

CONCRETE ROADS

- 8** Lay top course at same time as bottom course (within 20 minutes).
- 9** Keep reinforcement (*B.R.C. Welded Fabric*) above bottom of concrete by placing gaspipe under and pulling along as work progresses.
- 10** Thoroughly tamp the concrete with a heavy tamper worked off the side forms.
- 11** Work the concrete well against all forms, particularly transverse forms.
- 12** Hack back concrete at joints before joining up new work.
- 13** Protect concrete against quick drying by keeping surface damp for two weeks.
- 14** Keep traffic off for four weeks after laying concrete, one week if quick hardening cement is used.

B R C

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THE ARCHITECTS'



JOURNAL

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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.

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.

To obtain your copy of the JOURNAL you must therefore either place a definite order with your newsagent or send a subscription order to the Publishers.

S W I S S F A R M B U I L D I N G S



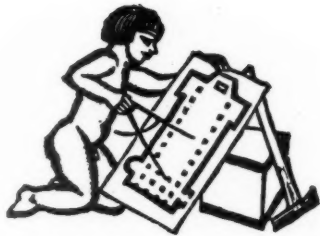
A chalet in heavy timber construction, most of the timbers being 8 ins. square, halved at the corners. The ground floor is used for stabling and storage with living accommodation over.



FRAM HOUSE, OSLO

The staircase leads up to a gallery round the hall, from which the deck of the "Fram" is reached by a gangway. The inside of the ship is used as a museum for exhibits connected with the expeditions. The architect of the Fram House was Bjarre Tøein

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BUILDING TIGHTENS ITS BELT

IN its issue for November 23, 1939, the JOURNAL suggested that a single authority should be put in charge of all war-time building, and that the duties of this authority should include the preparation and standardization of designs for suitable war-time buildings in all materials which could be used with tolerable speed and at low cost.

It required no special foresight in the autumn of 1939 to see that a Ministry of Building was urgently needed, still less to see that a reduction in the myriad types of peace-time materials and ways in which they could be used would have to be one of the duties of that Ministry. And it was typical of the general pre-French collapse attitude towards the war that it should have taken just under a year for that Ministry to be set up.

It is equally typical of Mr. T. S. Tait, of Sir John Burnet, Tait & Lorne, that he should call the technical press together to tell them what he means to do and how he means to do it within a fortnight of his appointment as Director of Standardization at the Ministry of Building. Mr. Tait at least is worth waiting for.

No architect will fail to realize how big a job Mr. Tait has taken on. It is the job of reducing the number of types of building equipment and constructional units and standardizing as far as possible those which are retained. From one point of view a state of war is an advantage for this job—for the Government, being in one way or another almost the sole customer of building manufacturers, has almost unlimited power to persuade manufacturers to accept its demands. But in all other ways the process of rationalization is gravely impeded by the war: at any moment a common material may become scarce and all the time constructional technique has to be modified as more becomes known of the effects of high explosive on various building types.

The aim of standardization is, first, to increase output by reducing number of types and sizes of materials and by concentrating productive capacity on those types; and, secondly, to reduce the labour of specification, design and erection.

Mr. Tait intends to realize this aim by three parallel methods. The articles of building equipment needed for wartime buildings have been listed and illustrated in a schedule called *War-time Building Supplies*, of which two editions have been published. This schedule contains the essential minima of equipment for most buildings and all items listed are robust, simple and

cheap. As manufacturers' stocks of equipment serving similar purposes become exhausted they will be encouraged to manufacture only those types asked for in the present and future editions of this Schedule.

Secondly, it is intended to standardize as far as is practicable units of building construction such as bricks, doors, window types and roofing sheets.

Thirdly, it is hoped to standardize complete building units where these are very simple (as in the case of military hutting and A.R.P. surface shelters) and to go some way towards standardizing equipment installations and methods of building construction.

At first sight it might seem easier to standardize war-time building by the reverse method to that adopted by Mr. Tait—by producing designs for the most common war-time building type complete to the last detail and imposing these designs on contractors and manufacturers. But this procedure is impracticable.

Changes in the availability of materials are constant in wartime, and the terrific jolt which would be given to manufacturers by such a changeover might be followed by the need for a second change before plant and methods had been adapted to the first.

Mr. Tait's aim is to keep at the disposal of designers many materials and methods of construction but to reduce the number of the units available in any one material and to give guidance concerning the methods of construction which are most suitable for a given period.

Success in this work demands not only very skilful and alert collaboration between all those now carrying out research into war-time construction—it requires also high speed publicity.

The JOURNAL pointed out last month that the War-time Building Bulletins and other official recommendations tend to lay behind events, designers tend inevitably to lay behind official recommendations, and it has hitherto been a matter of doubt how much a designer for one department has to pay attention to the edicts of another.

Mr. Tait's manifesto promises improvement in this matter. No improvement is more needed. Every architect will have confidence that Mr. Tait and his collaborators will do great things at the Ministry of Building. But when constant chop and change in materials is inevitable much of the benefit of his achievements may be lost to the industry if architects in general are thinking in June what Mr. Tait is thinking now.



The Architects' Journal

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

CHAIRMAN OF RECONSTRUCTION

THERE was a time not so long ago when so vague and so huge an announcement as that a Minister was to be chairman of a committee which would consider all important post war problems might not have seemed to mean very much. But developments in war-time administration and war-time foresight seem to run in phases: good and bad. And we are now in a good phase.

Within a very few months we have been given a Ministry of Building, some first rate appointments in it, and a Director of Standardization who is the ideal man for the job. And therefore the appointment of Mr. Arthur Greenwood, Minister without Portfolio, to examine all the major aspects of reconstruction means a great deal. It is a first assurance that post-war problems are *not* going to be left to solve themselves among cries of "Retrenchment" or "Back to Normal." The committee cannot be expected to provide cut and dried plans until the end of the war: but it provides at once a focus for the attention of all those who are interested in reconstruction and an address to which they can send their suggestions. And Mr. Greenwood may be expected to indicate without too much delay the general lines on which the committee believes that specific problems should be tackled.

STANDARDIZATION

The appointment of Mr. T. S. Tait, of Sir John Burnet, Tait and Lorne, as Director of Standardization at the Ministry of Building, has possibilities which go far beyond the war. It holds out the hope that, in time, the building industry may be relieved of part of the burden which it has to carry out its peace-time activities—the burden of ridiculous overlapping and disorder in sizes, types and methods of building materials, building equipment and construction.

When the Government has decided, on the advice of Mr. Greenwood's Committee, the methods by which reconstruction (of health, education and trade as well as

buildings) shall be carried out, the general framework of that reconstruction must be set up by territorial planning. After this has been done, the building industry must carry out the work of filling in the framework. This work would be immensely lightened if some measure of order could be introduced into the sizes and types of units of building material and equipment and the ways in which they are used in buildings.

