

# The important Relationship of BOND VALUE AND EXTERNAL APPEARANCE

Article Number Five in a new series on the principles and practice of reinforced concrete construction. It is suggested that each article should be cut out and kept in a personal file for the series, and for other information relating to reinforced concrete construction.

In no other age than the present has the Architect had at his command a material that of itself can give almost any conceivable character of surface treatment. With no other single material can be produced the variety of external finishes obtainable with reinforced concrete. The massiveness of masonry, the dignity of good brickwork and the decorativeness of renderings, are readily and cheaply obtainable in addition to the many excellent surfaces that are a feature only of concrete.

Consider a few characteristic treatments.

Given reasonable care during construction, a normal concrete

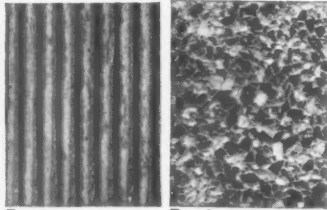


FIG. 1 FIG. 2

surface can be made presentable without any treatment other than rubbing-down or grout-washing. But for various reasons, such surfaces are not usually deemed suitable for structures of architectural merit. Although, where the face is broken by bold features, satisfactory results have been obtained. Indented surfaces on a small scale, however, lead economically to pleasing results. An otherwise plain wall area being relieved by the light and shade afforded by the grooves, arrises, projections, and other features of which an exceeding diversity can be produced. (Fig. 1). By emphasis of shutter markings and joint lines attractive patterns are also obtained.

Any of the tooled finishes normally associated with masonry



UNIVERSITY OF CALIFORNIA

All the work, including the columns and decorative motifs, were poured as the work proceeded

are equally applicable to concrete but exposure of the aggregate—specially selected material being used to attain particular effects—leads to a further range of surfaces only possible with concrete. (Fig. 2).

Where objection is taken to the possibly drab colour of untreated concrete, consideration should be given to the use of successful cement paints of various hues, and to the unbounded possibilities of white and coloured cements applied by brush or spray.

Modern developments in surface treatments must be associated with simple precautions to prevent superficial cracks. Here the experienced reinforced concrete engineer comes to the Architect's aid. Scientific attainment of the objective is primarily assured by introducing reinforcement to augment the tensile resistance of the concrete. Essential to this purpose is a reinforcement that utilises the minimum weight of steel with a maximum continuous bond or adhesion.

The acknowledged manner of most economically obtaining a minimum steel weight is to incorporate high tensile square bars that have a greater bond value than ordinary mild steel round bars. In this way it is possible to save a considerable weight of steel and at the same time obtain an exceedingly higher bond efficiency and increased immunity from cracking.

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STRESS OF  
75,000 lbs.  
per sq. in.**

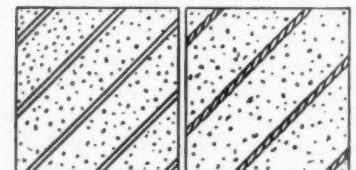
Among the primary factors governing a well designed structure in reinforced concrete is an efficient reinforcement. A reinforcement with a high tensile strength, an efficient bond value, and, in days of economy in materials, one that will do maximum work with minimum of steel.

All these structural advantages can be gained by the adoption of the Square Grip. For, thanks to the development of Square Grip of a works-hardened steel reinforcement (by twisting each square section bar when cold) a tensile strength is introduced far exceeding that of mild steel round rods. Furthermore, the twisting of steel bars greatly increases the continuous bond value.

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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, JUNE 18, 1942.

NUMBER 2473: VOLUME 95

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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.

## PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 3

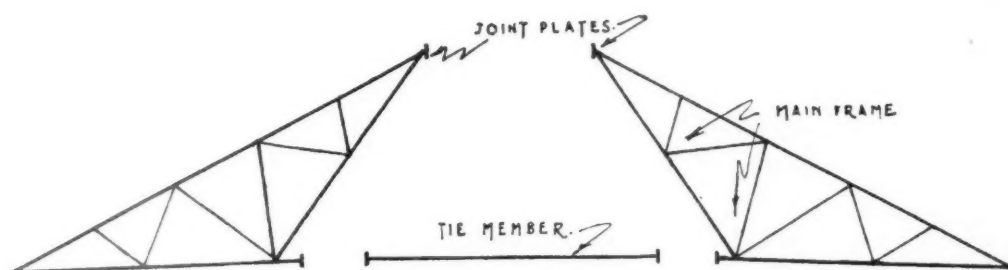


Fig. 1. Composite roof truss for spans ranging from 15' to 40'.

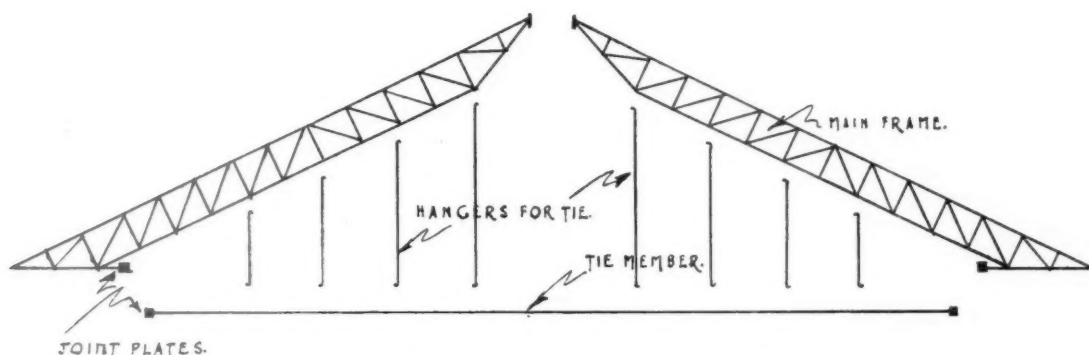


Fig. 2. Composite roof truss for spans ranging from 30' to 120'.

## COMPOSITE TRUSSES

Truss designs dealt with in Data Sheet No. 2 were designed and produced to give a range of trusses for roof spans from 15 ft. to 60 ft. suitable for quarter and 30° pitch roofs at 10 ft. to 12 ft. centres—purlins to be of tubular steel or timber. Fig. 1, above, shows this composite form of truss.

An alternative design is detailed in Fig. 2. This design may be said to supersede the earlier standard designs; it is suitable for spans from 30 ft. to 120 ft. and offers a simplified form of construction by reduction of the number of intersecting members at any one point. This form of truss is employed for roofs of quarter to 30° pitch and provides the simplest possible form of fixing for the asbestos-cement roof covering; the large roof cubage may be considered a disadvantage and the pitch of the roof can be reduced by slight amendments to the truss design. Details showing a further modification of this type of truss, for barrel form roofs, are dealt with in a later Data Sheet.

These composite trusses (Fig. 1 and Fig. 2) are composed of two main sections and a tie member and greatly facilitate handling and transportation; erection is extremely simple, the sections being bolted or welded together on the site and lifted into position by means of a single pole and tackle. The reduction in weight effected by this form of construction may be estimated as approximately 50 per cent. on existing methods.

(continued on page xxiv)

- Speed in erection
- Economy in steel
- Lightness of structure with great strength

# PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 3

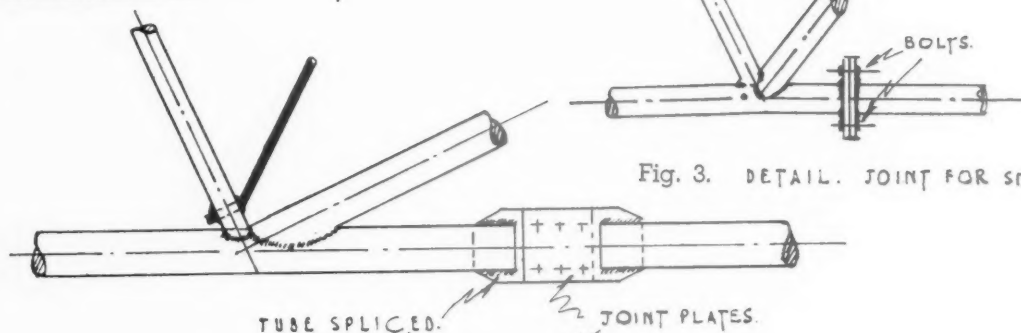


Fig. 3. DETAIL. JOINT FOR SMALL SPANS.

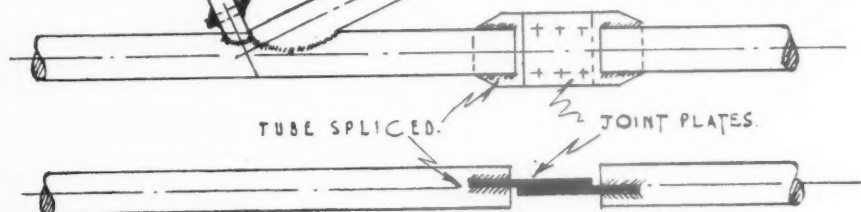


Fig. 4. Bolt connection for larger trusses.

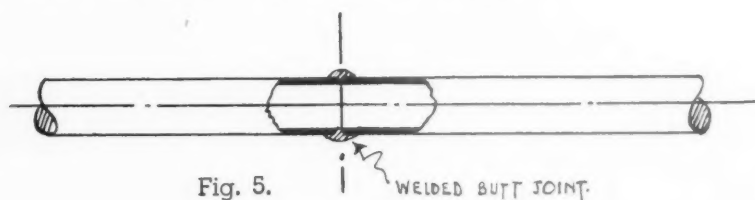


Fig. 5.

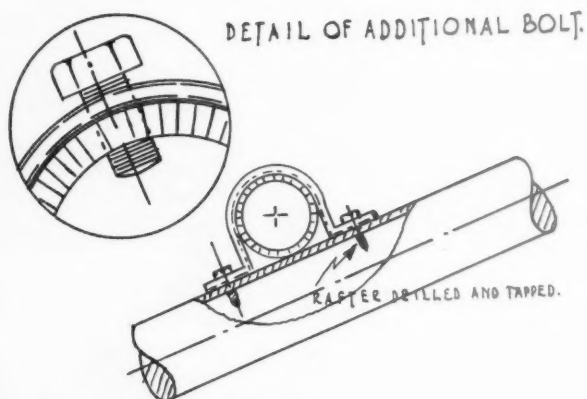


Fig. 6. Detail of purlin clips.

