THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 45 THE AVENUE, CHEAM, SURREY

*

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :
BY POST IN THE UNITED KINGDOM..... £1 3 10
BY POST TO CANADA..... £1 3 10
BY POST ELSEWHERE ABROAD..... £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL : INLAND £2 6s. ; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

*

SINGLE COPIES, SIXPENCE ; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION ; SINGLE COPIES, ONE SHILLING ; POST FREE, 1s. 3D. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE.

*

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 10s. EACH. CARRIAGE 1s. EXTRA

*

45 *The Avenue, Cheam, Surrey*
TELEPHONE : VIGILANT 0087-9 (3 LINES)

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, SEPTEMBER 18, 1941. NUMBER 2434: VOLUME 94

PRINCIPAL CONTENTS

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.*

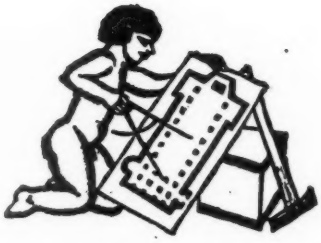
To obtain your copy of the JOURNAL *you must therefore either place a definite order with your newsagent or send a subscription order to the Publishers.*

RAID DAMAGE AT LLANDAFF CATHEDRAL

Llandaff Cathedral after damage in a raid. The nave was unroofed as was the Chapter House, which appears on the right of the photograph, and all windows were blown in. The interior of the church also suffered severely. The present Llandaff Cathedral was begun in 1120, considerably extended and altered during the thirteenth and fourteenth centuries, and was left disused and partly ruinous after the Reformation. It was restored by a local architect named Pritchard during the last century.

POISON GAS

A view in the Poison Gas Exhibition, now being held at Charing Cross Underground Station. The opening words of the script to the exhibits are: "Unlike high explosive bombs, war gas on the whole is not a killing weapon. It can be beaten by those who make use of sensible protection. Why, then, will the enemy use so wasteful a weapon?" The remainder of the exhibition answers this question, deals with the different types of war gases which might be used, and explains how decontamination and cleansing would be done. Protection for children, food and domestic animals is dealt with, and a complete, concise survey given of all instructions for civilian behaviour during a gas attack. Further photographs appear on pages 194—195.



LAND AND RECONSTRUCTION

As reconstruction gains in vitality, the defects of our present system of landownership attract an increasing amount of attention. And there is a tendency to assume that in order to have planning some form of public ownership of land is necessary.

This reaction is an obvious one : it is paralleled in the economic sphere by the communist idea that State ownership as the means of production is necessary in order to secure a planned economic system. Ultimately, however, the question arises—*Quis custodet custodes* ?

Town planning is a positive science ; it can't be classed, for instance, in the same group of activities as factory inspection. Power to plan must be vested in men who have the ability to project and execute daring and revolutionary schemes. Experience has shown that this kind of ability does not as a rule reside in civil service departments ; and that close supervision by democratically elected representatives does not on the whole encourage it ; fear of the electorate encourages a policy of safety first.

It may be argued that public ownership of land doesn't necessarily imply its development by central or local government authorities ; it could be let off on building leases.

The advantages claimed for this method of control are (1) unification of the land without which large-scale building and planning operations are not possible ; (2) control over building development, to be exercised by means of conditions embodied in the lease.

With regard to (1) the advantages are more apparent than real. A short lease lasts for 99 years. During the whole of that period the control exercised by the lessor is nearly negative ; the intervals at which constructive changes could be made are widely separated in time. Moreover, the difficulties which arise at present from the expiry of leases at different dates would continue to exist, though on a different scale. Technical progress is becoming increasingly rapid. Motor cars were only invented about 50 years ago. Aeroplanes are even newer. Is a system of control which functions primarily through the granting of building leases at 99 year intervals really a good thing ?

The same applies to (2). Assuming for the moment that the process of piecemeal acquisition were finally complete, what guarantee is there that the various local authorities would prove less jealous of their rights in future than they are at present ? The boroughs of Holborn and Paddington each imposed their separate sets of byelaws when Heals was built, on opposite ends of the building. Will planning authority really be able to hold them in check when love of privilege is reinforced by pride of ownership ?

Assuming that public ownership remains incomplete, the objections are even more serious ; if we admit the proposition that land must be acquired to be controlled we imply the validity of the reverse proposition, that land which is not owned by the public is free from control. The first essential for effective town planning is *nation-wide* control *uniformly* applied so that the design of communal services, roads for instance, drainage and water supply, can be treated as straightforward technical problems.

Unification of land ownership is necessary to a lesser degree, in order to make possible large-scale building operations and all that they imply.* But the scale here is very much smaller. Surely there is some easier method of bringing about the degree of concentration necessary for this purpose than buying up all the land in the district.

In the economic sphere it has been necessary to amalgamate business undertakings in order to carry out the plan of production forced on us by the war. The Government has not bought up the businesses in question in order to lease them back to their owners on favourable terms. The Government has merely outlined the steps it considered necessary, and private owners have been left to formulate their own plans in order to fit in with instructions of the Government. Profits have been pooled in order to pay whatever compensation might be necessary. The necessary degree of unity has been quickly achieved and has cost the Government nothing. Why not deal with land ownership in the same way? A family business is the creation of the man who owns it. Land is our common inheritance. There is nothing unnatural in the idea that land should be held only subject to certain conditions that can be changed from time to time by the State ; in fact, the unrestrained liberty of the landowner is an innovation scarcely old enough to have achieved respectability.

The third big difficulty that public ownership is designed to overcome is speculation in land. Again the question arises, is there no easier way of doing this ?

Supposing that individual holdings were grouped, in accordance with directions issued by the Town Planning authorities, so that the boundaries of each holding were made to coincide with some obvious line of demarcation—a street, a river or a railway ; and that the original owners were to become shareholders in a limited company for the purpose of owning and developing land. Then shares could be issued on the basis of the present-day value of the land handed over to the company. Some form of speculation might continue, but it would be in shares not in land. Town planning would not be affected.

Why is it then that public ownership of land is so enthusiastically advocated ? Partly, perhaps, because in the last resort the best way of evading arrest is " to offer the policeman a share in the swag."

* Mass production methods and architectural unity.

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

NOTES & TOPICS

SIR ERNEST SIMON

SIR Ernest Simon, deputy chairman of the Central Council for Works and Buildings, is a man who approaches the problems of the building industry not from the point of view of a person actively engaged in it but from the slightly different, though one hopes not necessarily opposite, point of view : that of the intelligent citizen primarily interested in *results*. Results, of course, are the one thing we have not been getting lately ; his appointment seems particularly opportune.