It has long been realized by architects and engineers that it is absurd that even the commonest units of building—bricks, baths, water-closets, doors, cookers and windows—should be available in thousands of types which differ not because they are designed for different purposes, but merely by accident or for the sake of being different. And it is equally absurd that no standard types, and no standard methods of fixing or construction, should have been evolved even for the drainage, heating or water supply systems of small houses. As a result, the labour of the designer is enormously increased: first, by having to keep track of all types; second, by having to make a special study of the dimensions and other properties of each proprietary type of the commonest unit before it can be used with confidence. Nor can the architect specify Standard Drainage No. 4 or *Standard Heating No. 10* for even his 1,000th house: between the local authority and his own experience some strange specially designed drapery of pipes must be evolved and mastered by the builder.

Attempts have been made to simplify "keeping track" by means of Mr. Tait's own firm's Information Sheets, by comprehensive catalogues, and in other ways. Attempts have been made to standardize spaces, sizes, qualities and methods of materials, equipment and fixing by the British Standards Institution and other bodies. All in vain. Conservatism, commercial competition and most of all, the supposed news value and selling value of novelty continues to heap new products in new shapes and sizes on the architect.

It is therefore a wonderful opportunity which has befallen Mr. Tait. Representing as he does almost the building industry's sole customer—a customer uninfluenced by stunts and desiring only simplicity, low cost and durability—he has every chance of persuading manufacturers to bring a greater measure of order and uniformity into their products.

No one can be in any doubt about the difficulties of this work. But if it succeeds, if we end this war with simpler building materials and equipment reduced to an orderly range of size, type and quality, an appreciable proportion of the job of good post-war reconstruction will be already done.

THE MUZZLED PEN

In casting about for a bedside book last weekend I found and carried off *Hold Your Tongue!*—a book by two American lawyers which bore the encouraging subtitle of *Adventures in Libel and Slander*.*

* *Hold Your Tongue! Adventures in Libel and Slander*. By Morris L. Ernst and Alexander Lindsey. Methuen and Co. Price 8s. 6d.

To those architects who have never been foolish enough to write for the Press, libel and slander may seem, at first thought, remote and uninteresting questions. But they are quite mistaken. *Hold Your Tongue!* makes it clear that the chaos and absurdity of American and British laws of libel have a direct effect on architects both privately and professionally.

*

If one dare make any generalization about libel, it seems that one is at liberty to comment, "fairly and without malice," on the policies of those who hold public office or are candidates for such office and upon their individual competence to carry out those policies. The meaning of "public office" has become enlarged in the last century to cover public utility companies and other concerns of great interest to the community: but the field of free comment is still narrow.

*

There is only one exception to this restriction—the Arts. The man who writes a book and sends it out for review or holds a public exhibition of paintings or a recital of music, is supposed to be asking for public comment, and has, by custom, no right to kick if the public comment (expressed through critics) is not to his taste.

*

It requires only a moment's thought to see how absurd are these customary, and to some extent legally sanctioned, restrictions on free comment. "Fair comment on a matter of great public interest" is the catchphrase most frequently used to justify adverse criticism which is resented; and, in theory, if this defence is sustained an action for libel will fail. Yet we know only too well that the magnitude of public interest is no guide to the freedom of comment which we may expect from the Press. A book which may be read by a thousand people in forty millions can be called hopelessly incompetent with impunity, but no newspaper has yet published a candid review of a patent medicine composed of salt and water, sold at 2s. 6d. the bottle, and guaranteed to "relieve" twenty diseases—though a million may stump up their half-crowns.

*

And even in the Arts there is no consistency. As has been said often enough, the public can ignore books, plays, pictures and recitals but architecture they can not ignore. No Art affects the public's lives so intimately and over so long a period. Yet the reluctance of newspapers to publish worthwhile architectural criticism is notorious and public ignorance of and lack of interest in architecture is partly, if not largely, attributable to this veto.

*

The attitude of progressive newspapers is well known. They contend (1) that it has not been customary to criticize architecture and therefore they will stand on poor ground in defending an action for libel; (2) that no criticism is worth while unless it is sometimes adverse; and (3) that an architect is partly a business or professional man and partly an artist, and that no reliable means can be found of criticizing him as an artist without also reflecting on his competence as a professional man—reflections which the Courts will not allow.

These contentions are undoubtedly true. And it is plain that standards of architecture will never rise to the level at which architects wish to see them until a new building in every town is discussed as thoroughly, caustically and enthusiastically—in the Press and out—as would be a slashing article by Mr. J. B. Priestley about the same town.

*

The only way to bring this state of affairs nearer is for every architect to bind himself never to bring an action for libel over a newspaper criticism of one of his buildings, providing the newspaper gives him equally prominent space in a subsequent issue to answer the attack. At first sight, this might seem to suggest architects handing over their professional reputations to be the playthings of irresponsible ignorance. But in reality it is not so.

*

The authors of *Hold Your Tongue!* show that the time which elapses between the serving of a writ for libel and the hearing of the action is between one and three years; that less than one per cent. of actions reach trial, and that the cost involved is prodigious.

*

What architect is going to keep his anger at fever heat for two years and pay £500 to obtain a questionable verdict?—in the certain knowledge that neither the offending newspaper nor any other will publish the result with prominence. (There is honour among thieves.)

*

It would be far better to renounce a theoretical protection which is no protection for space in which to rebut, with wit or pungency, criticism which is too critical, and thereby help to make architecture a real day-to-day interest for the man in the street.

ASTRAGAL

NEW YEAR ISSUE

Next week, January 23, the JOURNAL will publish its New Year Issue for 1941. This issue will include:

THE BLITZ AND BUILDINGS—An article in which Mr. Denis Poulton, A.R.I.B.A., who has been responsible for the examination and repair of many buildings damaged by bombs, will summarize his conclusions concerning the liability to damage of different building types, the recognition of degree of damage and the best methods of carrying out "first-aid" repairs.

ASTRAGAL'S REVIEW OF THE YEAR—A diary and running commentary on the men, measures and events which have affected architects and the world of building during 1940. With illustrations by Hugh Casson.

BUILDINGS OF THE YEAR—Professor C. H. Reilly's outspoken commentary on British buildings of last year.

NEWS

RECONSTRUCTION AFTER THE WAR

Mr. Arthur Greenwood, Minister without Portfolio, has been appointed chairman of a new Committee of Ministers on Reconstruction and Post-War Problems. He will make a close study of problems of reconstruction which may arise after the war. These will include the rebuilding of our social services, the re-creation of Britain's commercial markets at home and overseas, and the co-ordination of Colonial and other Empire activities.

When the end of the war can more clearly be foreseen a special Ministry will be set up to give effect to these plans. Meanwhile Mr. Greenwood will be chairman of a group of Ministers who have interests in the problems he is to tackle. The post-war problems to be dealt with include health, education, trade and industry, transport and agriculture, as well as Colonial development.

ROYAL GOLD MEDAL

CABLE FROM FRANK LLOYD WRIGHT

His Majesty the King, on the recommendation of the R.I.B.A., having approved of the award of the Royal Gold Medal for Architecture to Mr. Frank Lloyd Wright, the following cablegram of acceptance has been received by the R.I.B.A.:

"You propose a great honour. I accept. Gratiated that during this terrific war England can think of honouring an architect. A culture like that can never lose.

