanding, the floor should be wax polished.

FRIERN BARNET MUNICIPAL OFFICES

On page xxviii of our issue for September 24 it was stated that Messrs. Hume, Atkins & Co., Ltd., were the sub-contractors for the electric wiring and telephones. This is incorrect. The firm supplied the electric light fittings.

BOOKS ON DOMESTIC ARCHITECTURE

SMALL HOUSES, £500-£2,500
Edited by H. Myles Wright, A.R.I.B.A.

This book contains photographs and plans of a large number of houses of widely different types. A selection of interior views is also included, and to every house is appended a descriptive note giving particulars of the site, plan, construction, services, equipment, cost, etc. Price 7s. 6d. Postage 7d.

THE MODERN HOUSE
By F. R. S. Yorke, A.R.I.B.A.

This book is divided into six sections: Introduction—Plan—Walls and Windows—Roof—Experimental Houses—General Illustrations. This last section contains over 140 pages of photographs, plans, constructional details and descriptions of English, American and Continental houses. Price 21s. Postage 8d.

THE MODERN HOUSE IN ENGLAND
Edited by F. R. S. Yorke, A.R.I.B.A.

Comprising the contents of the December, 1936, *Architectural Review*, with a number of additional examples of modern English houses built since then. The illustrations are accompanied by notes on the construction and materials. 144 pages, including 350 photographs, plans and drawings. Price 15s. Postage 7d.

WEEK-END HOUSES, COTTAGES & BUNGALOWS
Edited by Alan Hastings

The first part deals with houses and cottages in England, the second with week-end houses abroad, and the third with bungalows. 112 pages, including photographs, plans and full particulars including cost. Price 7s. 6d. Postage 7d.

THE MODERN FLAT
By F. R. S. Yorke, A.R.I.B.A., and F. Gibberd, A.I.A.A.

Following 32 pages of illustrated introduction and 168 pages of exterior and interior views, scale plans, details, diagrams and tabular information about blocks of flats built in recent years in England, Europe and the U.S.A. Price £1 10s. Postage 8d. inland.

HOUSES OF THE WREN AND EARLY GEORGIAN PERIODS
By Small and Woodbridge

A selection of houses which are among the finest examples of the period: these have been recorded by means of specially prepared measured drawings and photographs of general elevations—gates and railings, exterior and interior doors, entrance halls, staircases, panelled rooms, fireplaces, etc. Price £1 5s. net. Postage 8d. inland.

ECONOMY IN HOUSE DESIGN
By Edwin Gunn, A.R.I.B.A.

Containing about 100 pages the book is essentially practical throughout and is fully illustrated by clear and self-explanatory drawings made by the author. Price 7s. 6d. Postage 7d.

A HISTORY OF THE ENGLISH HOUSE
By Nathaniel Lloyd, O.B.E., F.S.A., F.R.I.B.A.

This is the most authoritative history of the English house which has ever been published and contains, in addition to text, nearly nine hundred illustrations. Price £3 3s. net. Postage 1s. inland.

The Publisher's complete catalogue will be sent on application to:

THE ARCHITECTURAL PRESS . *War Address:* **45 The Avenue . Cheam . Surrey**

CLASSIFIED ADVERTISEMENTS

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

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

Public and Official Announcements

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

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

CITY OF CARDIFF EDUCATION COMMITTEE

CARDIFF TECHNICAL COLLEGE

PRINCIPAL: JAMES STEPHENSON, M.A., M.COM., D.SC.

REQUIRED to commence duties as soon as possible, a Temporary ASSISTANT LECTURER (Male) of British nationality, in the Welsh School of Architecture.

Ability in Design and Draughtsmanship and a sound knowledge of Construction, both applied and theoretical, are essential, while preference will be given to Associates of the R.I.B.A. who have passed successfully through a full course of instruction in a "recognized" school of Architecture, and who have professional and teaching experience. The salary will be £300 p.a. untill such time as the Burnham (Technical) scale position overtakes this salary rate.

Forms of application, together with further particulars, may be obtained from the undersigned, to whom they must be returned by the 26th October.

W. J. WILLIAMS,
Director of Education.

City Hall,
Cardiff. 818

Architectural Appointments Wanted

ARCHITECT, experienced in carrying through large and small schemes, all parts country. Salary £800 to £1,000 per annum, according to locality. Box No. 468.