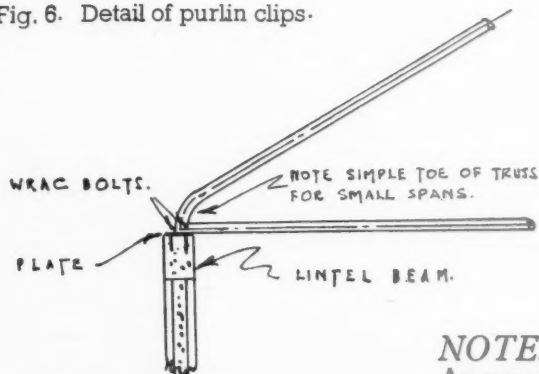


Fig. 7. Truss toe fixing for 20' span principle.

Figures 3, 4 and 5 show alternative methods of joining the composite parts. For small span trusses the bolt connection, with the bolts in tension, as shown in Fig. 3, is employed. Fig. 4 shows the bolt connection for larger trusses, with the plates reversed and the bolts used in shear instead of tension. Fig. 5 shows the alternative method of butt welding for large span trusses.

In deciding the method of jointing to be used the economy factor has to be considered, and this is governed by the size of the job and the site conditions prevailing. It may be said that the bolt connection shown in Fig. 4 is more generally used. (This question is more fully dealt with in Data Sheet No. 7).

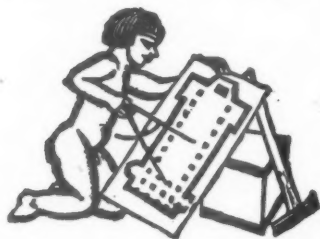
Detail of purlin clips for single section tubular purlins is given in Fig. 6 (fabricated purlins, and their fixings, for large span trusses are dealt with in later Sheets). This method of connection is not entirely direct, being in the form of a clamp tightened by two bolts and, with the larger span trusses, owing to the human element, might not be considered to provide adequate stiffening against horizontal movement; the use of the additional tightening bolt, inset in Fig. 6, eliminates the possibility of such horizontal movement.

Fig. 7 shows the toe of the small 20 ft. span principle and the method of attachment employed when this type of principle is used in conjunction with precast reinforced concrete beam and panel construction (the same method of fixing can also be used with brick construction).

**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.



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

May 31, 1854.

MY DEAR SIR,

I take this opportunity of expressing to you my thanks for having constructed a house, in my humble judgment without a fault.

Believe me, most sincerely yours,

(Signed) HARRINGTON

February 2, 1855.

MY DEAR SIR,

I pray you to accept my cordial thanks for your most able architectural skill in the construction of my House. I have lived in it one season, and have not discovered in it a single fault.

Believe me, most truly yours,

(Signed) HARRINGTON

*Letters from Earl Harrington to the Architect, C. J. Richardson, in connection with Harrington House, Queen's Palace Gardens.*

## NEWS

★ 126 members of the professional and technical staff of MOWP, who were below the age of reservation when they registered for military service, are to be released page 417

★ MOWP has formed a flying squad of men ready to go anywhere to do first aid repairs to a blitzed town page 429

### MOWP

MOWP has issued for publication a letter to Government Departments on the transfer of contractors' labour under the Undertakings (Restriction of Engagement) Order, 1941. It reads:

1. I am directed by the Minister of Works and Planning to say that in the case of some building contracts it is still apparently being made a condition of the grant of a contract that the contractor can or should provide a certain number of men whom he will bring to the job.  
2. The Undertakings (Restriction of Engagement) Order, 1941 and more particularly the Building and Civil Engineering (Restriction on Transfer) Order, 1941, were made with the express purpose of securing that at the end of each contract labour is returned to the general pool to be distributed by the Ministry of Labour

in accordance with the needs of the Government building programme. Except as regards foremen and keymen, contractors are therefore not in a position or entitled to offer a labour force for use on a proposed contract and in so far as Departments ask for assurances of this kind, they are acting contrary to the policy of the Government in this matter.

3. I am to request your Department's co-operation in seeing that no such assurances are asked for or accepted. If any offer of labour should be made by a contractor, it should be referred to this Department or to the Ministry of Labour, with a view to investigation of possible contravention of the Statutory Orders.

The Licensing Officer for the London Civil Defence Region has moved from Abell House. Application for building licences in this region should now be addressed to: The Licensing Officer, Ministry of Works and Planning, 51/54, Gracechurch Street, London, E.C.3. (Telephone: Mansion House 9855)

### SALVAGE

In view of the doubt that exists in many quarters as to the disposal of old business records, books, vouchers, etc., in relation to the Statute of Limitations and other Statutes, the Waste Paper Recovery Association referred the subject to a leading firm of chartered accountants for their help and advice. As a result, a memorandum has been prepared by the firm, from which the following extracts are taken:—

The law does not state unequivocally that books and documents should be kept for any definite period of time. The 1939 Companies' Act sets out in some detail the books which limited liability companies should keep, but there is no direct stipulation as to how long they should keep them. There is a reference to time in the case of companies in liquidation. In such cases it is a punishable offence not to have kept proper books of account throughout the period of two years immediately preceding the liquidation. By inference, the best way to prove that proper books of accounts have been kept is to produce them for those two years.

Again, a liquidator, where the company is finally wound up, cannot be called upon to produce the books after a lapse of five years. It is possible to secure their disposal within that period however by obtaining the sanction of the company, or the creditors in a voluntary winding up, or of the Board of Trade in a compulsory winding up. They should in any case be kept for at least two years since the proceedings may be re-opened within that period.

There is no direct legal obligation on partnerships or sole traders to keep books of account, but in these cases, should bankruptcy ensue, it is a punishable offence not to have proper books of account through the two years prior to the commencement of the bankruptcy unless it can be shown that the omission was both honest and excusable.

The obligation to preserve books and documents, therefore, may be said to be an indirect one and apart from the question of preservation for purposes of reference, is bound up with those Statutes which set limits to the time within which an action for the non-payment of money or other breach of contract may be brought.

There are three Statutes. The best known is the Statute of Limitations which refers to parole or simple contracts, e.g., contracts made by word of mouth or in writing not under seal. These constitute the great majority of commercial transactions.

Next is the Civil Procedure Act which refers to speciality contracts, that is, contracts entered into by deed.

Lastly, there is the Real Property Limitation Act, which deals with legal proceedings brought to recover money charged or payable out of any land.

The effect of these Statutes is that an injured party must bring his action-at-law within what the law regards as a reasonable time.

### WAR DAMAGE REPAIRS : PLYMOUTH

The War Damage Commission recently issued in the *London Gazette* a notice which affects the following area in the County Borough of Plymouth: An area comprising the following nine Wards—Keyham, Nelson, St. Aubyn, Mount Edgumbe, St. Andrew's, Vintry, Drake, Valletort and Ford. The *Gazette* states:—

The notice is issued under Section 7 (2) of the War Damage Act, 1941, whereby provision is made for securing that the making of payments by the Commission in respect of war damage shall have regard to the public interest. The publication of the notice in the *Gazette* is, therefore, of great importance to all those with interests in war damaged property, and particularly to those professionally concerned with work on such properties, since upon them must, in practice, fall the responsibility, on behalf of their clients, for seeing that the requirements of the Act are complied with.

The effect of the notice is that any person proposing to execute works for the repair of war damage, other than temporary repairs, in this area, where the total ultimate cost will be more than £100, must first inform the Commission. A notice affecting the whole of the County Borough of Plymouth appeared in the *London Gazette* on August 19, 1941. It laid down that no work on a war damaged building which would ultimately cost £1,000, or ten times the net annual value, whichever was the less, should be put in hand without the Com-



## joint parliamentary secretary, mowp

For just over fifty years Mr. George Hicks, M.P., Parliamentary Secretary to the Ministry of Works and Planning, has been connected with the building industry. Born in 1879 and educated at a London elementary school and polytechnic, he began work as a general builders' youth at eleven years of age. Later he decided to become a bricklayer and was appointed to various offices in the Operative Bricklayers' Society. He became National Organiser for the Society in 1912 and, seven years later, was elected general secretary of the Society and President of the National Federation of Building Trades Operatives. He held the position of President of the

latter body for the year 1936-37. Mr. Hicks became the first General Secretary of the Amalgamated Union of Building Trade Workers of Great Britain and Ireland in 1921. He vacated this post in 1940 when he became Parliamentary Secretary to MOWP. He has also served on no fewer than thirty government and other committees. He has written several pamphlets on housing and has broadcast a great deal. Shortly after the outbreak of war he spoke regularly after the news, his topic being the national war effort; in these talks he showed a flair for broadcasting which, perhaps, was not surprising, since he gives as his recreation in *Who's Who*, propaganda.

mission being first informed. The conjoint effect of these two notices is, therefore, that within the Wards now specified, all works costing more than £100 or ten times the net annual value, whichever is the less, should be submitted to the Commission. In the remainder of the County Borough of Plymouth, all works costing more than £1,000, or ten times the net annual value, whichever is the less, should likewise be notified to the Commission.

That body in its turn will consult the appropriate Local and Planning Authorities to ascertain whether the carrying out of the proposed works would conform with their intentions regarding re-planning and other public interests. The price limits laid down will be strictly enforced, and the incurring of a larger expenditure than that named without prior notification to the Commission will render the person doing such works liable to forfeit the right: repayment by the Commission.

Power is given to the Commission in such cases to impose requirements as to the nature of works, the materials to be used, and the time for their execution, and it may change a cost of works payment into a value

(or total loss) payment in those cases where restoration of a building would be contrary to the public interest. In the case of buildings which have been totally destroyed the Commission is already empowered by the Act, without the previous publication of notices in the *Gazette*, to attach conditions to the payments made, in order that the public interest may be observed.

The powers conferred upon the Commission by the Act are exercisable only in direct relation to war damage, and the action which it has now notified is not to be confused with any steps which may be taken with regard to "reconstruction areas" as recommended in the Uthwatt Report, or with any measures decided upon by the authorities responsible for short or long term planning.

### IN PARLIAMENT

"Ancient Monuments.—Mr. Hannah asked the Parliamentary Secretary to the Ministry of Works and Planning what measures it was

proposed to take to preserve the monuments of the past in replanning our towns; and would the inspectors of ancient monuments be asked to advise?

Mr. Strauss, Joint-Parliamentary Secretary to MOWP, said there were several statutory provisions designed to enable monuments of the past to be preserved. If, under legislation at present before Parliament, powers under the Town and Country Planning Act, 1932, were transferred to his Noble Friend, he would endeavour to secure that full use was made of these provisions.

Mr. Hannah asked: Did the Government realise that the present efforts to preserve ancient monuments were in many cases

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# DEMobilISATION

wholly ineffective, and that it was extremely desirable that His Majesty's inspectors should have complete responsibility?

Mr. Strauss replied that he could assure his hon. Friend that the question of strengthening or supplementing existing powers was being considered in connection with forthcoming legislation. With regard to his remarks about the inspectors of ancient monuments, he would remind him that they were officers of his Department, and certainly full use would be made of their abilities.