★

As an outsider, if one may use the term without any derogatory implications, he has no particular axe to grind, and he has shown in the past a desire to learn from anyone able to teach without worrying about possible unpleasant results to his own favourite theories. In short, he is one of the very few Englishmen who before Russia became our gallant ally, took the trouble to visit Moscow and find out what was going on there, as well as what was going on in other places. And I think he is the only person out of these few who has attempted to give a discriminating and unbiassed account of what he saw, without trying to justify or condemn the experiment as a whole.

★

In 1937, when *Moscow in the Making* was published, conditions in Russia were very different from what they were in Britain at that time. But conditions, as they are in England now and are likely to be after the war are not unlike what they were in Russia then—building materials in very short supply ; labour exceedingly scarce ; building programme wildly in excess of the capacity of the industry. The comparison Sir Ernest Simon then made between the Russian and English building trades is almost more interesting now than it was when it was first published.

SPEED-UP IN RUSSIA

For instance : "Having had a general look round we adjourned to see the Stakhanovite bricklayer. Two girls he himself had trained were working with him. The duty of one was to place each brick on the wall, not more than a foot from the point where it was to be laid. The duty of the other was to shovel mortar from a receptacle on to the actual spot where the next bricks were to be laid. . . . The bricklayer smoothed the mortar and splashed it against the next brick with his left hand, while placing the brick with his right. . . . . There was no time to spread the mortar with any nice accuracy ; the only thing that mattered was that there should be enough mortar to carry the weight and that the wall should be accurately vertical, which it seemed to be.

★

"I have never seen three people move so fast and so accurately. . . . I was asked . . . why I had not timed the work. They all seemed quite disappointed that I had not taken out a stop-watch. I asked what the Trade Union thought about it. The Trade Union representative expressed the greatest pride and pleasure in the achievement. He was absolutely convinced that the greatest possible output was to the benefit not only of the individual worker but of the community as a whole. Rather a contrast to the English worker's view.

★

"The standard of pay for a skilled bricklayer is 13 roubles a day ; the piecework system is so arranged that a given increase in output means an actually greater increase in pay. For instance, a double output means treble pay. The manager of the Moscow Building Trust told me that this bricklayer was getting 2,000 roubles a month more than he, the Head of the Trust, was getting himself, and seemed very pleased and proud about it all.

★

"I said to a Trade Union secretary that the Stakhanovite movement seemed to be similar to the Taylor system. He leapt indignantly to his feet and asserted it was exactly the opposite. Taylor wanted all the thinking done from above—the Stakhanovite movement was based on hard thinking as well as hard work by the individual manual worker ; it inspired the workers to feel responsible for efficiency. It implied an educated working class all consciously co-operating for greater output.

★

"As it happened, the first bricklayer I saw at work after my return to England was working at a new house on the outskirts of a small town. It was a perfect autumn day. He was enjoying the sunshine, he was enjoying his pipe and clearly had a craftsman's joy in his unhurried work ; judging by his jolly red face, he was enjoying the prospect of his glass of ale when the day's work was done. As I arrived he took up a brick. After looking at it critically he laid some mortar on it and carefully spread it as evenly as possible, smoothed down the edges, added a little more mortar at one corner, smoothed the whole thing over again. He then examined it, laid it in its place, adjusted it accurately and pointed the joint with some mortar. The whole thing was done with loving care. The brick was perfectly laid, it took about a minute. Meantime the Stakhanovite would have laid about 50. Which method belongs to the better civilization ?"

Sir Ernest Simon, Deputy Chairman of the Central Council for Works and Buildings. See Astragal's note on facing page.

The question is difficult to answer in the abstract. The answer depends so much on outside conditions. Work is not only a pleasure, it is done for a purpose, and the urgency of the purpose affects the reply. But one thing is easy to say : and that is that a civilization animated by the spirit of the Stakhanovite is, other things being equal, more likely to pull through a crisis.

★

Sir Ernest sums up : " There is clearly no advantage in rush jobs except in an emergency—as a stimulus to a traditionally lethargic people to work with supreme vigour and energy." The words could be most aptly applied to us to-day.

SPEED UP IN AMERICA

Dallas, Texas, is going in for building news in a big way. It is only a week or two since I wrote about its Central Contracting Co.'s all-time world-beater of a house built, decorated and furnished in 57 minutes, 58 seconds. In the meantime Dallas has done it again with the Biggest Sidewalk Club in the States. (And it seems reasonable to suspect that the Central Contracting Co. had a share in this second win.)

★

A 75-ft. grandstand, with canopy, cold-drink bar, and man to answer questions has been built to overlook excavation work for a skyscraper's foundations. Tickets of membership are obtainable and—perfection's final blossom—a telephone is there on which patrons can announce that they are unavoidably detained.

For Britons such a news item reproduces exactly their impressions of the House-in-an-Hour Race. Derision does not last very long. Disregarding the enviable amount of advance publicity netted by 20,000 membership tickets of the Sidewalk Club of the Pan-Texan Hotel (or whatever it is), there is the Club's effect on the building operatives. And one suspects that continuous supervision by 200 witty, observant fellow townsmen, has an effect which would pay the contractors even if each patron took away a dollar as well as a ticket.

★

Dallas has shrewdly grasped two bedrock truths : no skilled man dislikes exhibiting his skill ; and no sluggard is capable of slacking under the eye of 100 fellow citizens who have nothing to do but ask why. It has also, of course, grasped the idea that building is interesting.

. . . AND OVER HERE

I read the news from Dallas on the way to one of the many meetings which are now being held to compare notes on how the payment by results scheme—Britain's alternative to a Sidewalk Club—is now working on war building contracts. Evidence was much what was expected. There had been a big improvement in bricklaying by two-thirds of bricklayers on each scheme. But there were also considerable disadvantages ; the task qualifying for bonus must be constantly varied* ; there had been heartburnings among unbonused trades ; measurement was very tricky—and so on.

★

In painstaking detail it was debated whether the bonus should be in the pay packet or be paid separately. (" Every British workman likes a little something coming in which his wife doesn't know about.") The smoke thickened and another window or two was opened. And at the end one wondered whether Dallas's latest effort had not a lesson. Apart from the administrative complexity of the Government's latest scheme, there is the stark building fact that you can't bonus tricky work on output. Such work needs the best men, unhurried ; and no good man is going to do the difficult work at £4 a week while duffers, on piecework, are knocking up £8 on retaining walls.

★

And one was forced to conclude that the only form of bonusing which would not break down through its own complexity was a bonus for good effort, which would take into consideration volume, quality and difficulty of work and each man's individual ability.

★

Under this scheme the contractor's foremen and supervisors would have to deputize for 20,000 Dallas citizens. And the possibilities of its abuse by a foreman with a down on a gang or a man are obvious, even though a right of appeal can be arranged. But it is significant that schemes of this kind are the only bonus schemes in general use in the industry ; and they are used in many cases by contractors who suffer very little indeed from labour disputes.

ASTRAGAL

* cf. a 14 in. retaining wall in a straight run against 4½ in. partitions to small rooms, fair-faced both sides.