FRANK LLOYD WRIGHT."

LETTERS

Ancient Lights in Demolished Buildings

SIR,—During the last few days, I have seen important buildings razed to the ground, by explosive charges or steel ropes attached to tractors, in consequence of having been rendered dangerous by enemy action. In many cases, it appears that no records of the positions of the "ancient lights" were obtained prior to demolition.

As the easements of light enjoyed through the old windows have been the only means by which the amenity of good natural illumination has been preserved in some of the valuable buildings demolished, it is to be feared that the right of enjoying equally good lighting in any future buildings on the same sites may have been sacrificed, unless Parliament takes steps to protect the interests of the owners affected. As such protection may not be provided, I would strongly recommend owners, in all possible cases, to obtain carefully measured records of ancient lights, before demolition takes place.

One of the best-known cases in the High Court, in which this point was referred to, was that of *News of the*

World, Ltd. v. Allen Fairhead & Sons, Ltd., heard by Mr. Justice Farwell, in 1931. I remember this case particularly well, as I prepared the daylight plans used in Court and gave evidence.

The judgment in that case made it clear that to preserve easements of light in new structures, erected on the site of older buildings, it is necessary to record the positions of the former windows and apertures "with precision" and to reproduce or incorporate them carefully in the new windows. That cannot be done when no dimensions have been taken and recorded.

Another point that this case made clear was that, if a prolonged interval should take place between demolition and re-erection, the Court would regard the easements as abandoned. To avoid such an inference, notices have frequently been erected, in the past, to inform adjoining owners that there was no intention to abandon these rights. Whether such notices were in themselves sufficient to satisfy the Courts was, however, doubtful.

Sometimes the window openings have been reproduced in lofty timber hoardings; but, unfortunately, the leading cases make it clear that easements of light can only be enjoyed within buildings and not on vacant sites: so such indications of intention to rebuild may only have a very limited value. In the case in question, rebuilding took place within about two years after demolition, and this circumstance appeared to satisfy the judge that abandonment of the easements of light had not taken place.

JOHN SWARBRICK

Old Linen Tracings

SIR,—There has been a splendid result to the appeal for old linen tracings which we issued some time ago, and in which you assisted us by printing. Thousands of pieces of first-class linen have been salvaged, and well over £2,000 worth have been passed on to the Women's Voluntary Services who have distributed it amongst their various branches. Hundreds of articles have been made, such as aprons, pillow cases, surgeons' caps and masks, bandages and handkerchiefs, etc., and the officials of the W.V.S. are most grateful to all those who have assisted.

The W.V.S. say that the demand from their branches is now so great that they urge me once more to call on all those who can do so to send more and more bundles of old linen tracings for which they have no further use.

They should be sent addressed to me at this address where they will be quickly dealt with and every care taken to see that they are utilized for no other purpose than that for which they are asked.

F. R. YERBURY,
Director,
The Building Centre,
158 New Bond St., W.1.

THE OTHER CAMP

SINCE the Nazis came into power in Germany, the German man in the street has been promised many good things in the future. Besides the People's Car he has been promised the People's House and the People's Flat. And, like his Car, his House and his Flat have not yet appeared. The Fascist regime has never gone so far as to promise its supporters motor cars, but it has repeatedly forecasted that small holdings in far more fertile spots than Libya will soon be forthcoming on a large scale.

Latterly, for reasons which can perhaps be guessed, the broadcasts of both countries—and particularly German broadcasts—have dealt most frequently with the good things that are coming in the way of new buildings, and the JOURNAL prints below a summary of what is now being promised to those who do what they are told in the other camp.

Preparing for Peacetime (Broadcast to Germany)

AT the end of the war housing problems will probably become very acute; certainly the demand, so often raised in the past, for a "People's Flat" will be revived. The Reich Labour Minister has now issued regulations in which the conception and scope of the term "People's Flat" are clearly defined. At the same time, it is not the intention of the authorities to narrow down the conception to an extent which would produce dull uniformity, either in size or design. On the contrary, the adaptation of the building in any individual case to the surrounding landscape is strongly recommended. The "People's Flat," as a rule, will comprise three to five rooms; one living-room (which at the same time may be the kitchen), one bedroom for the parents, and the bedrooms for the children separated according to sex. The rent is to be fixed by two guiding principles: it should not exceed one-fifth of the income of the tenant, nor 40 Rm. per month. Within these limits the rent is to be assessed in accordance with the cost of construction. "People's Flats" can be erected either singly or as colonies, or even entire suburbs.

At the moment, in view of the war, the latter solution is not timely. At present the main problem is to provide "People's Flats" for workers and employees of the great armament factories near their place of work. In future, however, the erection of colonies and suburbs is also envisaged. In these cases means must be provided also for the erection of public buildings like schools. In order to provide the means for the "People's Flats" loans will be given, the amount of which will vary with the cost. The rate of interest for loans of this kind can be reduced down to 1 per cent. The cost per housing unit is supposed not to exceed 3,600 Rm. The opportunity to live in such flats will be given to people with small incomes. In order to forestall the rush which might ensue after the war, the Reich Labour Minister has given orders to all authorities to make preparations on a large scale.

CHANGE OF ADDRESS

Messrs. Searle & Searle, architects and surveyors, announce that their offices at 34 Paternoster Row, E.C., have been destroyed by enemy action. A new office has been opened at No. 6 Old Bailey (Telephone: City 2471, extension 16), where the practice will be carried on as usual. Trade diaries and catalogues will be welcomed.