*House of Commons (Rebuilding).*—Mr. Hannah asked the Parliamentary Secretary to MOWP whether any plans existed for rebuilding the House of Commons; what method would be adopted to choose the architect; and whether it would be possible to preserve any of the calcined stonework as a memorial of the present age?

Mr. Hicks (Joint Parliamentary Secretary, MOWP), replied: "I would refer the hon. Member to the reply given on June 4 to the hon. Member for Maidstone (Mr. Bossom). In regard to the second part of the Question, it would, I fear, be premature at this stage to consider the method of selecting the architect. I am grateful for the suggestion made in the last part of the Question which will be borne in mind when plans for the reconstruction of the Chamber are under consideration."

Mr. Hannah said: Was it not a fact that the fire had in some respects rather improved the work of Barry?

*Government Departments. Ministry of Works and Planning.*—Mr. Parker asked the Parliamentary Secretary to MOWP how far site or job committees now operated on work done for the Government; whether he was satisfied that they assisted the war effort; and what policy his Department adopted towards them?

Mr. Hicks said he had not information about all Government building sites, but on sites on which work was being carried out under the supervision of his Department there were already 42 site committees, of which 36 were composed of representatives of employers and operatives, and six of representatives of operatives only. He was satisfied that such committees were of value in the war effort. The policy of his Department was not to impose the establishment of such committees on the building and civil engineering industries, but to welcome their appointment when the initiative was taken by the industry.

Mr. Bossom asked Mr. Hicks whether his Ministry had applied to the R.I.B.A., the Institute of Civil Engineers and the Auctioneers and Estate Agents Institute for experienced men who would not be affected by the call-up and who could suitably undertake the tasks now performed by the 750 young professional and technical staff in his Department who were medically fit and below the age of reservation?

Mr. Hicks: "As I informed my hon. Friend on May 2 last, of the professional and technical staff who were below the age of reservation when they registered for military service 126 are to be released, 48 are medically unfit for service and 130 are still under consideration for release, leaving a balance of approximately 500. The Ministry recruits its staff in the main through the Central Register of the Ministry of Labour and National Service, who are in constant touch with all the professional Institutes."

Mr. Bossom then asked the Minister to tell him when the Ministry of Works and Planning applied to any of those institutions to get people who could do that work?

Mr. Hicks: "My answer was that we recruited our staff in the main through the Central Register of the Ministry of Labour, which is in constant touch with the bodies mentioned by the hon. Member."

Sir H. Williams: "Is the hon. Gentleman aware that the Central Register has ceased to exist and is now called something different?"

Mr. Bossom: "Will my hon. Friend look into this matter, because these institutions do not know that they have ever been asked for people for this work?" (from *Hansard*)

IN a recent issue of the JOURNAL we published a letter signed by twenty-two members of the R.I.B.A., at present serving in the Army, in which they stated that they viewed with grave concern the correspondence and discussion taking place on post-war planning and reconstruction by non-serving members. Their letter stated: "We feel that our interests may be forgotten by the Institute in whatever plans it is making for the future and, further, that we are inadequately represented, if at all, on the R.I.B.A. Council. That the serving members, many of whom have made great sacrifices in order to join the Forces, even to the extent of closing down their practices, must have the largest say in the question of architectural policy is obvious, but many far-reaching decisions are now being made without their concurrence and, in many cases, without their knowledge. Unless action is now taken to safeguard them it is felt that they will be at the same disadvantage after this war as happened after the last." The letter ended with a request that any other members—the actual wording was "no doubt many other members feel the same"—of the same opinion should communicate with Colonel Abbott, Deputy Chief Engineer, Eastern Command, Home Forces, in order that their views on this question should be obtained. This letter was replied to by Basil M. Sullivan, Chairman of the R.I.B.A. Demobilisation Committee. "Your correspondents will, I think, be glad to learn" he wrote, "that a special Committee of Members, most of whom served in the last war or are doing so in this, has been at work for a long time past in efforts to safeguard the interests of Members of the Forces." He concluded: "As to members at present serving in the Forces taking part now on any appreciable scale in the work of the Reconstruction Committee, it is difficult to see how this can be possible, so long as they are on active service." Mr. Sullivan stated that it was probable that the Committee's report would be made public in the near future. These remarks were published in the JOURNAL for May 28; a fortnight later, on June 11 to be precise, we printed the Committee's report.

The Committee, set up in 1941, consists of five members, including the chairman, Mr. Basil M. Sullivan. The other members are: Mr. H. Chalton Bradshaw, Mr. F. R. Yerbury, Sir John Brown and F/Lt. E. W. Armstrong. The first three served in the last war; Sir John Brown, founder of the Home Guard, recently retired from active service in the present war, and Mr. Armstrong is now serving in the R.A.F. A formidable body which, judged by the recommendations in the Report, seems to be working on the right lines. All the recommendations have been endorsed by the R.I.B.A. Council. The chief point made by the Committee was a direct answer to the letter published in the JOURNAL, men-



tioned above. The Committee stated that: "although the claims of all professional men to immediate employment will be advocated by their respective societies, we consider that it should not be forgotten that the successful carrying out of post-war reconstruction schemes will largely depend on the right use of architects; we therefore feel that it is essential that they should be established in their legitimate sphere in time to make a full contribution to the planning to be initiated by the State." To carry out this task it is suggested that the R.I.B.A. should, at a suitable time, point out to the appropriate authority that if a portion of the Building Industry now working on the War Building Programme is to be turned over to carry out part of the post-war reconstruction before the end of the war, consideration should be given before that action is taken, to the question of prior release of architects and assistant architects to prepare the necessary material for the Industry to work upon.



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

## NOTES & TOPICS

### PAST HALF WAY

As the months of 1942 slide by, the evasiveness, muddled-mindedness and sheer moral cowardice which is being shown over post-war problems grows more and more frightening. If this war is going to last for not more than five years—a not unreasonable supposition—we are already past the half-way mark. And so far real thorough preparations for reconstruction could be neatly stacked on the point of a pin. I don't think I was alone in noticing the resemblance between Mr. Greenwood's appointment to study economic reconstruction and the

former Sir Thomas Inskip's job as Minister for Co-ordination of Defence. We know what followed Sir Thomas; as yet we can only guess what may be the ultimate consequence of Mr. Greenwood and successors up to date.

One would think—the very ordinary common-sense person would think—that the main lines of what must happen after the war should be clear to every one of our rulers, and should have been clear by the beginning of 1941 at the latest. The lessons of 1919-24 and 1931-34 in this country and 1929-32 in the U.S.A. show that whether we like it or not there will have to be for many years after the war a very large measure of control of the kinds and locations of industry. It is pretty certain that we won't like it—I'm sure I shan't—but if we don't have it we will like the alternative a great deal less. For the alternative, as Anthony Eden pointed out the other day, will be another war.

This control of industry will compel a control over housing and transport and many other things, and the need for control over these things will require the establishment of a very efficient Central Planning Authority together with regional branches.

The ordinary man would suppose that our rulers would therefore have

said to themselves in January, 1941, "Very well. We must prepare for these things. But we have a war on of which we don't know the end and which will need 99.9 per cent. of our resources. We will therefore get the 100 best men in economics and industry and the 100 best on the physical planning side and tell them to prepare on behalf of the whole country—reporting in stages as they go on. These men are to be collected from wherever they are, in the Forces or outside, and they are to work whole time."

★

The Ordinary Man has, however, only to glance at a few newspapers to see he is supposing quite wrong—and this despite the fact that the promises of the Atlantic Charter can only be carried out by very careful control of industry during the post-war decade. If the O.M. asks anyone in the know what the Ministry of Planning Bill means, he will be told it means little or nothing and that the confusion and overlapping now existing in the control of war building is enough to make a cat laugh.

★

Well, there we are, the ordinary man and all the rest of us. Two years, or very much less, to go and nothing done. In the meantime an industrialist announces that industry denies the need of post-war controls, several Mayors deny the need for any post-war reshuffling of local authorities' powers, and 22 architects in the Forces have written to this JOURNAL suggesting that reconstruction policy must not be decided until they and others in the Forces are at liberty to help.

### BAEDEKER RAIDS

An exhaustive list of damage done at Bath is not yet possible, but here are the main heads of disaster. The Assembly rooms have been destroyed beyond repair, walls are still standing but the building has been gutted by fire. The famous chandeliers had previously been moved to a safer place.

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Lansdowne Crescent has been badly shaken by blast and one end demolished. In Lansdowne Place

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East—one of the straight terraces at either end of the crescent, six houses are quite uninhabitable, literally blown inside out by the blast, and what is perhaps more serious, the stone facing has been stripped off the façade. All Saints Chapel, one of our best 1830 Gothic revival buildings, sometimes called Lansdowne Chapel, because of its position near the crescent, has been completely wrecked.

\*

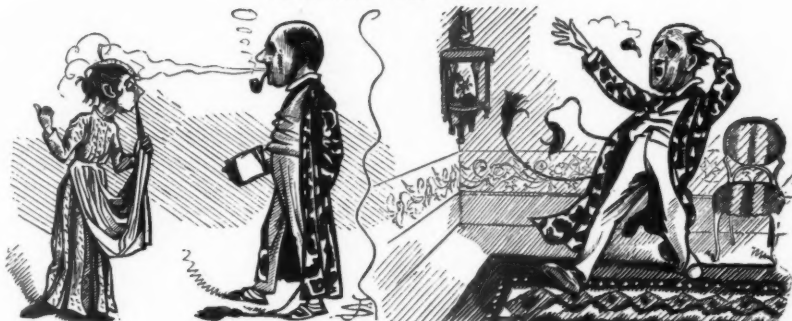
The middle section of Somerset Place has been burnt out and in Royal Crescent some houses have been destroyed though it is said that the façade as a whole is undamaged. The circus has escaped without serious damage, though windows are said to be out and ceilings down in one section owing to a direct hit on the back of one of the houses. The buildings destroyed include Doric House, Cavendish Road, and St. James' Church (both burnt out) and Holy Trinity Church, James Street.\*

\*

Exeter.—The most sensational news from Exeter is a direct hit on the South Choir Aisle of the Cathedral. This is the first of the great English Cathedrals to suffer. Several bays have been wrecked and the resulting pile of rubbish is 20 feet high. Less sensational, but possibly more tragic, is the extensive damage done to Southern Haye and Burnwell Crescent, the town-planned Georgian quarter behind the Cathedral. St. Stephen's Church and Sidwell

\*Among less well known buildings destroyed was Bath Art School which was completely gutted. This year's exam. candidates mostly homeless, tidied over the emergency by camping in the house of Mr. and Mrs. Ellis, together with quite a number of other people including Mr. John Piper, newly arrived to draw and paint the blitz. A problem which exercised everybody's mind for some days was "Will examination candidates due to sit in a day or two be excused from the subject called Antique now that the plaster casts have been blown to smithereens, or will the Board of Education persuade the Ministry of Supply to rush a Venus de Milo there in time? Eventually a bunch of fruit carved by Grinling Gibbons was accepted as a suitable substitute.