NEWS

POST-WAR PLANNING IN SCOTLAND

In the House of Commons, Mr. T. Johnston said a council had been formed to collaborate with him for the purpose of surveying problems of post-war reconstruction in Scotland. The council will select the subjects of inquiry and will determine by whom the inquiries will be made. The members will be all the living ex-Secretaries of State for Scotland (Sir Archibald Sinclair, Colonel Walter Elliot, Colonel Colville, and Mr. Ernest Brown) and Lord Alness, who held the office of Secretary for Scotland. The work of the council, over which Mr. Johnston will preside, will be carried on in close touch with the organizations set up by the Government to examine all post-war problems of Great Britain as a whole.

SIR GEOFFREY WHISKARD

Sir Geoffrey Whiskard, K.C.M.G., C.B., has taken up his post as Permanent Secretary of the Ministry of Works and Buildings. When the appointment was announced last April he was in Australia where, since 1936, he has been High Commissioner. He arrived in this country in the convoy which the Prime Minister passed on his way back from the Atlantic meeting.

POISON GAS

"For persons who, because of respiratory trouble, cannot wear a standard respirator."

How Poison Gas can be beaten by those who make use of a sensible protection is explained at the exhibition now being held at Charing Cross Underground Station. The story is told primarily by photographs, drawings and type-set and silk-screened captions. Each display unit is individually

LETTERS

JOHN GLOAG

R. BLYTH WINTER, L.R.I.B.A.

Collaboration with Russia

SIR,—The letter which you published over twenty-six exalted signatures in your issue of September 4, illustrates a dangerous and deplorable national tendency that threatens to grow to large and ridiculous dimensions: it is a tendency to belittle our own capacity for solving our own problems in a way acceptable to English people. Russia and its great and valiant people have their own problems, their own views and beliefs, social, economic and spiritual: England, far less logical and articulate, far more comfortable and civilized, far more homely and pleasant than any other country on God's good earth, is more than capable of solving its own post-war reconstruction and planning problems. Why must we always assume that something foreign is something better, or even something as good, as our home products?

If I could live in an England that was tidied up and planned by Clough Williams-Ellis and Maxwell Fry and Professor Reilly and F. R. S. Yorke, I know that I should be living in an England that would still be true to itself and to its peculiar genius for living. I do suggest that those capable minds have nothing to learn from Russia or any other place in Europe.

If I had the pen of a Chesterton or a Cobbett, I could put this in a more memorable fashion, but why should we not recognize that our apparent impatience with logical theories of living arises from our deep, instinctive understanding of how to live?

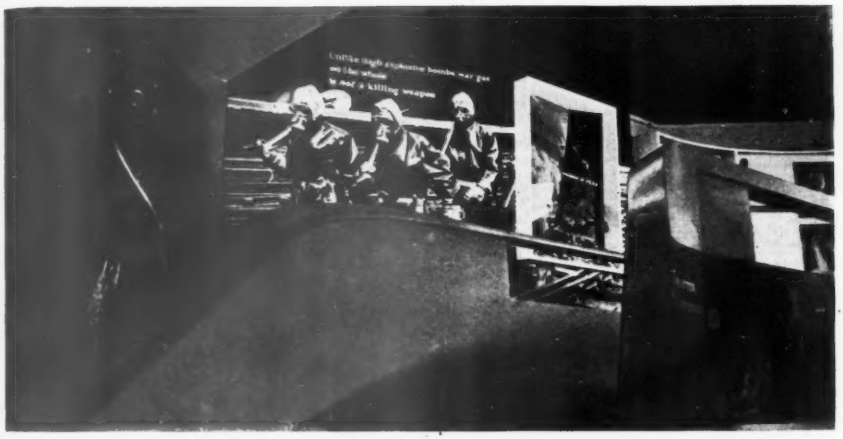
JOHN GLOAG

London

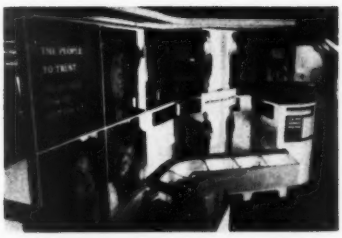
Call in the Experts

SIR,—Anyone who has perused the mass of evidence concerning the replanning of our blitzed cities cannot

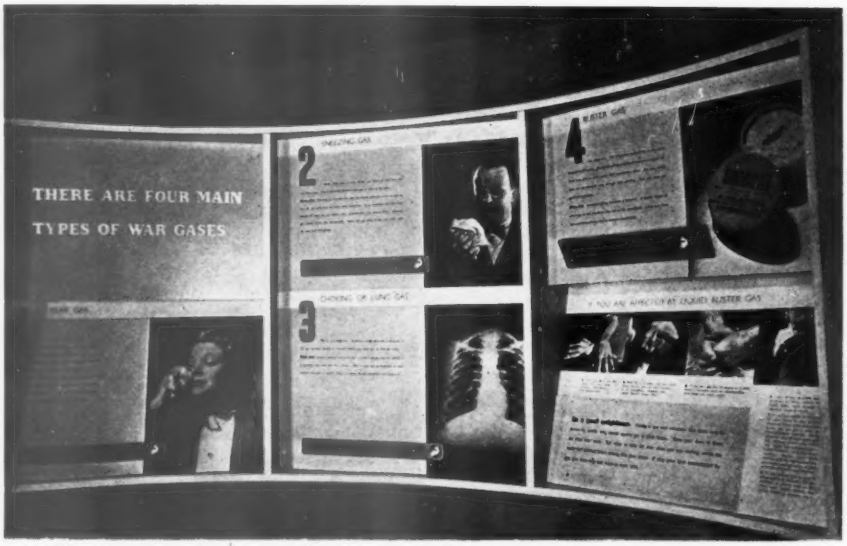
AT CHARING CROSS



"Unlike high explosive bombs, war gas on the whole is not a killing weapon."



"The people to trust. They are trained: follow their instructions."



"There are four main types of war gases: tear, sneezing, choking or lung, and blister gas."

illuminated and many physical exhibits are included. A screen some 12 ft. high slowly revolves. On one side are photos of a soldier, sailor, airman and A.F.S. girl, with a caption reading "The services always carry their masks." On the opposite side the silhouettes of the figures are shown with the respirators clearly marked :—A caption reads "—— you are in the front line, too." The exhibition is built on two levels, the main story being told by display units viewed from a raised platform. This ensures that the exhibits, some of which are reproduced on this and the facing page, are viewed in their correct order. The exhibition was designed and produced for the Ministry of Home Security by the Exhibition Branch of the Ministry of Information. The text was written by Robert Sinclair, the collaborating designer being Peter A. Ray. The designing personnel of Exhibitions Branch consist of Milner Gray, Misha Black and Norbert Dutton. A general view of the exhibition, which closes on October 8, appears on page 190.

but be conscious of the complicated and diverse problems to be faced. Compensation, betterment, speculation, planning authorities, etc., have all been subjected to the scouting of various experts and committees and expert committees, but the net result appears to be only that they are or are not desirable as the case may be.