THE FIRE IN THE CITY



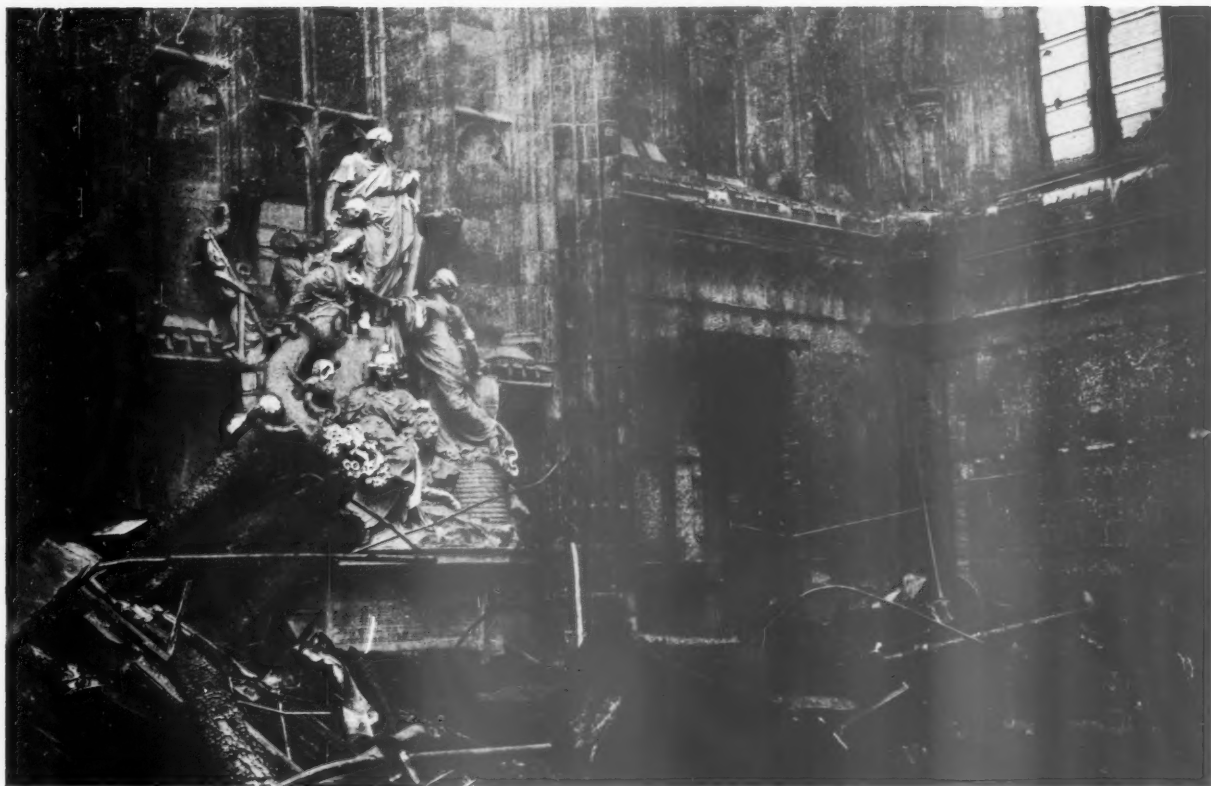
SOME FAMOUS BUILDINGS DAMAGED ON DECEMBER 29th

AS most architects will have heard with great regret, the incendiary attack on the City of London on December 29 which destroyed the JOURNAL's printers also damaged, and in some cases wholly destroyed, over a score of famous buildings, including several of Wren's City churches.

The comparative success of this attack was in large measure caused by the lack of adequate numbers of fire watchers possessing intimate knowledge of the intricate and congested buildings in the area. The accompanying photograph bears out this contention—which is now generally admitted and is being remedied. The photograph (taken during the blasting of dangerous buildings) shows how near to St. Paul's were some of the gutted buildings: and St. Paul's owed its survival not to good fortune, but to the long practice of the watchers of the Cathedral in reaching all parts of the fabric with the least possible delay which enabled the incendiaries which struck the Cathedral on December 29 to be put out during the first and relatively harmless stage of their ignition.

On the following pages the JOURNAL illustrates some of the damage to well known buildings which took place on the same night.





THE GUILDHALL



The Guildhall of the City of London contains the Council rooms, banqueting hall and library of the Common Council of the City of London and is best known to the public because of the political speeches made there at the Lord Mayor's Banquet.

The crypt of Guildhall and portions of the side walls of the banqueting hall are 15th and early 16th century Gothic, but, save for the crypt, nearly the whole of the structure had been rebuilt. The Portland stone front was the work of George Dance the younger in the 1790's, and Sir Christopher Wren designed a temporary roof which remained until the building was extensively restored and repaired in the mid-19th century by Sir Horace Jones—a President of the R.I.B.A., who designed part of Smithfield Market. He is also known to architects by a legend that he was so fat that a special groove is supposed to have been cut to accommodate him at the R.I.B.A. Council table.

An interesting architectural footnote to the Guildhall is that all the architects who at various times restored or reconstructed it, were at those times official and not private architects.

The photograph shows one wall of the banqueting hall. The library was undamaged by the fire.

DR. JOHNSON'S HOUSE

Dr. Johnson's house in Gough Square, off Fleet Street, of which the attic storey was gutted by fire on December 29, was an early 18th century house, with a later doorway, which possesses no special architectural distinction, and, for that matter, was only one of half-dozen places near Fleet Street where Dr. Johnson lived at one time or another.

Its architectural interest is that it is typical of the size and type of house facing narrow streets and small courts which formerly was the standard type of building near Fleet Street. Many such houses, cut about and altered almost beyond recognition, are still in use for commercial purposes in the city.



St. Bride's, Fleet Street, was rebuilt by Wren between 1680 and 1699. The spire, which was scorched but not destroyed by the fire which gutted the nave, was the tallest of Wren's City church spires, but had some monotony of detail at close quarters. This spire was partially rebuilt and lowered fifteen feet after damage by a storm in the last century. The photograph shows burning debris in the nave.

ST. BRIDE'S,
FLEET
STREET



ST. VEDAST'S, FOSTER LANE

St. Vedast's, Foster Lane, was rebuilt in 1677, but the spire was not added until 1695. As in the case of others of the City churches there is ground for believing that this spire was actually designed by Hawksmoor, possibly following preliminary sketches by Wren.



ST. LAWRENCE, OLD JEWRY

St. Lawrence, Old Jewry, was rebuilt by Wren in 1680 and was the most elaborate in design of all his City churches. Externally, string courses and balastrades were more carefully considered and finely modelled than elsewhere; and internally, the joinery and carving of the vestry and organ loft were on a most splendid scale. The church was most carefully refurbished by Sir Arthur Blomfield at the end of the last century.



Trinity House, Tower Hill, the original offices of the Brethren of Trinity House, but recently used wholly as records office and museum, was built between 1793 and 1797. Its design is commonly attributed to Samuel Wyatt; but James Wyatt, architect of the Pantheon in Oxford Street, probably designed much of the detail and was possibly the real architect.

The loss of Trinity House is additionally regrettable in that many of the old maritime records and navigating instruments which were housed there are irreplaceable.

TRINITY HOUSE, TOWER HILL

FROM ST. PAUL'S

The photograph on the right—taken from the Golden Gallery of St. Paul's a few days after the attack, leaves no doubt of the necessity of fire watchers in the City. In the foreground is Cheapside with the tower and gutted nave of St. Vedast's just behind it. In the background are gable ends and turrets of Guildhall.