No. 5.—WAYS AND PASSAGES.



Always make the very most of your ground; leave no side entrance. "Ere's the dustman," says the servant to the Tenant.

"Great Universe!" says the Tenant, "there is no side entrance for him."



So first of all he gets the dustman to come along the wall from the end of the road.

Then he tries getting him over the top of the house.



But at length these little arrangements become somewhat tedious. "THERE!!!" gasps the Tenant, "let him come through the 'drawingroom—and the coals too—and everything else!"

*The British Tradesman together with the Complete Builder-Landlord published by Fun Office, London, 1880 was recently discovered by Astragal in a second-hand book shop—a whole volume of prodigious jokes worked out with a wealth of detail and carefully bound in stout brown leather. Here is the fifth of the Builder series.*

Church, two good mediæval buildings, have also been hit; there may be others.

\*

York and Norwich.—York has lost its mediæval Guild Hall, which was destroyed by fire, and also a number of good Georgian houses in Bootham. The Friends' Meeting House, Norwich, is the only serious architectural

casualty reported from that area so far.

LACEY FARE-WELL

By a recent order of the Government no more lace curtains could be manufactured for the home market after the end of May. The news will probably arouse little public interest, for the hey-day of the lace curtain was long past, and in the normal



progress of fashionable revivalism its reappearance is not due for another twenty years.

★

Yet for most people lace is a fabric woven with youthful associations as varied and complex as the pattern of the material itself. It adorns in memory the ends of nursery blinds, the petticoats of one's dolls and the blouses of one's governess. It regularly appeared beneath birthday cakes, and floated with its fragile cargo of pin-trays upon mirrored mahogany dressing tables in the echoing spare rooms of elderly relatives' houses. It is unforgettably associated with the romantic wrist-ruffles of Scaramouche, Monsieur Beaucaire and The Scarlet Pimpernel—am I wrong or was it always "faultless Mechlin?"

★

But above all it is remembered as curtains, draping the windows of a thousand digs—by the seaside, in the University town, or in the "bedsitters" of one's student days in Bloomsbury, Bayswater or Earls Court. Elaborate, yellowing, discreet, they hang like some dingy veil over the years of later adolescence.

★

It is then with more than nostalgic affection—it is with regret—that Astragal records their end. They follow into oblivion, their inseparable associate—the aspidistra—for many years now more famous as a music hall joke than as a plant. So symbolic indeed has it become of a certain attitude of mind on the part of a householder, that an advertisement appeared last week in a Cheltenham paper which read as follows: "Civil Servant requires residence, preferably with board. No aspidistras."

#### U.S.A. HOUSING

Two American housing films were shown to the press at the Ministry of Information last week. One is in black-and-white with a sound track, the other is a silent colour film. Both deal with prefabricated housing, wood being the chief material. They get across the story in a convincing manner.

ASTRAGAL



## LETTERS

D. E. MORRISON

### Job Committees

SIR,—The technical committee of the A.A.S.T.A. has recently prepared a short report containing proposals for the organisation of the building industry. We should like to draw special attention to that part of these proposals which is, perhaps, of most immediate interest, and which in our opinion should be the first to be put into practice: the setting up of job committees.

When we first made this part of our policy at our conference last November, the movement for setting up Joint Production Committees was already well started in the big industries. Since then it has developed greatly. It received the official approval of the Trades Union Congress; and the Russian Trades Union delegates on their visit here significantly noticed that output was most satisfactory in factories where vigorous production committees existed. Government encouragement has not been lacking. The Ministries of Supply and Aircraft Production have officially recognised them. The Ministry of Works, in recently inviting suggestions for increased efficiency, has established the principle for office staff; and many office meetings in this Ministry have already been held.

Thus this movement has ample official backing. What it still lacks—in our particular field—is a real drive from the technical men and women themselves in the offices and on the sites. And this is something which we can all bring about now, long before even the practical and short-term proposals which form the rest of the A.A.S.T.A. report.

Let us get clear about this. Staff consultations are not a mere means of "raising morale" or "making people feel they are participating" in the war effort. They are the most effective way of making improvements. Nobody knows so well as those carrying out work where the weaknesses are. Few mistakes or bottlenecks can be con-

cealed from them. And when their collective practical experience can be drawn on it provides a wealth of constructive suggestions unobtainable in any other way.

Meetings of drawing office staffs alone, such as have taken place in the L.C.C. and the Ministry of Works, can achieve important results, but the kind of meeting that will do most is the meeting on the site itself between technical staff and operatives. The site is the place where in actual execution the plans and organisation of the job are tested. Are there delays, waste of material, faulty construction, misleading details, architect's and client's changes of mind? They all come to light on the site. Technicians and operatives together are in a position to check over every step in the whole building process in the light of each other's experience.

Better and quicker building with less manpower. This is the urgent need for the great war-time work of our industry. We ask every technical employee to consider seriously this method of achieving it—the method of democratic initiative of the men on the job, and to start a discussion in their work-place this week.

D. E. MORRISON.

(Chairman, Public Relations Committee, A.A.S.T.A.)

## RIBA

### REPORT

In the annual report of the R.I.B.A., it is pointed out that the tables of membership indicate that the strength of the R.I.B.A. has been maintained, and even increased, in a remarkable fashion in spite of the losses due to the war. Many members have died on active service, many have had to drop out of the profession owing to war difficulties, some have been unable to keep up their membership, and numbers of older members have retired at an earlier age than would have been the case but for the war, and the calling up of young men for the Forces has greatly lessened the number of those taking the Examinations and qualifying for the Associateship. Yet in spite of all this the comparison between the pre-war year (1938) and 1942 shows striking results: the Fellows have increased by 127; the Associates have increased by 685; the Licentiates have decreased by 59; the Students have increased by 109; the Probationers have increased by 526; a net increase of no fewer than 1,388.

In connection with the Directorate of Post-War Building recently created by the Ministry of Works and Planning, the Institute has agreed to sponsor three of the various committees which are being set up under the Directorate.

The membership of the committees is as follows:

#### 1. THE ARCHITECTURAL USE OF BUILDING MATERIALS

Chairman, Edward Maufe, A.R.A.; Vice-Chairman, Oswald P. Milne; Hon. Secretary, Basil M. Sullivan, C.I.E., O.B.E. Members, Robert Atkinson, W. T. Curtis, J. Murray Easton, Henry M. Fletcher, J. H. Forshaw, M.C., W. Curtis Green, R.A., Lionel G. Pearson, J. Hubert Worthington, O.B.E.; Nominated by the Royal Incorporation of Architects in Scotland, J. R. McKay; Nominated by the Ministry of Works and Planning, Brian O'Rourke, W. A. Rutter.

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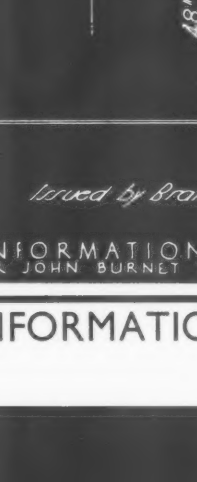
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TABLE GIVING COMPARATIVE PROPERTIES & EFFICIENCY COEFFICIENTS (e) OF WELDED PLATE GIRDERS.

SIZE OF WEB PLATE & DIAGRAMS OF TYPICAL GIRDER SECTIONS.

	FLANGE PLATE (ins)	I.	Z.	W.	Z/W.	e.
	6 x 1/2	1260	100.8	49.9	2.02	1.77
	8 x 1/2	1560	124.8	52.7	2.36	2.06
	6 x 1	2238	171.7	66.3	2.59	2.29
	8 x 1	2864	219.7	79.9	2.75	2.43
	10 x 1	3490	267.7	93.5	2.86	2.52
	12 x 1	4116	315.7	107.1	2.95	2.60
	+ 12 x 1	6306	450.4	147.9	3.05	2.70
	+ 10 x 1	7766	554.7	175.1	3.17	2.80
	6 x 1/2	2242	145.0	58.65	2.47	2.17
	8 x 1/2	2708	174.9	65.45	2.67	2.35
	6 x 1	3730	234.0	79.05	2.96	2.61
	8 x 1	4692	293.0	92.65	3.16	2.78
	10 x 1	5654	354.0	106.25	3.33	2.93
	12 x 1	6616	414.0	119.85	3.46	3.04
	+ 12 x 1	9986	581.0	160.65	3.63	3.21
	+ 10 x 1	12066	708.0	187.85	3.78	3.23
	8 x 1/2	4110	223.0	73.1	3.06	2.70
	12 x 1/2	5450	295.0	86.7	3.40	3.00
	8 x 1	6910	365.0	100.3	3.64	3.21
	10 x 1	8305	438.0	113.9	3.85	3.40
	12 x 1	9650	509.0	127.5	3.99	3.51
	16 x 1	12420	655.0	154.7	4.25	3.74
	+ 16 x 1	16980	848.0	195.5	4.35	3.83
	+ 12 x 1	21550	1077.0	236.3	4.55	4.00
	8 x 1/2	6703	312.0	98.6	3.16	2.75
	12 x 1/2	8535	396.0	112.2	3.53	3.11
	8 x 1	10490	476.0	125.8	3.78	3.23
	10 x 1	12340	560.0	139.4	4.00	3.52
	12 x 1	14190	654.0	153.0	4.22	3.74
	16 x 1	17890	814.0	180.2	4.51	4.00
	+ 16 x 1	23970	1041.0	221.0	4.72	4.15
	+ 12 x 1	29050	1262.0	261.8	4.93	4.25
	12 x 1/2	12664	516.8	122.4	4.22	3.74
	10 x 1	16618	671.7	149.6	4.50	4.05
	12 x 1	19020	760.8	163.2	4.66	4.10
	16 x 1	23824	952.9	190.4	5.01	4.41
	+ 16 x 1	31630	1216.5	231.2	5.25	4.32
	+ 12 x 1	39436	1516.8	272.0	5.56	4.90
	20 x 2	54628	2101.1	353.6	5.95	5.23
	24 x 2	64632	2485.8	408.0	6.09	5.36
	+ 2/10 x 1	92652	3431.5	544.0	6.31	5.55

for explanation of notations, see reverse side of this sheet.