Everyone appears to be agreed that planning is necessary and one would have thought that the logical corollary of a Central Planning Authority to do the planning was sufficiently evident without the findings of an Expert Committee.

Is it not high time that the Central Planning Authority was created so that the vast amount of preliminary work could proceed without delay? Dare one suggest that this authority should consist of planners, *i.e.*, Architects and Engineers?

To turn to practical suggestions. The following may indicate in what directions research could usefully be made in determining the shape of the ultimate plan.

Sketch No. 1 (page 196) shows a typical area to be found anywhere in Central London. There are over 200 building sites of a total area of approximately 250,000 square feet.

Sketch No. 2 shows the same area replanned with 100 ft. wide roads. This provides large sites with a total area of 300,000 square feet, a *gain* of 50,000 square feet over the old plan with its narrow and superfluous streets.

The problem of effecting the transformation and dispelling the resistance of the multitudinous vested interests involved could be solved by :—

1. The Government compulsorily acquiring the whole of the area at 1939 valuation.
2. Paying the owners, not in cash, but in Building Bonds carrying a low rate of interest, not transferable.
3. Laying out the new roads and sites.

4. Selling by auction the new sites to the highest bidder. Building bonds would be accepted as cash.

The surplus cash arising out of the betterment of the sites would in most cases pay for the re-planning, and in some cases a considerable profit would be available for expenditure elsewhere.

In the case under consideration the value of the 200 odd sites taken at an average value of 15s. per square foot amounts to £187,500. The sale of the new sites at £3 per square foot would yield £900,000.

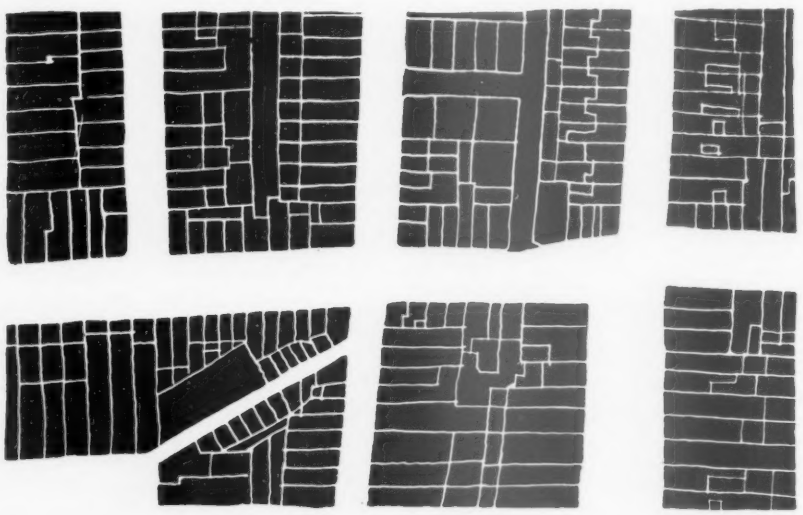
In arriving at the valuation of the new sites it should be borne in mind that the present restrictions imposed under the London Building Act and the Town and Country Planning (Prohibition) Act would, of course, be swept away and replaced by a Building Code bearing close relation to contemporary knowledge. The buildings would rise to a height of, say, 150 feet and then be stepped back within an angle of 62½ per cent.

The area chosen presents the least favourable comparison because not all such areas would contain two main roads. The best spacing of the roads and their width is a matter for much consideration. I assume that the advantages of rectangular planning are beyond dispute.

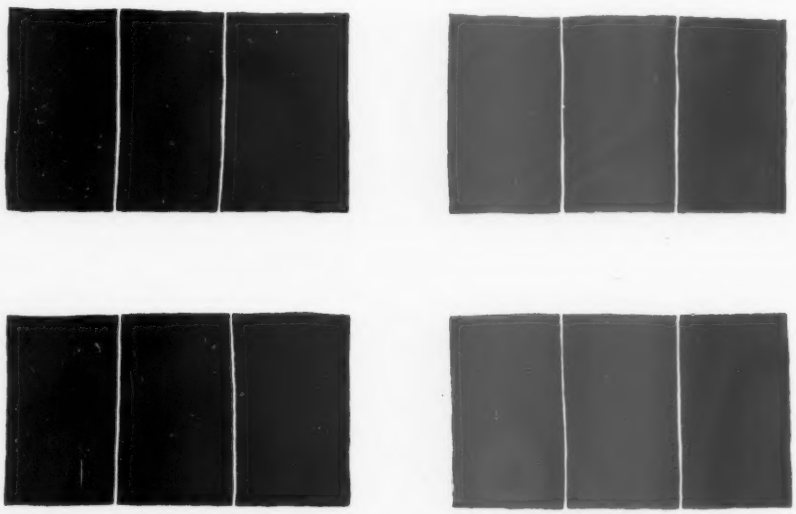
R. BLYTH WINTER.

Chingford, Essex.

1. *Typical area in Central London with over 200 building sites of a total area of approximately 250,000 sq. ft.*



2. *The same area replanned and providing large sites with a total area of 300,000 sq. ft.*



The plans reproduced above are referred to in the letter by R. Blyth Winter.

LORD REITH TO CLEAR SLUMS

"We are out to complete with system and purpose what Hitler's bombers have so aimlessly and cruelly begun—the clearing out of the slums," said Professor Holford, a member of Lord Reith's reconstruction staff, broadcasting to America in the B.B.C. programme "Answering You."

Professor Holford was replying to the question: "Are there any plans for the elimination of slums, after the war, in Great Britain and Northern Ireland cities?", which was put to him in a cable by Thomas F. Walsh, Junior, of Lancaster, Mass.

"We have the will to rebuild after the war," he said. "Already, even in the midst of the conflict, we are out to find the way. A good deal of thinking has to be done first, of course. We are finding out how the population has moved: whether, in fact, the tendency to leave the country for the town will be increased, slowed down, stopped or even reversed after the war; what the pattern of living will be, following the new location of industry and the revival of agriculture; what standards of housing and planning we are to aim at, so as to give every man and woman a convenient and healthy place to work in, to play in and to live in.

"We have got to make sure that we have the equipment and the labour with which to build; and the organization, the technical training and the financial policy to enable us to build quickly and without waste of men or materials.

"The blueprints are now being developed at the centre, and sooner or later the plans will spring up from every village, town and city in these Islands."