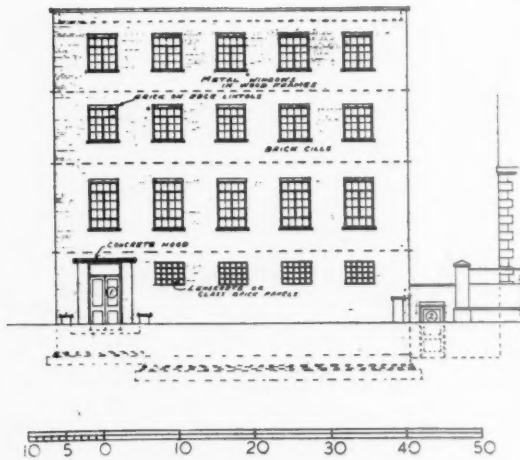


TERRITORIAL

DESIGNED BY STANLEY

HALL AND EASTON

AND ROBERTSON



MAIN ELEVATION

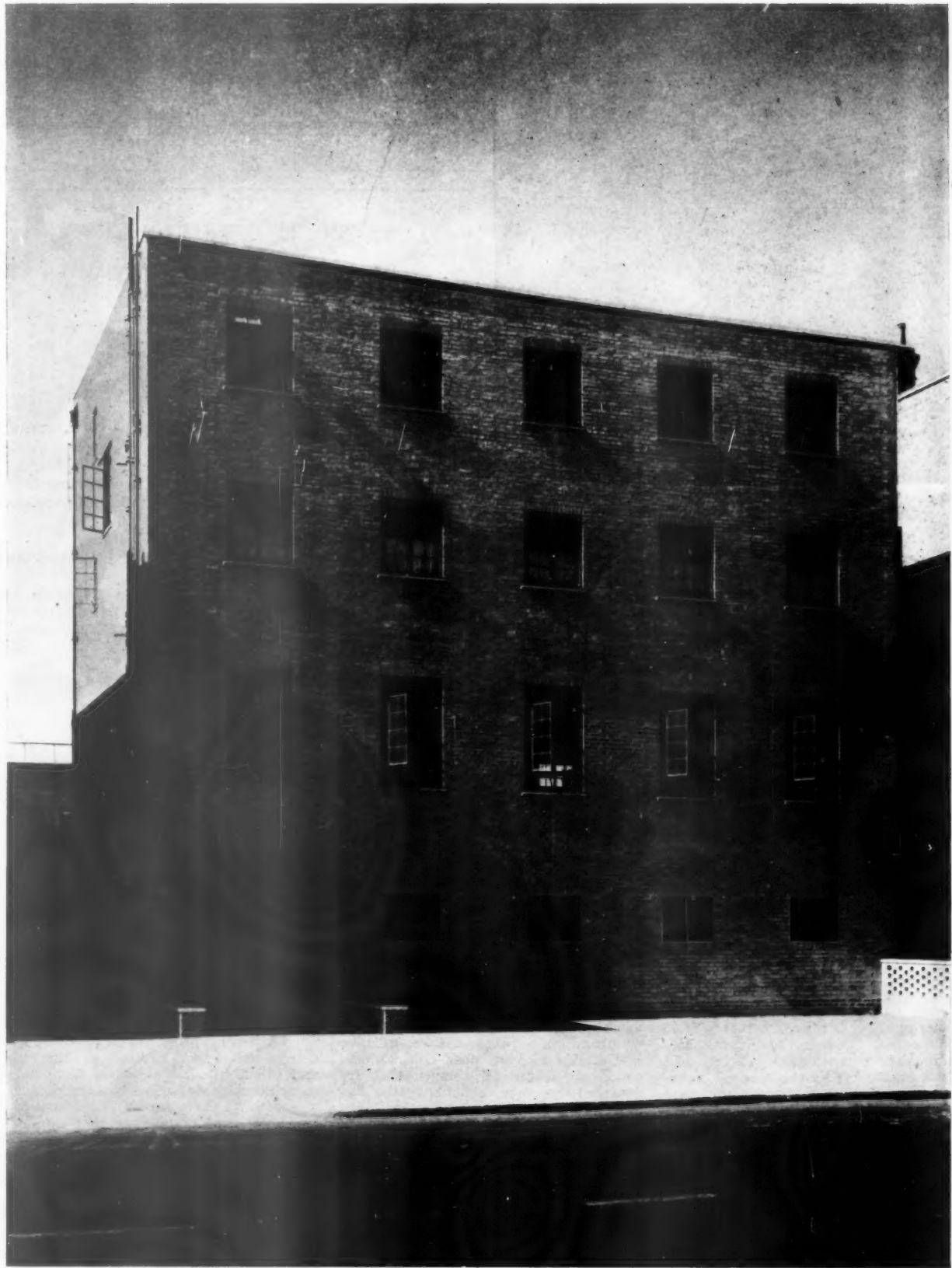


Left, sergeants' canteen. Above, main front of rear building.

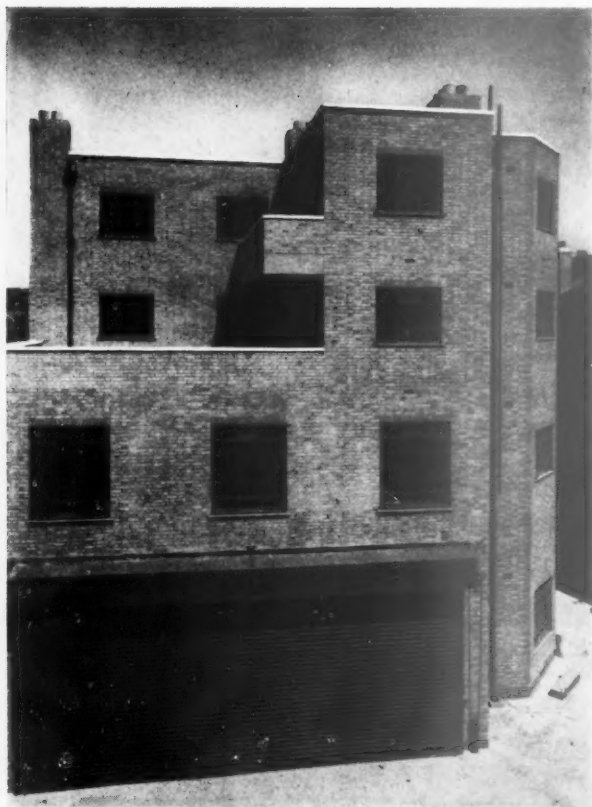
GENERAL—Enlargement of existing accommodation for a military organization to provide recreational and educational facilities, living quarters and garage space.

SITE — An existing retaining wall formed one boundary of the site with a railway track about 5 ft. below. The condition of this old wall did not permit it carrying any additional weight. Consequently, the rear block of the extensions is supported on a reinforced concrete raft and beams on concrete piles.

ARMY HEADQUARTERS

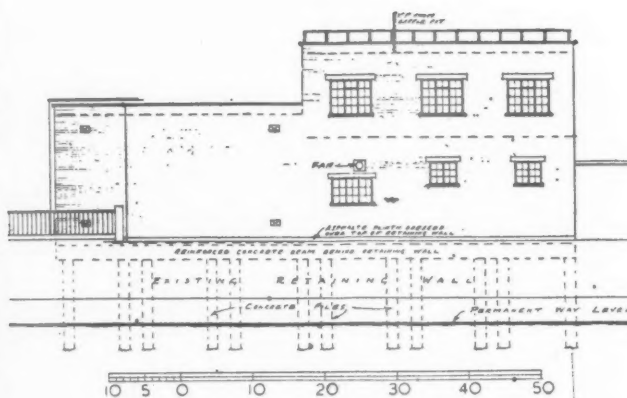


The main front



Back view of front building.