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INFORMATION SHEET: STEEL FRAME CONSTRUCTION, 77: WELDING 33.  
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1



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• 867 •  
**STRUCTURAL  
STEELWORK**

**Subject:**—Welding 33: Comparative Properties and Efficiency Coefficients of Welded Plate Girders.

**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.

This Sheet is the sixth of the section on detailed considerations of design in welded steel, and gives comparative Moments of Inertia, Section Moduli and Efficiency Coefficients of plate girders.

**Section:**

Considerable variation is possible in the arrangement of plate girders, but in normal circumstances the most suitable choice is one of the forms shown in Fig 6 on Sheet 28 of this series.

**Web Plate:**

When designing a plate girder, the designer should first fix the dimensions of the web plate. These should be governed by the following considerations.

- (1) ht should exceed  $\frac{S}{s} + \frac{h^2}{135}$
- (2) t should exceed  $\frac{h}{100}$
- (3) h should exceed  $\frac{l}{24}$

where S=Shear Force in tons.

s=Permitted shear stress in tons per square inch (usually 5).

h=Depth of web plate in inches.

t=Thickness of web plate in inches.

l=Length between supports in inches.

Within the limits of condition (2) it will generally be found that the deeper the web plate is made the greater will be the efficiency.

**Flanges:**

When the depth of the web plate is fixed, the cross sectional areas of the flanges can be found from the approximate formula.

$$A = \frac{\text{Required } Z - .9 Z_w}{h}$$

where A=Area of one flange plate in square inches and

$Z_w$ =Section modulus of Web plate  $\left(\frac{th^2}{6}\right)$

**Composition of Flanges:**

Each flange may consist of one or more plates. Note that in the latter case the plates can be of widely different widths, but must not be equal. Curtailment can be effected:

- (1) By stopping the top plate.
- (2) By butt-welding a thinner plate to a thicker one.
- (3) By butt-welding a narrower plate to a wider one.

**Efficiency:**

The Efficiency Coefficients given in the table on the front of this Sheet, refers to certain common examples. The possible variety of girders, however, is so great that the values given can merely serve as a guide.

**General:**

Rivet holes need not, as a rule, be deducted, but care should be taken if holes are required in the tensile flange for the fastening of hangers, etc., or for a splice (by means of bolts) which is carried out at the site. For the arrangement of stiffeners, see Sheet No. 29 of this series.

**Notations:**

I=Moment of Inertia of girder.

Z=Section Modulus of girder.

w=Weight of girder in lbs. per ft. run.

$\frac{Z}{w}$ =Efficiency of girder, by weight only.

e=Reduced efficiency of girder allowing for labour and stiffeners.

**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 and 865.

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## EXAMINATIONS

At the R.I.B.A. Examination for the Office of Building Surveyor under Local Authorities, held on May 6, 7 and 8, 1942, ten candidates presented themselves and the following were successful: Messrs. Reginald Boyd, Lewis G. Clark, Alfred H. Goodman, Kenneth Powell, John A. Simcock and John Tunstall.

The R.I.B.A.'s twenty-fifth list of members serving with the forces includes the following: Awarded M.B.E.: Brentnall, R. H. (A.R.I.B.A.), Lieut. R.E. Mentioned in Despatches: Mackay, Harry, M.B.E. (A.R.I.B.A.), Major R.E. Awarded D.F.C.: Sands, D. O. (A.R.I.B.A.), Pilot Officer, R.A.F.V.R. Prisoner of War: Whitelaw, Alex. R. (Student, R.I.B.A.), Tpr., the Queen's Bays.

## CHANGE OF ADDRESS

Mr. Ernst L. Freud, M.Inst., R.A., has returned to his old address at 32, St. John's Wood Terrace, N.W.8. Telephone number: Primrose 1727.

## MEETINGS

Friday, June 19. Town Planning Institute. At Caxton Hall, S.W.1. Address by Henry G. Strauss, Joint Secretary, Ministry of Works and Planning. 3 p.m.

Tuesday, June 23. Housing Centre, 13, Suffolk Street, S.W.1. "Co-operative Housing in Sweden." By Mrs. P. M. Stevenson, 1.25 p.m.

## EXHIBITION

The A.A.S.T.A. "Aid to Russia" Exhibition of Modern Art is now being held at No. 2 Willow Road, Hampstead. It will remain open to June 21, 1942.

"Today we think it an honour to be able to help in any way the people of the Soviet Union . . . Members of the A.A.S.T.A. through their work in the design, construction and decoration of buildings, are conscious of having a special share in our tradition of visual art. With our painters and sculptors they share the knowledge that if culture is to develop, flourish and become part of the life of the people, it is necessary first that Fascism be destroyed." These words from the introduction of the catalogue of the Exhibition summarize its object and reason. The considerable success of the Exhibition (more than 800 people have visited it in the first week) may be ascribed not only to the excellence of the cause but to the fact that the works shown are practically all of outstanding quality. It is also the first time in this country that an exhibition of modern paintings took place in a building of modern design.

Approximately two-thirds of the pictures shown are on sale, and over ten were sold in the first week. The artists donated half the receipts to the Fund, while the buyers paid prices similar to those in any gallery.

*Lieutenant SAMUEL BRITTEN BENNETT, R.N.V.R., D.S.C., recently killed in action, was twenty-five years of age. One of the most brilliant of the younger architects, he was educated at Winchester and the A.A. School of Architecture, and was one of the founders and editor of FOCUS. He was awarded the D.S.C., for courage, skill, and seamanship in action against the enemy, while serving in H.M. motor gunboats.*

TIM. BENNETT  
An Appreciation

[By JOHN MADGE]

Tim Bennett was killed in action a few weeks ago. For one so young, he had collected around him an extremely wide circle of friends of his own choosing. His presence sustained and stimulated them; they are now grieving their loss.

He will be remembered more for his potential than for his actual achievements. Of the generation who were training for architecture when war broke out, a generation which could already claim to be influencing architectural thought, Tim had achieved a position of leadership.

This leadership rested on two different foundations. As an interpreter of the form of contemporary architecture he showed an exceptional precision of understanding. His own designs, both in his scraps of private practice and in his work at the Architectural Association, expressed the same sensitivity and imagination. There was a sureness in his command of the joyous qualities of materials and spatial patterns, though this was still balanced by his intolerance for the details of physical and social structure. He had no time to interest himself in methods or reasons, but he excelled at handling the substance of art.

He was equally sure in his approach to other arts. Too impatient to toil through the normal process of acquiring a sound technique, he had developed for himself a characteristically fiery

method of expressing himself, both in his drawings and in his music. Such a hit-and-miss method could not always be successful, but at best the results were brilliant.

A pioneer must be a propagandist as well as a designer. With this aim he had joined in founding FOCUS, which was able to record in print the endless controversies on the nature and purpose of architecture; but the ground had already been explored by discussion. As a past scholar of Winchester, Tim had acquired and digested the gambits of argument, and he employed them with the vitality and ruthlessness which united all his actions. Here the certainties which are so necessary to the artist proved a liability to the logician in him. If it had not been for the natural humanity of his character, the arbitrary virulence of his opinions would often have estranged him from those whom he sought to influence; but his ability to charm and to excite always left a more lasting impression on his opponents than the eccentricity of his views as expressed in any one argument. The development of his beliefs was a living thing. Whatever the immediate phase of his enquiry, no one could doubt that the direction was to a good purpose.

When war broke through the stagnant autumn of 1939, it demanded of him no conflict of decision. In earlier years he had disappeared regularly on training cruises with the R.N.V.R. At the time these weeks at sea had seemed mere intervals in a full life, but at last this preparation—however unconsciously designed—could be put to use. He loved the sea and the constant sense of victory over a stubborn element. Here at last was an opportunity to exercise to the full the restless energy and recklessness which peaceful conditions had always limited. The Royal Navy entrusted him with a command which gave full scope to his initiative, and he went into his last action with the knowledge that the value of his leadership had been recognized.

The forces which compel a man to create are settled on him as something separate from the rest of his nature and circumstances. A synthesis must follow to produce the artist. Tim's life before the war had been too full of action and the winning of experience for him to rest and contemplate. His life in the Navy, though physically it was probably the most vigorous that he had undertaken, also contained its share of mental solitude. This is what he had always lacked, and the fruits of change were ripening when he died. His few public writings since 1939 and his brief reappearances into the shadowy version of our pre-war life revealed an extraordinary development of outlook. This was the final price, that the war whose conditions were preparing him for achievement should have made him pay for maturity with his life.



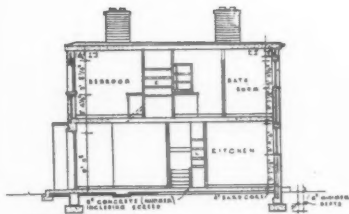
# H O U S I N G

T W O   S C H E M E S   F O R   T H E  
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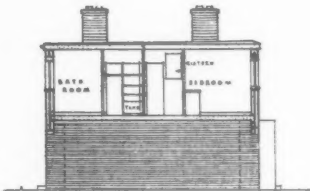
A R C H I T E C T :   G .   A .   J E L L I C O E

*In last week's issue of the JOURNAL we published illustrations and plans of two of the seven housing schemes designed by Mr. G. A. Jellicoe for the Ministry of Supply. Two more of these schemes are illustrated in this issue. The resident architect for Scheme 1 was Mr. Laurence Fermaud, and the general contractors were John Howard & Company and Griggs & Son. The resident architect for Scheme 2 was Mr. R. H. Uren, and the general contractors were Sir Robert McAlpine & Sons.*

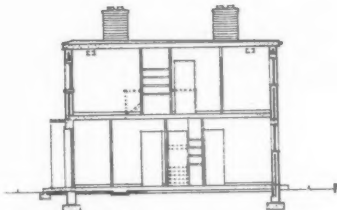
## S C H E M E 1



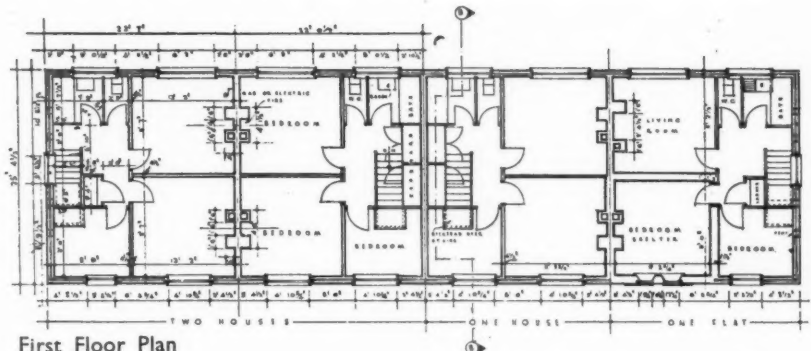
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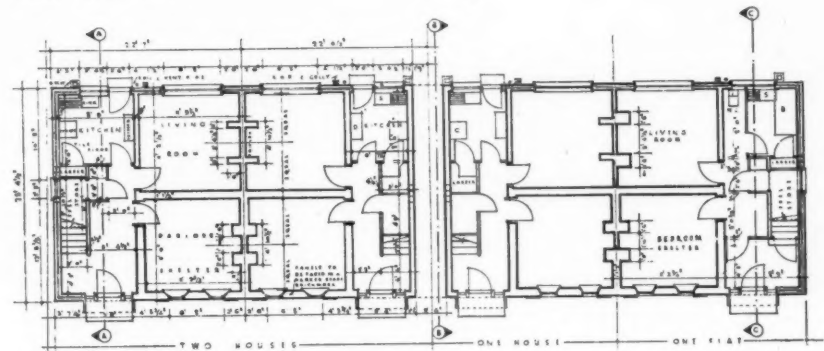
Section B-B



Section C-C



First Floor Plan



Ground Floor Plan

## TYPE PLANS—HOUSES AND FLATS

SCHEME 1.—The plan developed from various features of the site. A river lies to the north, and the staff houses, eighteen in number, have a view across orchards towards it. At the western end a long artificial mound (an old tramway) cuts right across the plan. To the east is a small pond and some fine trees. The experiment of a ten-unit terrace, the longest used, has been made on this site. The existing trees and hedges break up the plan into separate groupings, giving it a domestic character without which the curved lines of the central road might have been too marked.