WELSH SCHOOL OF ARCHITECTURE

The Welsh School of Architecture, which commences its new year on September 30, has now been at work for more than twenty-one years under the charge of Mr. W. S. Purchon, M.A., F.R.I.B.A., and for the last fourteen years has been granted Final Recognition by the R.I.B.A. The three years full-time day course leads to the Certificate, to the holders of which the R.I.B.A. grants exemption from the Intermediate Examination, while those who successfully pass the Diploma course are exempted from the Final Examination and qualify for Registration. A course leading to the Degree of B.Arch. has been arranged jointly by the University of Wales and the School. There is also an Evening Atelier for architects assistants who cannot attend the day courses. Students have won various important scholarships including the Rome Scholarship in Architecture.

The chief lecturer in architecture is Mr. Lewis John, M.A., B.Arch., A.R.I.B.A., and the assistant lecturers are Messrs. L. B. Starling, A.R.I.B.A. and W. J. Phillips, Dipl. Arch.

The following local architects assist in the work of the advanced courses as honorary lecturers:—Messrs. Percy Thomas, PP.R.I.B.A.; T. Alwyn Lloyd, F.R.I.B.A., PP.T.P.I.; Ivor P. Jones, A.R.I.B.A.; J. Williamson, A.R.I.B.A.; C. F. Jones, A.R.I.B.A.; John W. Bishop, A.R.I.B.A.; C. F. Bates, F.R.I.B.A.

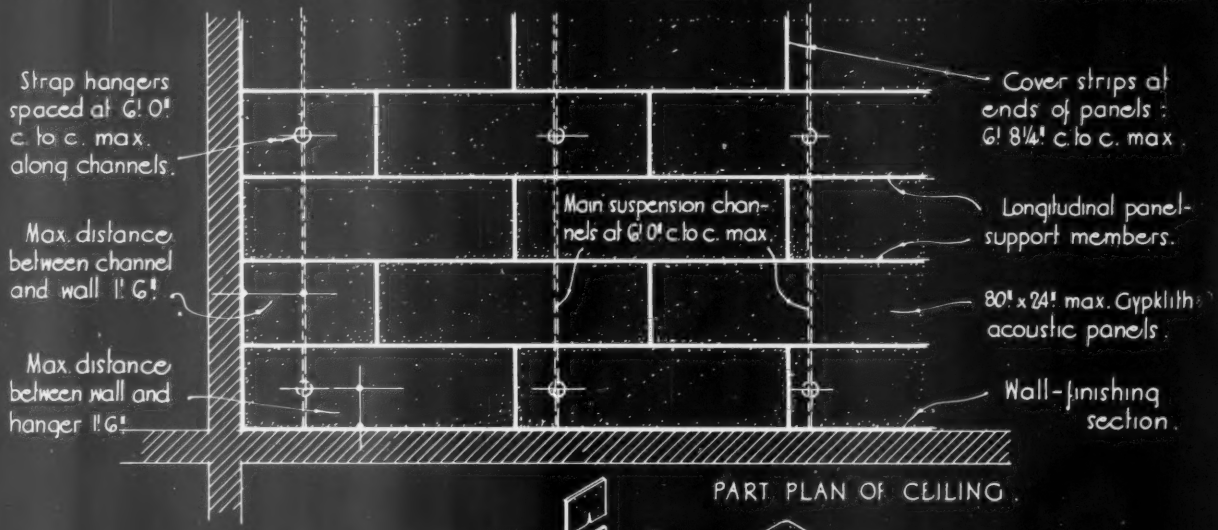
The external examiners are Professor L. B. Budden of the University of Liverpool and Professor R. A. Cordingley of the University of Manchester.

R.I.B.A. EXAMINATIONS

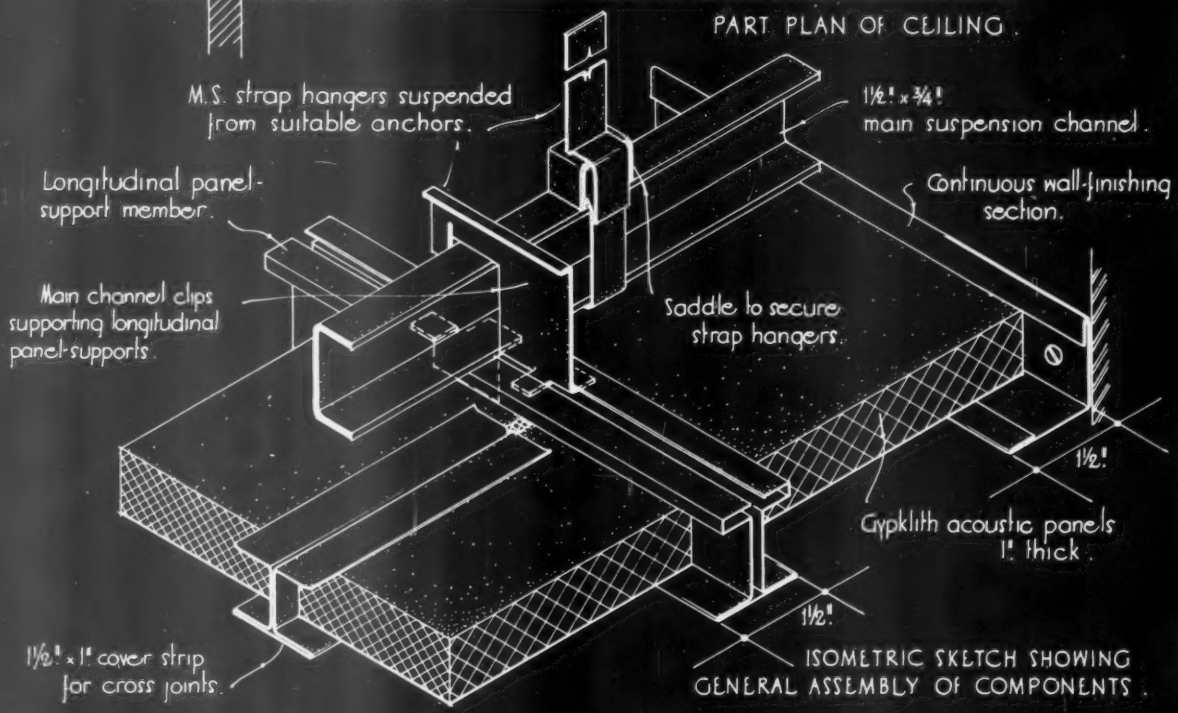
The questions set at the R.I.B.A. Intermediate, Final and Special Final Examinations, held in May and July, 1941, have been published, and are on sale at the Royal Institute, price 1s. 3d. inclusive of postage.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