CONSTRUCTION—Partly steel framed. Walls, Fletton bricks with Dunbrik facings; roofs, concrete and filler joists; floors, hollow tile floors; partitions, brick and patent partition blocks; standard metal casements divided into small panes to minimize effects of blast.



BACK ELEVATION OF REAR BUILDING

INTERNAL FINISHES—Floors, corridors and staircases, granolithic finish; rooms, wood blocks; internal walls of lecture rooms finished fair-face in Dunbrik facing bricks; other rooms plastered. Adjacent to the sergeants' and men's recreation rooms are canteens with service counters and fully equipped with sinks and cupboards.

SERVICES—Central heating and hot water supplied from new boiler chamber to serve both old and new buildings. Married quarters have independent hot water services to kitchens and bathrooms. Living rooms and two bedrooms in each flat fitted with coal fires. Sergeants' and men's recreation rooms have large fireplaces.

The general contractors were E. A. Roome & Co., Ltd.; for list of sub-contractors see page xiv.

TERRITORIAL HEADQUARTERS • BY STANLEY HALL AND EASTON AND ROBERTSON

NEWS ITEMS

FEES FOR SHELTER WORK

The President of the R.I.B.A. has discussed with officials of the Home Office the question of fees which should properly be charged for work done in connection with shelters under the A.R.P. Department Circular 110/1939 by architects. It was agreed that where a total of £2,000 in value was made up by a number of small shelters, varying in size and character, the fees should be based on the shelters as separate contracts, and that they should be increased according to the scale of the R.I.B.A., taking, however, the basic charge as 5 per cent. instead of 6 per cent. It was also agreed that where more than two copies of the plans were required by local authorities, the extra copies should be paid for in addition to the fee.

CHARTERED ARCHITECT

In view of the passing of the Architects Registration Act, 1938, members of the

R.I.B.A. whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

AIR RAID DAMAGE

A note was issued a short time ago by the R.I.B.A. suggesting that members who were willing to give free advice to very poor house-owners concerning claims for compensation for damaged property should notify the local authorities in whose areas they practised or resided. It has since been suggested that there is also a class of citizen who, while he would not be justified in asking for or accepting free advice, would not normally go to an architect, although he would probably do so if he could obtain advice for a nominal fee.

The War Executive Committee of the Council have considered this suggestion and recommend it to members. The Committee think that members who are

prepared to render free service to the very poor or service for a nominal fee to those slightly better off, should give their names to their local Citizens' Advice Bureau, who would no doubt be able to make it known that such advice was available.

COMPETITION FOR PAVILION

The Council of the National Eisteddfod offer prizes of £75 and £25 for competitive designs for a standardized pavilion to seat 12,000 with the necessary stage and other accommodation. The intention is to encourage the planning and design of a modern type of building that can be taken down, transported and re-erected from year to year in various centres. The Council of the National Eisteddfod have appointed as adjudicators Mr. Percy E. Thomas, P.P.R.I.B.A., and Mr. T. Alwyn Lloyd, F.R.I.B.A. The conditions drawn up by them can be supplied to those who apply to the Secretary, Eisteddfod Office, Colwyn Bay, before March 1, 1941.

THE HYDROSTATIC PARADOX

"... a paradox which comforts while it mocks." Robert Browning.



The Hydrostatic Bellows.

THE apparatus shown in the sketch consists of two stout boards joined together by flexible waterproof material in the form of bellows. A vertical tube is connected at its foot with the interior of the bellows, and a person standing on the upper board, and pouring water into the tube, will lift himself up. The weight of a column of water 28 inches high exerts, at its lowest level, a pressure in all directions of 1 lb. per square inch, and whether this column of water is itself more or less than one inch square, the pressure will be multiplied by the number of square inches in the enlarged area that the water comes in contact with at that lower level. A few pounds of water can thus be made to balance a ton weight, and this seemingly wonderful multiplication of power has been called the "hydrostatic paradox." It is, however, no more of a paradox than what takes place when a few lbs. pressure applied to the long arm of a lever, lifts a much greater weight at its short end.

When a basement, or air raid shelter, is sunk in ground that is waterlogged, or in a clay excavation that collects surface water, this water exerts a pressure upon all surfaces in contact with it. The upward pressure upon the area of the floor, tending to float the structure,

will be equal to the weight of the whole of the water that it displaces, no matter how great or small is the total volume of water that surrounds it. For example, presume that a concrete shelter 10 ft. x 10 ft. overall, on plan, is formed in an impervious clay subsoil with a 3 inch space between the outer surfaces of the walls and the clay excavation faces, and that surface water collects in this outer space to a depth of 5 ft. The weight of the surrounding body of water will be about 28½ cwts., but the total pressure on the bottom of the concrete floor will be approximately 279 cwts.—nearly ten times as great—because a 5 ft. "head" of water exerts a pressure at its base of 2·165 lb. per square inch and this pressure, in an upwards direction, is multiplied by the number of square inches contained in the whole area of the floor, which is 100 square feet. The total upward pressure of 279 cwts. is also equal to the weight of the water that is displaced by the submerged portion of the shelter. Such is the "hydrostatic paradox."

The filling in of the 3 inch width of spare excavation with returned earth, thereby reducing the volume of surrounding water, but owing to the looseness of this filling, not entirely excluding it, will not reduce the upwards pressure upon the structure because the lifting power of a given "head" of water will always be the same whether the volume of the surrounding water is more or less; this is obvious when you consider that a ship floats just as high in the smallest dock that will contain it as it does in the ocean.

The principle thus explained makes it clear that when designing any structure which will be partially surrounded by water it is necessary, in addition to making the submerged parts of the structure impervious, that its total dead weight should exceed the weight of the water it displaces; also that the strength of the floor and walls should be adequate to withstand the stresses imposed upon them. If these conditions are satisfied and the work is done in accordance with the ordinary rules of good workmanship, the inclusion of 'PUDLO' Brand waterproofer throughout the thickness of the concrete will ensure a permanently satisfactory result.

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SOME QUESTIONS ANSWERED THIS WEEK :

- ★ *WE were interested in the answer to question No. 610 dealing with claims for compensation for war damage - - - - -* Q633
- ★ *A local authority has power to salvage material and remove debris from bombed sites. It has been suggested that the Building Owner is entitled to immediate payment by the local authority for salvaged material. Is this correct ?* Q634
- ★ *CAN you give me any information as to the efficacy of braced windows against vibration and collapse through the effect of blast ? -* Q635

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

THE Information Centre answers any question about architecture, building, or the professions and trades within the building industry. It does so free of charge, and its services are available to any member of the industry.

Questions may be sent in writing to THE ARCHITECTS' JOURNAL, 45 The Avenue, Cheam, Surrey, or telephoned direct to the Information Centre: Regent 6888.

Enquirers do not have to wait for an answer until their question is published in the JOURNAL. Answers are sent direct to enquirers by post or telephone as soon as they have been prepared.

The service is confidential; and in no case is the identity of an enquirer disclosed to a third party. Samples and descriptive literature sent to the Information Centre by manufacturers for the use of a particular enquirer are forwarded whenever the Director of the Centre considers them likely to be of use.