SCHEME 2.—The site here is level, with some fine existing elms, and the houses have been grouped round a large green. Fine views to the north of the adjoining country can be seen through the open treatment at the corners of the square. The porches here are of white brick, a variation from all other sites. Allotments are provided for those tenants wishing to work on them.



Semi-detached blocks. The A.R.P. shutters are, of course, removable after the war. Facing page: top, perspective view; the Staff Houses are on the right. Bottom, view showing the use of the long terraces; the end units in each terrace are pairs of flats.



## HOUSING: TWO SCHEMES FOR THE MINISTRY



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## OF SUPPLY. BY G. A. JELLICOE



Above, view showing the treatment of the road junction. Facing page: three views of semi-detached houses; the two large trees in the centre view mark the main entrance. In this scheme the external doors are worked out in a rhythm of bright colours: Venetian red, golden yellow, blue and green, with the window frames throughout in pale blue-green. Internally, the walls and ceilings are off-white and all woodwork is finished dove grey.

## S C H E M E 2

Perspective showing the existing trees and their relationship with the landscape through the open corners. The gardens are the tenants' own plantings. In this scheme the doors are: primrose facing north, pale green facing south, and cream facing east and west. An unexpected effect has been introduced by the fact that the tenants have themselves in many cases painted the floors of the porches in various lively colours, such as bright red or yellow.





# HOUSING. TWO SCHEMES FOR THE MINISTRY



## CONSTRUCTION & FINISHES

—On each site construction was based on availability of materials and speed of deliveries. Where necessary, two different types of floor and roof were used on one site to avoid delay. Complete duplicate sets of working drawings were prepared for 3 in. or 2½ in. bricks, as supplies became available. External walls are of hollow

brick. Floors, roofs and stairs are all fire-resisting, by various proprietary firms. The roofs are designed with a slight one-way fall, so that all down pipes are kept on the back elevations. A sliding joint of felt to the topmost course allows for expansion between the brickwork and roof slab. Metal windows are used throughout, and the varied modelling of window

reveals has been carefully considered on the elevations. Timber saving points are: Painted cement skirtings in lieu of wood. Asbestos cement draining boards. Architraves are reduced to minimum dimensions. Floor finishes are either asphalt, screeding with linoleum finish, or, where linoleum was unobtainable, a paint finish on screeding. Externally applied

## OF SUPPLY

By G. A. JELlicOE

Dr. W. A. ROBSON, in a talk to the Town and Country Planning Association, said that "one of the developments which will be required in regard to training if the planning movement is to be served by adequately equipped personnel is a National School of Planning, at which the science and art of planning can be studied as a separate discipline on broader and more comprehensive lines than is now possible anywhere." The title of his talk, printed below, was

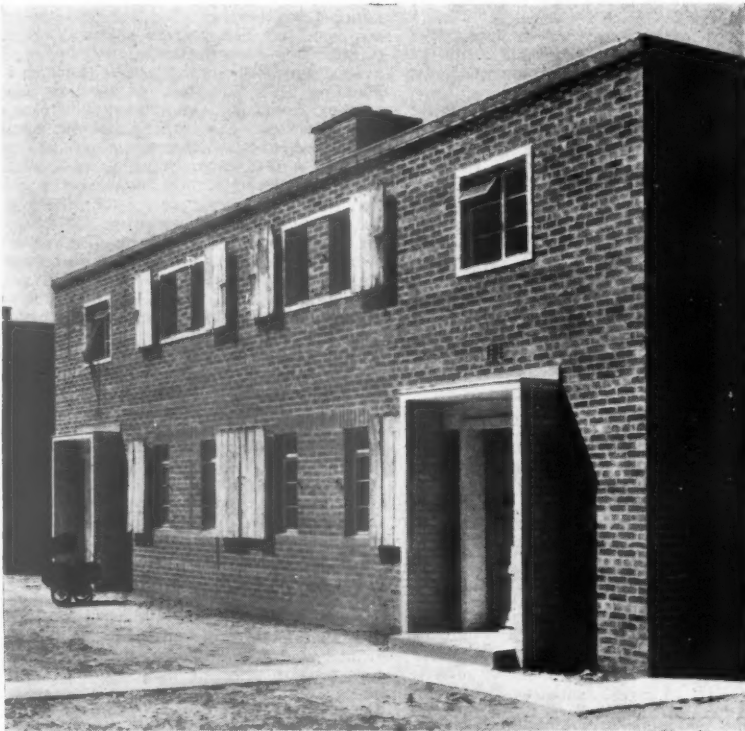
## PLANNERS

It is a strange thing that whereas much discussion has taken place during the past decade on the subject of planning policy and planning methods, little or nothing has been said about the men and women who are to do the planning. Yet the kind of plans which are produced will be determined at least as much by the training, background, experience and capacities of the human beings who are put in charge of the job as by the policies which inform the political chiefs concerned or the methods of organization. I propose, therefore, to devote the short time at my disposal to-day to the question of the personnel of planning—in short, the Planners.

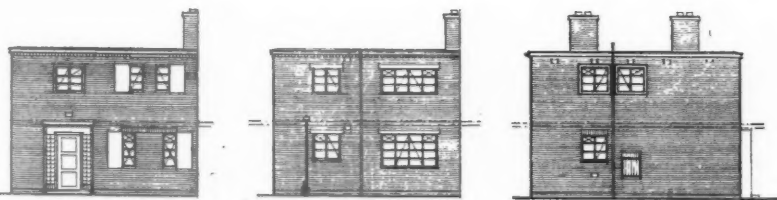
The most conspicuous fact about town and country planners in Britain is that practically all of those who are regarded as technically qualified officers have been trained as architects or surveyors. The vocation of planning has come to be regarded as an off-shoot of the architects' profession in much the same way as town clerkship and similar posts in the local government service have been appropriated by the legal profession. It is true, of course, that just as the ordinary doctor must take an additional course in State Medicine if he is to go into the public health service, so an architect or surveyor must take a course in town planning if he is to specialize in that field; but the assumption is that architecture is the proper basic training.

I must not be understood to be criticizing or attacking the architects' profession if I say that there is no valid reason why the training or experience of an architect should be regarded as specially relevant to physical planning at the national, regional or even local level.

It is true that an architect in ordinary practice must be skilled in making the proper use of a site. But so must a factory manager laying out new works, a constructional engineer, a landscape gardener, a golf-course designer, and many other types of expert. It is also true that a planner engaged in designing a town ought to be able to draw or at least sketch, and must in any case be able to read



Rear Elevation



Flats: Front, Back and End Elevations

## TYPICAL ELEVATIONS

colour is in general limited to the street doors, as plenty of natural colour arises in the buildings themselves. The glass brick panels, for example, colourless at close range, take on a marked green colour from a distance. For each site a separate colour scheme was prepared. Internally the rooms are finished in plain light distempers, as being the most economical.

**SERVICES — Cooking:** Various types of stoves are provided in all living-rooms, with space for gas or electric cookers in kitchens, if provided by tenants. Hot water is from combination stoves in houses, and by gas or electric water heaters in flats. One bedroom is provided with a gas or electric fire; heating elsewhere is by open coal fires.

drawings; but no one would seriously argue that it is necessary to go through the elaborate training of an architect in order to acquire these qualifications. There is little doubt that by far the greater part of an architectural training is of small use in the field of territorial planning, and that it omits much which is essential, even where the requirements of the Town Planning Institute exams are fulfilled.

The planning movement owes an immense amount to the numerous architects who have devoted themselves to its theory and practice. Many of the most distinguished figures in the planning world were trained in the schools of architecture: Sir Raymond Unwin and Thomas Adams are among those of the past. Those of the present are equally well known and esteemed. Nor can we in any sense reproach the architectural profession for laying claim to a virgin field which no other vocation or profession was taking the trouble to cultivate. But neither of those considerations invalidates the point I have emphasized that an architectural training is not specially suited to planning. This is borne out by the fact that in both the United States and the Soviet Union territorial planning is by no means the monopoly of architects or surveyors.

In this country the special courses which are offered in town and country planning at London, Liverpool and elsewhere may have been adequate to produce officers capable of administering the trifling amount of town and country planning which local authorities were willing to undertake under the lethargic regime of the past. A considerable part of their work consisted of such secondary and negative functions as the giving of consents.

But whatever may have been the case in the past, the courses now available are hopelessly inadequate to train men and women for the mighty tasks which we may believe with some confidence awaits those who are called upon to participate in the work of planning post-war Britain.

In the first place, there will be the entirely new field of national planning. In the second place, regional planning will assume a scope, an importance and a degree of ubiquity far beyond anything we have hitherto experienced. In the third place, local planning in town and country, will be much more positive and radical in character than in the past.

At all three levels, planning will require many different kinds of knowledge, training and ability which have not so far been evoked or incited for this function.

We shall want statisticians trained in demography, to forecast changes in population trends; economists capable of working out problems connected with the location of industry, and the relation between agriculture and industry, from a constructive point of view; transport experts and highway engineers who are able to consider communications as means of realizing ends rather than as ends in themselves; public lawyers who can invent legal forms and doctrines to embody the new social rights and duties which must accompany and protect a planned environment; geographers who will carry much further the essential constitution which their studies are beginning to make to the optimum use of land; experts in public finance who will find ways to make planning financially practicable and equitable; medical officers, botanists, biologists, geologists, electrical, mining and gas engineers, experts in public administration, psychologists and students of public relations—the list is too long to enumerate all the specific tasks for which men and women from these and other disciplines will be required. That we shall need them in greater or less degree, for longer or shorter periods, there can be little doubt. Architects and surveyors will be needed, but they will be reinforced by many other types of skill, knowledge and tradition.