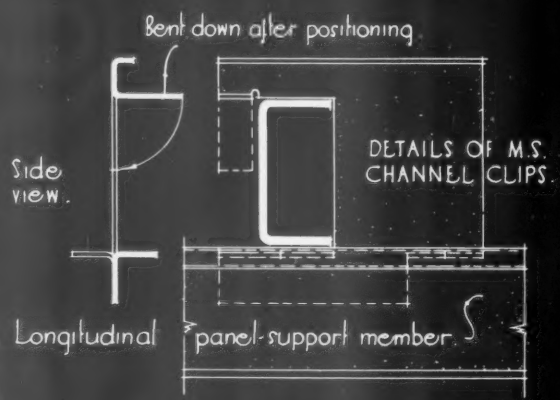
TYPICAL CONSTRUCTION OF ACOUSTELLE SUSPENDED CEILINGS

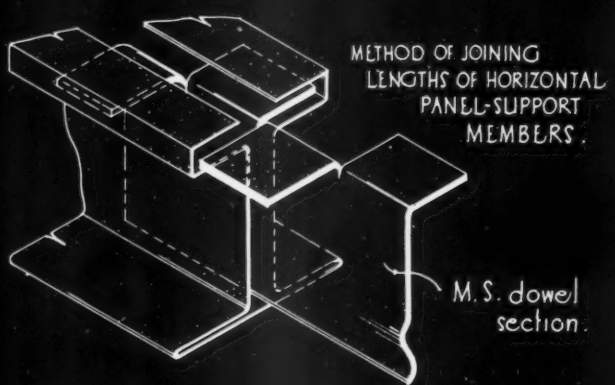


PART PLAN OF CEILING.



ISOMETRIC SKETCH SHOWING GENERAL ASSEMBLY OF COMPONENTS.





Issued by Gyproc Products Ltd.

INFORMATION SHEET : CEILINGS : SUSPENDED ACOUSTIC PANELS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC

INFORMATION SHEET • 841 • SOUND REVERBERATION CONTROL

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 841 •

SOUND REVERBERATION CONTROL

Product : ACOUSTELE Suspended Ceilings. (Registered) Brit. Patent 528612

Description :

Acoustele suspended ceilings combine the use of flat Gypklith acoustic panels with a number of light mild steel sections for suspension and jointing purposes. The completed ceiling presents a panelled appearance, and the panels are left with their natural finish. Construction is simple and rapid, and is dry throughout. No structural timber is used.

Gypklith :

The material consists of a finely textured and interlaced fibre construction, and is resistant to fire, moisture and vermin. The panels are 1 in. in thickness, weighing 22 lbs. per yard super, and are available in one size, viz., 80 in. by 24 in. The edges are even and clean, and the material can be readily cut to size with an ordinary hand saw.

Ceilings of this type provide a surface with an average sound absorption coefficient of 68 per cent. over the range of frequencies 250 to 8,000 cycles per second. With a ceiling height of 9 ft. 0 in. only, internal sound save reflections can be reduced by a reduction factor of 5 to 8 decibles.

Suspension :

The sizes, general assembly and maximum spacing of the various metal sections are shown in the details. The strap-hangers which support the main transverse suspension channels are made to any required length and may be holed and nailed to wood, or folded and clipped around metal roof members or other suitable structural anchorage. (See Plaxstele Sheet No. 825.) The continuous wall-finishing section is screwed into position.

Decoration :

The rustproofed finish of the steel panel strips and the natural finish of the panel is a light grey. The required finish of the ceiling can be obtained by spray painting.

It has been proved by actual test that even after six applications of paint the sound absorption value has not been appreciably impaired.

Thermal Insulation :

The thermal conductivity coefficient of the panels is 0.57 B.Th.U. per sq. ft. per hour per 1° F. difference in temperature.

Services :

Electric conduits and fittings, heating pipes, ventilation trunking, etc., can be concealed behind the panels. If necessary the material may be cut to accommodate the heads of a sprinkler system.

Issued by : Gyproc Products Limited.

Address : Great Burgh, Epsom, Surrey.

Telephone : Burgh Heath 742-3—3470-6.

Telegrams : Gyproc, c/o Research, Epsom.

Scottish Address : Gyproc Wharf, Shieldhall, Glasgow, S.W.1.

Telephone : Govan 614.

Telegrams : Gyproc, Glasgow.

If England is ever physically re-planned these are the men who will do it. Though architects like others have the war to win, architectural education must go on or the planning that follows will be short on its most vital executives. The designs above are for a new shopping centre in the centre of Liverpool and the students second-year men.

LIVERPOOL IN WAR

Since war began over a hundred students of the Liverpool School of Architecture have joined the Services and the staff has been reduced proportionately as members have volunteered for work of national importance. The calling-up of students for military and other forms of national service has chiefly affected the senior years. None the less, the school carries on vigorously, its standards have not been allowed to fall, and it is able to maintain the

Left: New Railway Station for Speke, Lancashire. Designed by T. Murray, fifth year student.

2 In the main entrance hall: Students assembling before going in to a lecture. On the walls are notices and designs.

3 Assessing students' designs. From left to right (standing): Professor Lionel B. Budden, in charge of the school, and Messrs. A. C. Todd, J. Ernest Marshall, and (seated) Mr. E. R. F. Cole, lecturers and studio instructors.

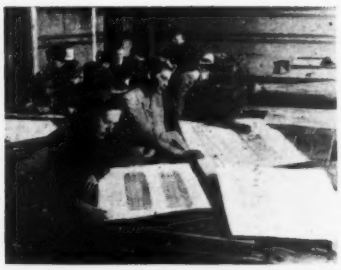
4 A lecture by Mr. D. Winston, senior lecturer and studio instructor, to second-year students.

5 The Lecture Theatre.

normal curriculum without modification. Liverpool is the oldest University school of architecture in the British Empire. During the past forty-seven years it has grown from a school serving chiefly the local needs of the district to one that has an international reputation attracting students from all over the world. This was entirely the work of Professor C. H. Reilly, the most forceful personality and the greatest master English architectural education ever had. Its peace-time complement of

6 Mr. W. A. Eden, lecturer in rural planning, outlining alternative methods of approach to the solution of a planning problem. Mr. Eden is now in charge of the Department of Civic Design, the father of all other town planning schools.

two hundred and twenty students, of whom about 10 per cent. are usually women, was just before the outbreak of war remarkably cosmopolitan in character. It included students from every British Dominion, from the Crown Colonies, from North and South America, a dozen European countries, Egypt, Turkey, Iraq, the Far East and even Iceland. Liverpool was the first architectural school to develop a Department of Civic Design, in which systematic instruction and research in town and country planning was undertaken. This was made possible by endowments provided by the first Viscount Leverhulme in 1909, the year in which the first Town Planning Act, for which John Burns was responsible, was passed by Parliament. In the School of Architecture, now under the direction of Professor Lionel B. Budden, the five years' course of study leads either to a Degree or to a Diploma in Architecture, both qualifications being recognised for admission to the Statutory Register of Architects and to Associate Membership of the R.I.B.A. In the early stages



of training the students are taught to plan simple types of structures and from these they go on to more complex problems involving considerable preliminary research such as blocks of flats, departmental stores, factories, and general hospitals ; group planning, the treatment of traffic routes and approaches, and estate development. As early as the

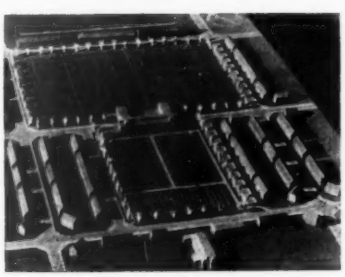
Above : Women students in the Department of Civic Design.