Finally, if an answer does not provide all the information needed, the Centre is always glad to amplify any point on which the enquirer wants fuller explanation.

Any questions about building or architecture may be sent to :

THE ARCHITECTS' JOURNAL
45 THE AVENUE, CHEAM, SURREY
Telephone: VIGILANT 0087

or ring the Architects' Journal Information Centre at

R E G E N T 6 8 8 8

Q 630

ARCHITECTS, LIVERPOOL.—*Can you give us the name of a consultant who specializes in the SOUND INSULATION OF BUILDINGS? We seek this information to obtain advice in connection with a heavy machinery workshop, the noise from which is proving to be a serious nuisance to an adjoining office building. The premises are on Merseyside and, for this reason, if there is an experienced consultant in the north-west area, it might expedite matters to get in touch with him. If you are not in a position to give us information on this question, could you please suggest to whom we might address our enquiry.*

There are not a great many independent consultants who specialize in sound insulation, and we have not been able to keep in touch with all of them during the war. We suggest the following names but we cannot say whether they will undertake the work for you: Hope Bagenal, A. H. Davis, G. W. Glover.* As an alternative you could write to the Building Research Station, Garston, near Watford, Herts, who normally undertake to advise on specific problems, although they would not, of course, visit the site. If you

* Addresses were sent to the enquirer.

are able to send them drawings or rough sketches they should be able to give you helpful advice. Failing this, most manufacturers of sound insulating products are willing to advise architects on problems of acoustics, and a list of some of the firms which might be suitable is given below.* Naturally these firms would be biased in favour of their own materials and could not be expected to render the same service as an independent consultant.

Q631

ARCHITECT, STOKE-ON-TRENT.—*I shall be pleased if you can inform me on the following points:—*

1. *Is it illegal for an architect to dismiss an assistant after he has registered for military service?*
2. *Assuming that the assistant is to be kept in employment at a loss to the architect, as, for instance, when there is insufficient work for him, can the architect claim any compensation from the Government?*

We refer you to the National Service "Armed Forces, Prevention of Evasion Regulations, 1939," which states (in para. 2) that "an employer should not terminate the employment of any person employed by him by reason of any duties or liabilities which that person is or may become liable to perform or discharge by virtue of the provisions of the Act." . . . You will see from this that an employer may not dismiss an assistant because he has registered for military service and is liable to be called up, but there is nothing to prevent him from dismissing the assistant at any time for other reasons, such as insufficiency of work. Should you decide to dismiss an assistant after he has registered, he might take proceedings against you, when you would have to prove your reasons for dismissal. In answer to the second part of your letter, the architect cannot claim compensation from the Government.

Q632

DRAUGHTSMAN, BIRMINGHAM.—*I should esteem it a great favour if you could kindly assist me with information regarding the following:—
The address of the Architect's and Draughtsman's and Technical Assistant's*

* Celotex, Ltd., North Circular Road, London, N.W.10; Newalls Insulation Co., Broxbourne, Broxbourne; Huntley & Sparks, Ltd., De Burch Road, London, S.W.19; Thermacoust Products, Ltd., 32 Victoria Street, London, S.W.1; D. R. Smart & Sons, Ltd., 30, Durham Road, London, N.7; H. W. Cullum & Co., Ltd., Connaught Gardens, London, N.10.

Association. I forget the correct title, but some little time ago it was broadcast that this Association was in a position to place assistants, etc., on Government building works.

Also could you inform me of any book which would help me in judging different kinds of timber before being planed and worked. There are, as you are aware, so many kinds of timber which when in the rough are pretty much the same as each other.

The correct name and address of the Association mentioned in your enquiry is The Association of Architects, Surveyors and Technical Assistants, 113 High Holborn, London, W.C.1.

Judging timber is naturally a difficult matter, but we can recommend the following books:—

The Architects' Dictionary of Wood: The Timber Development Association. Timber. By F. Y. Henderson.

Timber (Its Strength, Seasoning and Graining). By H. S. Betts.

How To Buy Timber. By Rivers.

Ordinary building timber obtained under normal conditions from Scandinavia and the U.S.S.R. has not been written about very fully, and this no doubt is because of the very numerous qualities available. It is, of course, possible to tell, within limits, what quality you are buying by examining the shipping marks or brands on the ends of the timber. A list of shipping marks and brands is given in Laxton's Builders' Price Book, published by Kelly's Directories Ltd., London.

Q633

ARCHITECT, LONDON.—*We were interested to read the answer to Question No. 610 by your Information Centre in the December 5 issue, which deals with the degree of accuracy required when preparing CLAIMS FOR COMPENSATION FOR WAR DAMAGE. Although we do not want to quarrel with the answer, which is reasonable enough, it does, in our opinion, differ rather from the view expressed by the R.I.B.A. and we should like to know to what extent your opinion is authoritative. We hope that you will not mind us raising this point again as we feel sure that many Architects are concerned with this particular problem.*

The enquirers were wrongly described as Architects and Surveyors; in fact they were Surveyors and we attempted to explain the Surveyors' viewpoint. Our answers can never be more than expressions of opinion unless we are quoting from official sources and in this case the answer was purely an

opinion but one to which, we think, few Surveyors would take exception. Had the enquirers been Architects, we should have referred them to the views expressed by the R.I.B.A. Journal of October 21, 1940, page 268. Here it is suggested that a spot estimate could be given for the whole job if the work is not complicated or extensive and alternatively that a lump sum could be given for each trade involved. As we imagine that you had the passage referred to in the R.I.B.A. Journal in mind, when writing, we should like to add that we do not think the views expressed therein were intended to apply to "considerable damage to a large building" such as was mentioned in the original enquiry. The cost of considerable reinstatement could not be accurately expressed in a few lump sums, unless such sums had been worked out in some detail first and, as stated in our original answer, the method of approach must depend upon the capabilities and experience of the person engaged.

Q634

ESTATE SURVEYORS, GUILDFORD.—*Under Regulation 50, paragraph 4, section 6 of the Statutory Rules and Orders 1940, No. 1750, a local authority has power to SALVAGE MATERIAL AND REMOVE DEBRIS FROM BOMBED SITES. No mention is made of payment either for clearance work or salvaged materials. However, in the case of the London Region the Special Commissioner allows certain salvaged material to be left on site, the value of which is deducted in assessing the War Damage Claim on Form V.O.W.I. Two cases have arisen:—*

1. A building is partly demolished and the local authorities remove the dangerous part of the building; leaving all sound material on site and carting away valueless material. The remainder of the building is left as the owner proposes to repair and make that part habitable.

2. The local authority proposes to demolish the whole of the premises, remove all salvaged material for their own use as a large quantity of same is valuable.