Mention of experts in public administration brings me to the civil service, of which I have for the moment the honour to be a temporary member engaged, like most other people, on work connected with war. My views on the Civil Service are not, however, derived from this experience but from independent investiga-

tions made a few years ago in an unofficial capacity.

It is obvious that there is a great deal of general administration connected with planning for which no technical qualifications are required, but for which a *planning mind* and a *constructive temperament* are required. The Civil Service has many admirable qualities; but it was not recruited with planning functions in view.

The methods of recruitment are all right, but the kind of tests—and the qualities which are tested—are all wrong for the purpose of producing planning administrators. This is a matter for the Civil Service Commission.

I would go so far as to assert, indeed, that the measure of our success in planning, the degree of richness and comprehensiveness which it will attain, the colour and variety which it will display, the foresight and wisdom which it will embody, the heights to which it will raise the level of health, wealth and happiness in the community, will depend in the last resort on the extent to which we can utilize the accumulated knowledge and skill possessed by the members of all these different professions or vocations.

But if this knowledge and skill is to be useful to the community for the purposes we are considering, it must be brought into some kind of conscious relation with the planning process. At present there is no attempt whatever, at any of the universities, schools or institutions at which men are trained for the professions or specialized occupations we have been considering, to study the subject of planning in either its wider or its narrower aspects. Nor is there any central institution devoted to the science and art of planning as such, to which men might go from whatever special angle they might approach the subject.

The social sciences, with which I am personally most familiar, is typical of the general situation. These sciences are much more highly developed in England than in most countries. In fact, taking the field as a whole, despite certain obvious weaknesses, only the United States can rival our achievements, either in teaching or research. Yet at none of the British Universities is there any sustained and systematic effort to apply the work of social scientists to the sociological aspects of town and country planning. Here and there a theoretical economist may devote part of a course to demonstrating that a planned economy must possess inherent disadvantages over the unregulated scramble for individual wellbeing. Anything more realistic or practical is seldom encountered.

Two kinds of development will be required in regard to training if the planning movement is to be served by adequately equipped personnel. On the one hand we must

endeavour to persuade or induce the university faculties, professional schools and technical institutions in which specialists of various kinds are trained, to devote part of their resources to teaching at least those aspects of national, regional and local planning which are significant for each particular discipline or profession; together with, it may be hoped, at least a modicum of the general principles of planning. The question of whether such training should be at the undergraduate or a post-graduate stage, whether a diploma should be granted for it, whether special teachers are required, and so forth, are pedagogical details which need not be pursued here.

We shall need, on the other hand, a National School of Planning, at which the science and art of planning in all its wide ramifications can be studied as a separate discipline on broader and more comprehensive lines than is now possible anywhere.

I would submit that planning consists not of mere co-ordination but rather of synthesis. If this is correct, there is presumably a body of general principles relating to planning as a whole which is different from, and larger than, the principles relating to the planning of separate factors, such as highways, or agriculture or hospitals. At the National School of Planning the science of planning as such would be studied and taught; not in an abstract way devoid of content but related to the practical task of designing the ground plan for a new Britain.

Such a school as I have proposed would be a post-graduate institute for men and women possessing many different kinds of professional or scientific qualifications and experience. To it would doubtless come at some time or other virtually everyone who laid claim to serious consideration in the planning world. It would be both a research institute and also a centre for advanced teaching. Its standard should be high but the conditions of admission flexible.

The obvious place for the establishment of this school is London, for it is in the capital that the largest issues of national planning will be determined and the leading figures congregate; and it is here, therefore, that the closest contact can be maintained between theory and practice.

The school should, moreover, be a University Institution and the University of London has had unique experience in establishing special schools and institutes of one kind or another. Situated in the metropolis, it should be able to forgo links with the London School of Economics and Political Science, the Bartlett School of Town Planning at University College, and professional bodies such as the Architectural Association, whose imaginative effort at establishing a School of Planning and

## ROYAL ACADEMY EXHIBITION



The City of London—crayon drawing by Sydney R. Jones.



## MOWP MOBILE BUILDERS

Research for National Development under E. A. A. Rowse, deserved a better fate than the early demise which it suffered.

I hope, incidentally, that no one will be so unwise as to argue from that one example that all subsequent efforts must fail. The situation in regard to planning is entirely different from any which has hitherto existed in this country. A new profession is about to be urgently needed and we must here and now consider methods by which recruits coming to it from many different spheres can be adequately trained in an overriding discipline and technique and permeated by a body of general principles.

Hitherto the powers exercised by local authorities in regard to town and country planning have been extremely limited and for this reason the vocational opportunities open to professional planners have been very circumscribed. This has had a narrowing influence on the provision of educational facilities at the institutions where town planning is taught. Now the prospect is entirely changed. "Where an entirely new Ministry is started with such responsibilities," said Lord Reith in the House of Lords when he announced the creation of the Ministry of Works and Planning, "it needs men with wings to their minds." It is not within our power to give wings to men's minds: that would seem to be a matter of natural endowment. But we can at least teach them the principles of flight; and see that those who have wings are permitted to soar to the utmost heights they can attain. The proposals I have made to-day are directed to that end.

## A.A.S.T.A.

The A.A.S.T.A. London Branch recently held a joint meeting with the Ministry of Works and Planning House Branch. After a short film programme there was a discussion about the part the building industry must play now in shaping the future. The title of the meeting was "Winning the War at Home," and all agreed that every obstacle to maximum production must be swept away. In the pre-war period building was dependent on profit except for the small proportion carried out by Government Departments and Local Authorities. But the goal now was building for the needs of the community as a whole. Building materials and labour were being drastically rationed so that only essential work could be done. The trend towards concentration in large firms was inevitable under the circumstances, but groups of small firms must be used wherever they were available. The bureaucracy arising out of this concentration must be overcome through democratic discussion, and consultation between the technicians, the administrative side and the operatives. One speaker gave examples of the success of such consultation in the L.C.C. where many suggestions made by the Staff Committee had been accepted by the Council and carried out.

Another speaker stressed the importance of organisation. There was no question, he said, that organisation was essential for men to achieve their common aims. We must ask: were there any aims for which building technicians should organise themselves? The need of the moment was maximum efficiency in the industry and the most powerful organisation to ensure this was the A.A.S.T.A. One of the functions of the Association, as a trade union, was to work for better salary and working conditions which were indispensable for greater output and those could be achieved by united action. The strength of an organisation depended on the efforts of the individual member. His ideas were bound to be valuable, but they could always be improved by discussion with others.

The importance of research in wartime was stressed by a third speaker. He said the functions of such research were to find ways to build better with less materials and fewer men and to avoid delay through wet or cold weather. New kinds of structures had to be devised to resist air attacks and new methods had to be



The Ministry of Works and Planning announced on Friday last that it has established a force of mobile builders to tackle emergency building work anywhere in Great Britain. There are six hundred mobile builders in ten compact flying squads, complete with mobile feeding and sleeping accommodation, materials and plant. Each squad is equipped with specially designed vehicles—three fitted with sixteen bunks each, a fourth with twelve bunks and a kitchen to provide the squad with three meals a day for seven days, while a 5-ton lorry acts as tender to the convoy carrying plant and sufficient materials to enable the squad to be independent for seven days. Thus, in a town blitzed overnight, they can arrive within a few hours and get to work without calling on local resources for billeting, food, tools or even materials. Similarly they can start instantly an urgent job for one of the services in any lonely spot, without any need for huts, bedding or canteens. These two photographs were taken last Friday when the vehicles were inspected by Lord Portal, Minister of Works and Planning. In the above view the vans in the foreground contain the living quarters. Right, Lord Portal and Mr. George Hicks (holding ladle), inspecting one of the kitchens.



applied immediately. There were other problems on which a good deal of research had been spent, such as soil stabilisation for rapid construction of aeroplane runways, new road surfaces to avoid excessive wear of rubber tyres, etc. He spoke in particular of research on A.R.P.: in this field official steps to direct research had been taken too halfheartedly and the results had been appalling. It was only recently that a high level of efficiency had been reached. The A.A.S.T.A. had had a large share in the agitation which resulted in the now accepted monolithic box type of shelter through its forerunner the Haldane shelter. Public attention stimulated unofficial research, and good results were

obtained through working with local committees to find out the real requirements of the people for whom the shelters were constructed. A great help in planning and even more in the application of new methods would be closer co-operation of technicians with the operatives. New techniques could often not be used immediately because there was not sufficient knowledge on the part of the operatives. On the other hand there were many things the planner and designer should learn from the men on the job that would improve his work. That was one of the reasons for which the A.A.S.T.A. had applied for affiliation to the National Federation of Building Trades Operatives.

★ *IN a contract without quantities but only a specification, certain p.c. sums are given. In the final account where these are deducted, should 5 per cent also be deducted?* - - - - -

Q 923

★ *HOW would you deal with the probability of the pipes in a hot water installation, passing through a fractured basement shelter, being fractured from the effects of "near miss" bombs and scalding the people taking refuge in the shelter?* - - -

Q 925

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Q 923

ENQUIRER, MON.—*In a CONTRACT WITHOUT QUANTITIES but only a specification, certain p.c. sums are given. In the final account where these are deducted, should 5 per cent. also be deducted? It is assumed that the contractor allowed for usual 5 per cent. profit in his tender. I ask this, as where the contractor spent money against a p.c. amount he has claimed that 5 per cent. be added to that amount so obviously it occurs to me that in deducting a p.c. amount 5 per cent. should also be added to the deduction. Am I correct—otherwise the contractor "gets it both ways"?*

The method of adjusting variations on a contract must depend upon the form of contract used, but it can be assumed that provision was made in

the contract for the contractor to add overhead charges and profit on p.c. sums and that the amounts allowed by the contractor should be adjusted in relation to the sums actually expended.

There is no real reason for assuming that the contractor added 5 per cent. to p.c. sums in his tender, but it is not an unreasonable figure. The R.I.B.A. Form of Contract (where quantities do not form part of the contract) states that the contractor is to supply a fully priced estimate, and if this form of contract was used, you are entitled to ask for the estimate to see what percentage was allowed. On the other hand, the proper time to call for the estimate is before work commences, and if the builder is not all that he should be, you cannot now be sure of getting a bona fide copy of the original article.