7 Fifth-year students debating a model with Mr. D. Winston (foreground, right), senior lecturer and studio instructor.

8 One of the ground-floor studios. Students at work on the preliminary stages of a planning exercise.

9 Three senior students working on a model for an agricultural training centre. Models are used a lot at Liverpool, two more are shown below.

second year, students work together in groups on the design of villages, rural industries settlements, small holding communities and similar projects, real sites being selected and visited so that the schemes can be based on actual conditions. In connection with these and other planning studies, small-scale models are prepared by the students. Professor W. G. Holford, of the Department of Civic Design, and Mr. W. Dougill, Research Fellow in Civic Design, have both been granted leave of absence by the University to undertake work of national importance, and the Department is now in the charge of Mr. W. A. Eden. Students can take either the Certificate or the Diploma Course in Civic Design. The course leading to the Certificate can be taken during the fourth and fifth years of architectural study. It is especially arranged to deal with the basic principles of town and country planning and to treat of problems involved in the distribution of population, industrial development, traffic and suburban extension. Studio work includes the plotting of new lines of communication, the reconstruction of existing towns and the planning of sites for residential development. The Diploma Course is a



Right, top: Model of a village designed to meet the requirements of a scheme of afforestation in Central Wales: by a group of second-year students. Bottom: Model of a health centre and family club, on an area of undeveloped land at Norris Green, Liverpool. Fifth-year thesis design by J. C. Gill.

10 Leaving the school after classes. Work goes on till 9.30 p.m. in the summer. Over a hundred students have joined the Services.

post-graduate day course and involves whole-time attendance during three terms of one session. It comprises courses of lectures on town and country planning, civic architecture and town furnishing. In the studio, schemes are prepared for the complete development of selected areas, not only in plan, but in elevation. The Diploma exempts students from the final examination of the Town Planning Institute. This year the School dispensed with its usual annual exhibition owing to war-time difficulties. This decision was reached with considerable regret, as more than sufficient material was available for a show that would have maintained the standards of the past.

SOME QUESTIONS ANSWERED THIS WEEK:

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 help is available to any member of the industry.

Enquirers do not have to wait for an answer until their question is published in the JOURNAL. Answers are sent direct to enquirers as soon as they have been prepared. The service is confidential; and in no case is the identity of an enquirer disclosed to a third party.

Questions should be sent by post to—

THE ARCHITECTS' JOURNAL
45 THE AVENUE, CHEAM, SURREY

—but in cases where an enquirer urgently requires an answer to a simple question, he may save time by telephoning the question to—

VIGILANT 0087

The reply will come by post.

Q 788

ARCHITECT, LONDON.—*A client of mine had his house badly damaged during an air raid. Certain FIRST-AID REPAIRS were carried out more or less immediately but now that I have been able to inspect the structure closely I think the building will have to be regarded as a total loss.*

The immediate first-aid repairs were not enough to keep out the weather and I am uncertain whether to recommend my client to carry out further repairs or not. I believe that the owner is bound to minimize subsequent damage from weather, etc., and I suppose that he will get compensation for first-aid repairs whether the building is regarded as a total loss or not; at the same time it seems a waste to spend more money on the house if it is eventually to be pulled down.

In the first place you should get in touch with the local authorities. If they definitely recommend that the house is unsafe and is not capable of repair, then your client would be absolved from his liability under the War Damage Act to take steps to minimize further damage. Naturally

it would be as well to get any ruling from the local authorities in writing.

If the local authorities do not condemn the house, your client is liable to carry out the necessary first-aid repairs until such time as the War Damage Commission decide that compensation is to take the form of a Value payment.

Briefly, the position is this. If it is decided that compensation is to take the form of a Cost of Works payment, your client will receive the actual cost of any necessary temporary repairs. If compensation is to take the form of a Value payment he will receive the depreciation in the value of property caused by actual war damage (not subsequent damage), plus the cost of temporary repairs carried out before a Value payment was decided upon.

You will not necessarily be informed immediately of the War Damage Commission's decision unless you ask for a decision in writing, which you are empowered to do. If you write explaining your reason for requiring a decision, your client will be able to obtain compensation for the cost of necessary temporary repairs carried out before notification reaches you.

If the house is not condemned your client may consider rebuilding in due course with the money received as a Value payment. In this case it would probably be in your client's interest to minimize subsequent damage even if he does not get compensation for first-aid repairs.

If you have a copy of the War Damage Act, you would be advised to study Part I, Sections 5 and 12.

Q 789

ENQUIRER, ESSEX.—*I am interested in the construction of BLAST WALLS for the protection of plant and machinery in factories, and have adopted the standard of 13½ in. for brick walls and 12 in. for concrete walls. I assume in adopting this standard that it has been arrived at by experiment to withstand both the effects of blast and splinters.*

Unfortunately I have been unable to find in any of the pamphlets issued by the various Ministries, details of the necessary foundations for these walls, and I should like help on the following points :—

1. *In the case of internal Blast Walls where there is a 6 in. concrete floor, is it sufficient to build the wall direct to the floor without further foundations?*
2. *What foundations are necessary to a 13½ in. brick wall, and to a 12 in. concrete wall built externally to a factory on open ground?*
3. *What calculations would the Ministry's Inspectors use to arrive at the results given.*

In all cases the walls are of an average of 8 ft. high.

Foundations are not dealt with in Ministry of Home Security Publications dealing with blast walls, etc., as they depend upon the nature of the ground and would be in accordance with normal building practice.

The object of foundations is to spread the weight of the wall or structure and the size of foundations depends upon the weight to be carried and the bearing strength of the ground.

Almost any ground, except made-up soil, would bear the weight of a 13½ in. brick or 12 in. concrete wall 8 ft. high without foundations; it is usual to provide some foundations, however, and 1 ft. 6 in. by 9 in. of concrete might be considered normal. The 6 in. concrete floor of the factory would bear the weight of the wall if it is resting on solid ground.

If you are in difficulties you should get in touch with the local authorities, who administer the building bye-laws.

Q 790

ARCHITECTURAL ASSISTANT, YORKSHIRE.—*Can you give me the names and addresses of some firms who manufacture the following :—*

1. *Dual heated cooking ranges (i.e., ranges heated with gas convertible to solid fuel at a moment's notice) suitable for a Communal Restaurant or Canteen.*
2. *Vegetable boilers, dual heated as above.*
3. *Hot-cupboards, gas heated.*
4. *Teak sinks for washing dishes.*

Dual heated cooking ranges and vegetable boilers can be obtained from :—

The Eagle Range & Grate Co., Ltd., 58, St. Paul's Churchyard, London, E.C.4.
Messrs. Fletcher, Russell Co., Ltd., 7, Stratford Place, London, W.1.