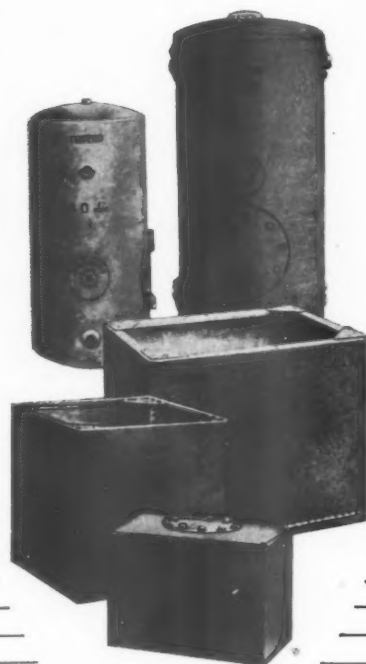
It has been suggested that in Case 2 the Building Owner is entitled to immediate payment by the local authority for salvaged material. Is that correct? If not immediate payment, can a credit be obtained for the value of such materials? In either case, is the Owner under any liability to the local authority for work done in demolition? In both cases the local authority did not do any work in making good damage; only demolition and salvage.

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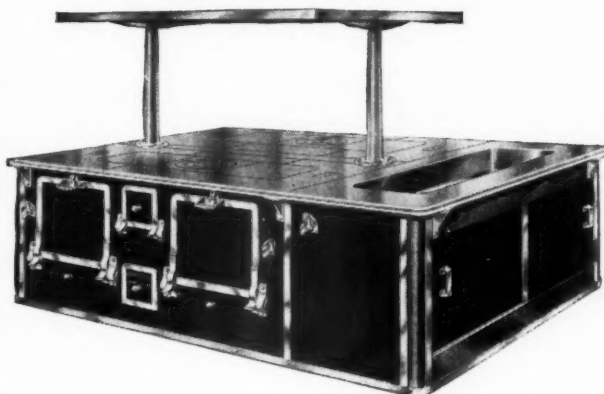
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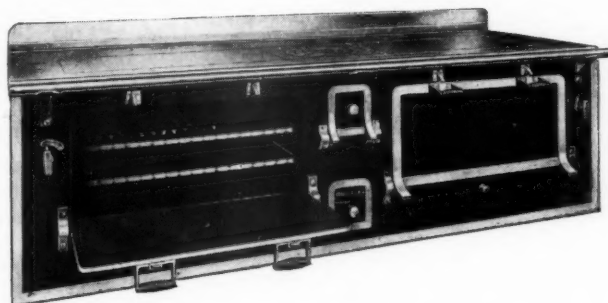
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Local Authorities becomes a charge on the property payable after the war—even though no making good is done. Any salvaged materials removed by the Local Authorities will be taken into account when the owner is called upon to pay for the demolition. All salvaged materials and even rubbish is carefully checked as it reaches the salvage dump, but we believe that this is the only safeguard offered to the owner. No cash payment is made to the owner for salvaged materials at the present time, and, as far as we know, it is not usual to give a receipt or credit note either.

Q635

ARCHITECT, MANCHESTER.—*Can you give any information as to the efficacy of BRACED WINDOWS AGAINST VIBRATION AND COLLAPSE through the effects of blast and the name of a maker of window stay apparatus. The subject appears to have some importance, in view of the figures which I have received noting 70 per cent. of casualties from flying glass.*

We would draw your attention to Bulletin B.6 issued by the Research and Experiments Department of the Ministry of Home Security which was published in the JOURNAL of September 26, 1940. In case you have not

got a copy of the JOURNAL in question we give below two extracts from the Bulletin, which deals with braces in general.

I. (2) "Whether the blast acts as an isolated pulse, or as a succession of pulses as it may in a street, the chance of the brace increasing the resistance of the glass to fracture may be regarded as an unlikely coincidence."

III. (1) "It follows that fitting a more or less rigid support at the centre of a sheet of glass always increases the effective pressure and suction forces exerted by the blast wave, and may or may not increase the strength of the pane. Consequently the effective resistance which the glass may offer to the incident blast wave may or may not be increased. The two effects are opposing and either may predominate, but in no case is the effect likely to be great. In other words, the brace may make the conditions worse or better, but it is not likely to have much effect either way."

The names of three manufacturers of window braces are given below.*

* Window Brace, Ltd., 11, Buckingham Street, London, W.C.2; Bilateral Anti-Crash Co., Broadway Chambers, London, W.6; Dawson, Nauton & Co., Walton House, Newman Street, London, W.1.

THE BUILDINGS ILLUSTRATED

TERRITORIAL ARMY HEADQUARTERS (pages 28-30). Architects: Stanley Hall & Easton and Robertson. The general contractors were E. A. Roome & Co., Ltd., who were also responsible for the joinery and

plumbing. Sub-contractors and suppliers included: The Tate (Foundation) Co., Ltd., demolition; F. Bradford & Co., Ltd., foundations; Field & Palmer, Ltd., asphalt; Caxton Floors, Ltd., reinforced concrete, fireproof construction; Dunbrik, Ltd., and The London Brick Co., Ltd., bricks; W. C. Richardson & Co., artificial stone; Redpath, Browne & Co., Ltd., structural steel; The Ruberoid Co., Ltd., special roofing; F. McNeill & Co., Ltd., "Foamagg" partitions; J. Clark & Son, Ltd., glass; Horseley, Smith & Co., Ltd., woodblock flooring; J. H. Jenner & Co., Ltd., granolithic pavings; R. W. Steele & Co., Ltd., central heating; Bratt Colbran, Ltd., grates, mantels; Johnson & Tanner, Ltd., electric wiring and bells; Greenwood's and Airvac Ventilating Co., Ltd., ventilation; Joseph Chater & Sons, Ltd., sanitary fittings; Adamite Co., Ltd., stair-treads; Yannedis & Co., Ltd., door furniture; Crittall Manufacturing Co., Ltd., casements; James Couper & Co., Ltd., casements and window furniture; Dennison Kett & Co., Ltd., and Haskins, rolling shutters; Chamberlain Morton, Ltd., black-out curtains; Cashmore Art Workers, and Henry Hope & Sons, Ltd., metalwork; Educational Supply Association, joinery; Surrey Tile Co., Ltd., tiling; Evans Lifts, Ltd., cranes.

CHANGES OF ADDRESS

Owing to unforeseen circumstances The Council for the Preservation of Rural England (C.P.R.E.), and The Council for the Preservation of Rural Wales (C.P.R.W.) have moved to Old Raven House, Hook, near Basingstoke, Hants.

Miss J. B. Drew, A.R.I.B.A., has moved to 3 King Street, St. James's, S.W.1. Telephone: Abbey 6697.

Floor appeal—

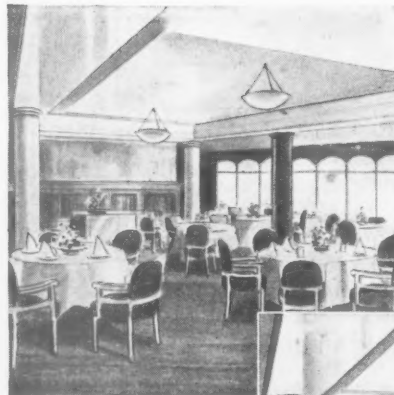
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