A.R.I.B.A. requires part-time work, many years experience all types of work, including war damage. Box 472.

EXPERIENCED SURVEYOR offers part-time services in connection with war damage repairs, bills of quantities, estimates, specifications, etc. North-west London area. Box No. 477.

DRAUGHTSMAN (Architectural), requires change, aged 17, 2½ years' experience in preparing working drawings of small structures under supervision, constructional details, tracing and building surveys. Write A.H., 61, Openview, Earlsfield, S.W.18. 483

ARCHITECTURAL STUDENT, at present engaged as Engineering Draughtsman, requires part-time Architectural Drawing work. D. Wheeler, 28, Endymion Road, Hatfield, Herts. 484

ARCHITECT, Alien, Swiss and Hungarian University Degree, 10-years' practice, good draughtsman, experienced designer, desires full or part-time work with firm or at home. Box No. 489

ARCHITECTURAL ASSISTANT, just completed 5 years' course at Regent Street Polytechnic School of Architecture and qualified for election as A.R.I.B.A., seeks employment. London or Kent preferred. Write, J. T. Dannatt, Church Road, Halstead, Nr. Sevenoaks, Kent. 490

REGISTERED ARCHITECT, available shortly, requires whole or part-time post. Experienced in supervising work on site. Designing and drafting, building maintenance and surveys (W. D. claims), variations builders accounts. Salary £450—£500 per annum. Box 491.

DRAUGHTSMAN, last 2½ years civil engineering, requires engineering or building appointment, available September 1. London area. Box 494.

PART TIME WORK, surveys, war damage, etc. Qualified and experienced Senior Assistant offers services in London area. 496

ARCHITECT AND SURVEYOR (Registered), requires responsible position (West or Mid-Wales preferred). Age 36, married, experienced in Factories, Commercial Buildings, Licensed Premises, Hospitals, Alterations to Existing Buildings, One-Eighth Scale Working Drawings, Details, Specifications, Preparing Bills of Quantities, Estimating, Land Surveying and Levelling, Checking Building Contractors' Accounts, Measuring War Damage and Preparing Schedules of Repairs. Salary £9 per week. Box 498.

ARCHITECT'S ASSISTANT (28), having 10 years experience in an architect's office, seeks position as architectural draughtsman or supervisor of works. Experienced in surveying, levelling, the preparation of working drawings and details, and the supervision of work. J. C. O'Dwyer, River View, Ballinacurra, Limerick. 499

ADAPTABLE YOUNG MAN, 19 (exempt from military service), studying for R.I.B.A., seeks position in architect's office. Extremely keen, practical, willing to do anything connected with architecture; one year office experience; R.S.A. certificate.—Write R. W. Terry, 37, Morley Avenue, N.22. Phone BOW 5366 (after 6 p.m.). 1

REGISTERED ARCHITECT requires employment on work subject to Essential Works Order or other scheme of National importance. Experienced in surveying and levelling, designing and planning and supervision of all building construction.—Box 4.

CHARTERED ARCHITECT, exempt military service, requires senior post, with possibilities of partnership. Box No. 5.

ARCHITECT'S ASSISTANT, widely experienced, free two days a week, London area. Would undertake usual office duties. Jones, 17, Lichfield Road, Kew Gardens. Tel. Rich. 1737. 6

ARCHITECT'S ASSISTANT (24) (B.Arch., A.R.I.B.A.), experienced in preparing Sketches, Working Drawings, Details, etc., also supervision and sound construction. Would prefer aircraft design. Box 7.

ARCHITECT'S ASSISTANT (26), requires post, preferably temporary. Experienced surveying and levelling, working drawings and details, for factory work, etc. Good draughtsman. Box No. 9.

ARCHITECTURAL AND CIVIL ENGINEERING DRAUGHTSMAN requires part-time work. Neat and accurate. Box 11.

VERY KEEN YOUTH, studying for R.I.B.A., seeks post in architect's office. Willing to do any work concerning architecture. Four months' office experience. Sec. Ed. Write: R. E. P., 45, Mayfield Road, E.8. 12

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Classified Advertisements continued on page xxx.

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