There can be no doubt that whatever form of contract is used, the contractor is not entitled to "get it both ways," i.e. he cannot claim 5 per cent. on the additions and refuse to allow 5 per cent. on the omissions.

We should make it clear that our remarks apply only to percentages added for overhead charges and profit. The contractor may also add to p.c. sums for attendance, and it is possible that he may be able to show that the amount of attendance required was similar to that envisaged at the time of tendering although the p.c. sum has been reduced. For instance, if for electrical work slip jointed conduits were substituted for screwed barrel, the p.c. sum would be reduced but the work involved in unloading, storing, assistance in setting out, etc., would be the same.

Q 924

SURVEYOR, EIRE.—*Can you recommend a book or books dealing with THATCHING, with special reference*

*to detail of flashing at interruptions of the surface and at gable copings.*

We have not been able to trace any one book entirely devoted to thatching so we are sending you, by kind permission of the Librarian, a copy of the references to thatching in the Library of the Royal Institute of British Architects.

### THATCHING.

\*Blake, E. G.: *Roof Coverings*. Chapman and Hall, 1925. 10s. 6d. Chapter 2, pp. 8-22.

\*Boardman, H. C.: *Reed Thatching in Norfolk*. Architects' Journal, April 26, 1933. pp. 563-567.

\*Briggs, M. S.: *Short History of the Building Crafts*. Clarendon Press, Oxford, 1925. 8s. 6d. pp. 212-214.

\*Cowell, J. G.: *Thatching: Specification*, 1922. Architectural Press. 10s. 6d. Dodds, L. V.: *Straw Thatch as a Building Material*. National Builder, October, 1929. pp. 86-87.

Gunn, Edwin: *Thatched Roofs*. Architect and Building News, September 11, 1936. p. 299.

Harper, Charles: *Thatch*. Journal of the American Institute of Architects. Part 1, December, 1921. pp. 389-396. Part 2, January, 1922. pp. 4-13.

\*Innocent, C. F.: *Development of English Building Construction*. Cambridge University Press, 1916. 10s. 6d. Chapter XIII. pp. 188-222.

Powell, Alfred H.: *Thatch*. Architects' Journal, December 12, 1923. pp. 859-862. Wood, M. Paige: *Sussex Thatch*. Builder, October 28, 1921. p. 544.

*Fireproofing Thatch*. Architect and Building News, June 24, 1927. p. 1066.

*Straw Reed for Thatching*. Architect and Building News, April 14, 1922. p. 276.

*Ancient History of Thatching*. Builder, July 22, 1932. p. 130.

*Illustrated Article on German Thatching*. Baugilde, July 5, 1936. p. 34.

*Thatching by Reedwork and Strawwork*. National Builder, October, 1927. p. 34.

*The Thatched Roof*. National Builder, January, 1933. pp. 236-238.

\**Thatching*. Specification. Vol. 28, 1926. pp. 305-309.

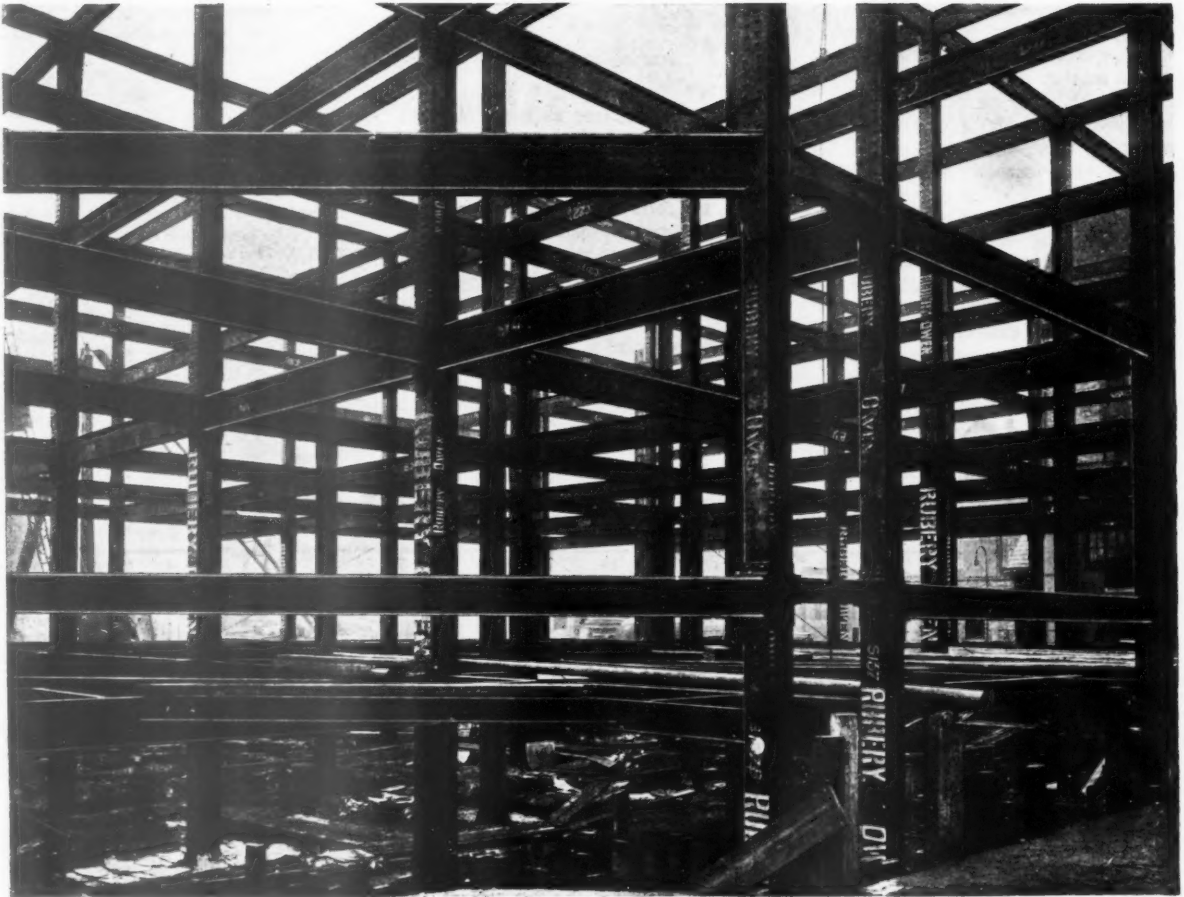
\* In the Loan Library.

Q 925

ARCHITECT, HEREFORD.—*How would you deal with the probability of the PIPES in a hot water installation, passing through a public basement shelter, being FRACTURED from the effects of "near miss" bombs and scalding the people taking refuge in the shelter. I have given some considerable thought to the problem without having arrived at what I consider the right solution. Below I have given the trend of my thoughts:—(i) Cut off the cold water supply to the boiler by a valve on the cold water pipe feeding the boiler to stop the circulation; (ii) Provide a valve on the return pipes and divert the return water into the drains; (iii) Introduce cold water into the installation at the farthest point from the boiler. N.B.—This is dependent on (ii) above being possible; (iv) Reduce the temperature at the boiler by (a)*



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fire extinguisher; (b) drawing the fire; and (c) damping the fire.

We regret that it is impossible to give a satisfactory answer without visiting the premises, and if you want to alter the hot water installation we should advise you to call in a good local firm of Heating and Hot Water Engineers.

We suggest that any solution should (a) eliminate danger at the shortest possible notice; (b) remain effective for an indefinite period; (c) not affect the installation seriously during the "safe" periods; and (d) not affect seriously, running costs. It does not appear to us that any of your suggestions fulfil these requirements, and we doubt whether the problem can be solved on these lines.

The two best methods would undoubtedly be to divert the pipes or to separate them from the shelter by protective walling or other means; possibly a combination of the two methods would be suitable. If your objection is to the initial cost, we would remind you that emptying the system, drawing fires, etc., even if effective, would increase running costs considerably.

As the shelter is a public one and the matter may be considered one of public interest, we should advise you to write to the Regional Technical Adviser, The Ministry of Home

Security, The Avenue Hotel, Clifton, Bristol.

# Q 926

ARCHITECTS, YORKSHIRE.—*In the issue of the JOURNAL for May 21 last you reported extracts from the lecture of Mr. R. Fitzmaurice, A.R.I.B.A., on Lighting, Heating and Ventilation. Mr. Fitzmaurice referred to "DAYLIGHT FACTOR PROTRACTORS" by Mr. A. F. Dufton of the Building Research Station. Where can we obtain detailed particulars of these and the cost?*

There are four daylight factor protractors available, one each for vertical glazing, horizontal glazing, and glazing at 60° and 30°, each with an auxiliary protractor to correct for short lengths of glazing, the total being eight instruments at 1s. 0d. each with instructions.

The protractors are supplied by the Department of Scientific and Industrial Research, Building Research Station, Garston, Watford, Herts., and you would be advised to write to them direct.

# Q 927

ARCHITECTS, LANCS.—*May we have the benefit of your advice for the TREATMENT of EXISTING CONCRETE*

*FLOORS to allay and prevent dusting from same. The premises in question are engineering workshops engaged upon urgent war production, therefore small areas only, say 250 to 500 square yards, could be released at one time.*

We give below a list of firms who supply materials for hardening and dust-proofing existing concrete floors:—

Adamite Co., Ltd., Manfield House, Strand, W.C.2.

"Antegele," 5, Oswald Street, Glasgow, C.1.  
Joseph Freeman Sons & Co., Ltd., 96, Garratt Lane, London, S.W.18.

Huntley & Sparkes, Ltd., De Burgh Road, South Wimbledon, London, S.W.19.

Imperial Chemical Industries, Ltd., Nobel House, Buckingham Gate, London, S.W.1. ◀  
Jno. Jones (Steel-Crete), Ltd., 35, Avenue Chambers, Southampton Row, London, W.C.1.

Geo. Lillington & Co., Ltd., 30, Denman Street, London Bridge, London, S.E.1. ◀

MacAndrews & Forbes, Ltd., Bush House, Aldwych, London, W.C.2.

R.I.W. Protective Products Co., Ltd., 2, Orsman Road, London, N.1.

Rollo Products, Ltd., 154, Albany Street, London, N.W.1.

Sal-Ferricite & Trading Co., Ltd., 748, Fulham Road, London, S.W.6.

Sealocrete Products, Ltd., Atlantic Works, Macbeth Street, London, W.6.

Sika-Francois, Ltd., 39, Victoria Street, London, S.W.1.

Sonneborn & Falkenstein, 10, Piccadilly, Bradford, Yorks.

Stonhard Co., Ltd., 15, Adeline Place, London, W.C.1.

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\* We manufacture Mechanically Operated Obscuration Shutters for use in conjunction with the Paragon Glazing System.

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