Gas-heated hot-cupboards can also be obtained from the above firms and from any of the well-known manufacturers of gas appliances such as Messrs. Benham & Sons, Ltd., of 66, Wigmore Street, London, W.1, and Messrs. James Stott & Co., Ltd., of Vernon Works, Oldham.

Teak sinks can be obtained from :—

Messrs. W. R. Loftus, Ltd., 18, Tottenham Court Road, London, W.1.
Messrs. Winch & Sons, Ltd., St. Lawrence Works, Nacton Road, Ipswich.

Q 791

SURVEYOR, CUMBERLAND.—*As a Surveyor I have been consulted by a cinema proprietor in connection with the treatment of WALL SURFACES for SOUND ABSORBENCY.*

He understands a liquid paint is obtainable which is a sound absorbent and would like to know from what source it may be obtained.

I have not heard of a sound absorbent that can be applied as a liquid and advise the use of some form of plaster. Can you supply me with information about various types of sound absorbents and the manufacturing sources.

It is desired to retain the present colour scheme so the effect of paints must be considered.

It is intended that the work shall be done so as to last till the end of the war when a complete scheme of modernization is anticipated.

Perhaps your client is thinking of sprayed-asbestos, which is a very good absorbent and which can be decorated after being sprayed on.

Messrs. May Acoustics, Ltd., of De Burgh Road, London, S.W.19 and Messrs. Newalls Insulation Co., of Broxbornebury, Broxborne, would carry out the work for you.

Cork-Tex B, a paint manufactured by Messrs. Thos. Parsons & Sons, Ltd., of 315, Oxford Street, London, W.1, which embodies a certain amount of granulated cork might act as a sound absorbent to some extent if used thickly, but it is primarily used to prevent or minimize condensation.

Other absorbent materials, such as felts, boards, tiles, plaster, etc., are too numerous to mention here in detail, but if you write to the following firms as well as those mentioned above, you will have a fairly comprehensive range of literature.

Messrs. Celotex, Ltd., North Circular Road, London, N.W.10.
Messrs. Honeywell & Stein, Ltd., 21, St. James Square, London, S.W.1.
Messrs. Huntley & Sparks, Ltd., De Burgh Road, London, S.W.19.
Messrs. Thermacoust Products, Ltd., 32, Victoria Street, London, S.W.1.

Q 792

ENQUIRER, CHESTER. — *We wish to carry out an experiment on the practical possibilities of PROTECTING OIL TANK ROOFS against incendiary bombs, by the application of 1 in. thick of foam slag concrete laid on to the steel roof sheets of the tanks, the concrete to be lightly reinforced (if necessary) with chicken wire. Can you give us the names and addresses of suppliers of foam slag aggregate or pre-cast slabs to which we could send enquiries?*

Foam slag aggregate or pre-cast slabs can be obtained from Messrs. F. McNeill & Co., Ltd., McNeill's Wharf, River Road, Barking, or The Ruberoid Co., Ltd., Commonwealth House, New Oxford Street, London, W.1. We would draw your attention to A.R.P. Handbook No. 9, which states that 3½ in.—4 in. of reinforced concrete is required for protection against penetration by impact of the 1-kilo incendiary bomb, and the thickness is increased to 5 in.—6 in. in the case of the 2-kilo bomb. We

think that the manufacturers would agree that 1 in. thickness of the material would be unsatisfactory. Further, owing to the porous nature of the concrete, it is probable that it might be affected by frost and it would be necessary to have a waterproof covering. You should consider referring the matter to the Ministry of Home Security, Research and Experiments Branch, Horseferry House, Thorney Street, London, S.W.1, or to the Building Research Station, Fire Testing Station, Elstree, Herts.

QUANTITY SURVEYING

By arrangement with Messrs. Crosby Lockwood, Ltd., the distribution of the books on the *Elements of Quantity Surveying* and *More Advanced Quantity Surveying*, by Arthur J. Willis, F.S.I., discontinued as the result of damage by enemy action, is being continued temporarily by the author. Copies of *More Advanced Quantity Surveying* with portfolio of plates are available on application at his office at 3, Denbigh Road, West Ealing, London, W.13, price 21s. [by post 21s. 8d.], or may be ordered through any bookseller. A new edition of *Elements of Quantity Surveying*, the preparation of which was suspended, is now being completed and will be available shortly.

ROOFING SLATES

Since February, 1941, the slate quarrying industry has been operating under the direction of the Ministry of Works and the Slate Quarries Executive Committee, whose address is Port Penrhyn, Bangor, North Wales.

Instructions have now been issued by the Director of Roofing, Ministry of Works, indicating the method to be followed when supplies of roofing slates are required, and in accordance with these instructions announces the Slate Quarries Executive Committee, slates are only supplied for Government priority work and for urgent air-raid damage repairs.

Orders should be placed through local merchants, who must obtain a permit from the local Assistant Director of Emergency Works or the Emergency Works Officer of the Ministry of Works, or from the Reconstruction Panel of the Ministry of Aircraft Production. A permit should be sent with order to one of the following committees :—

Cornish Slate Quarries Regional Committee, Delabole, Cornwall.

Welsh Slate Quarries Regional Committee, Port Penrhyn, Bangor, N. Wales.

Westmorland Slate Quarries Regional Committee, Martins Bank Chambers, Keswick-on-Derwentwater.

The Regional Committee will arrange for delivery to be made from the quarry best able to supply or may transfer orders to another committee if necessary.

The demand for roofing slate has eliminated all stocks of large sizes, and the officers issuing permits have been instructed to arrange for the use of small sizes wherever possible, as these can be delivered from stock in each region. Merchants and contractors are asked to co-operate in the use of small sizes of slates, as it is only by this means that the slate quarrying industry can meet the demands due to air-raid damage.

SHOPKEEPERS' BLACKOUT

During black-out shops must not have any lights visible from outside except certain permitted dimly-illuminated signs. These signs must be placed inside a ground-floor window or doorway and must not be conspicuous at a distance of 100 feet. The brightness of the light must not vary but it may be of any colour. The illuminated area of all the letters or symbols together must not exceed 144 square inches, and all letters or symbols must be within a rectangular space not more than 3 ft. wide and 2 ft. high. No light must show except from the letters or symbols. The face of the sign must be kept vertical.

A.A. WAR-TIME SKETCHES

From October 28 to November 14 an exhibition will be held at the A.A. of Members' War-Time Sketches. All members are invited to send war-time sketches for the exhibition. Sketches, which should be framed, or mounted only, and labelled, must be delivered to No. 36, Bedford Square not later than October 23. Members are requested to note that on account of the limited accommodation not more than one sketch will be exhibited from those submitted by each member.