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# THE ARCHITECTS'



## JOURNAL

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

THURSDAY, SEPTEMBER 21, 1939.

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### PRINCIPAL CONTENTS

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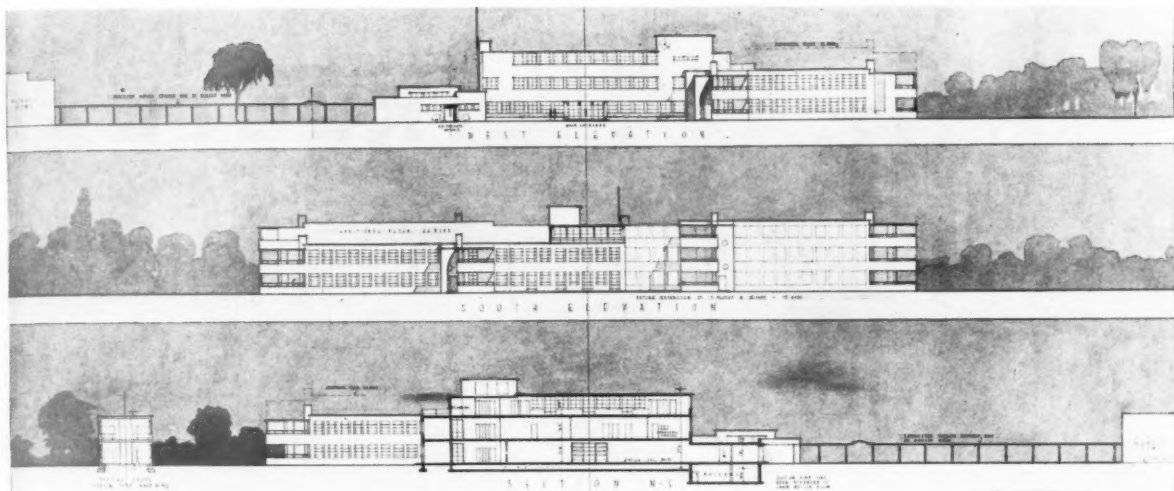
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The Editor will be glad to receive MS. articles  
and also illustrations of current architecture in this  
country and abroad with a view to publication.  
Though every care will be taken, the Editor cannot  
hold himself responsible for material sent him.

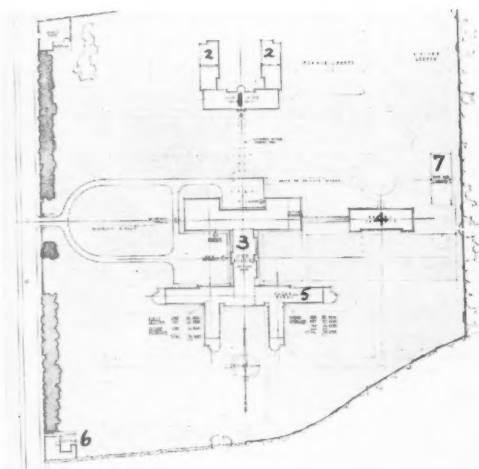
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## THE SLOUGH COMPETITION



MAIN BUILDING

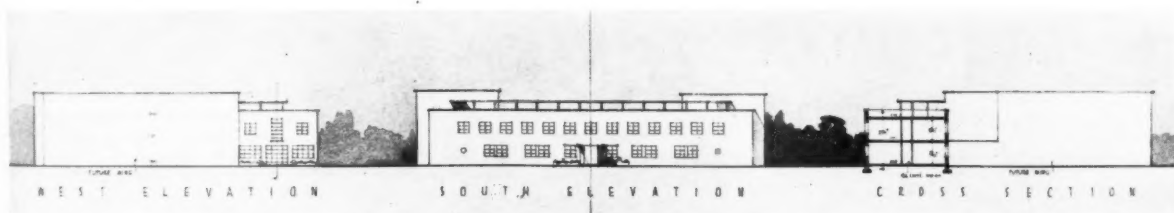
WINNING DESIGN : BY  
HERBERT H. CLARK



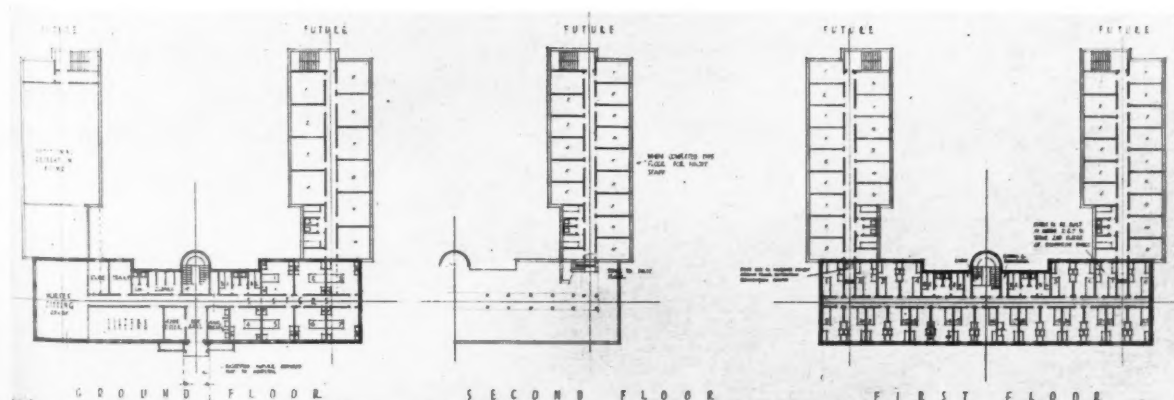
Mr. Lionel G. Pearson, F.R.I.B.A., the assessor of the limited competition for a hospital at Slough for the Slough Hospital Committee has awarded first place to Mr. Herbert H. Clark, of 235 Magdalen Road, S.W.18.

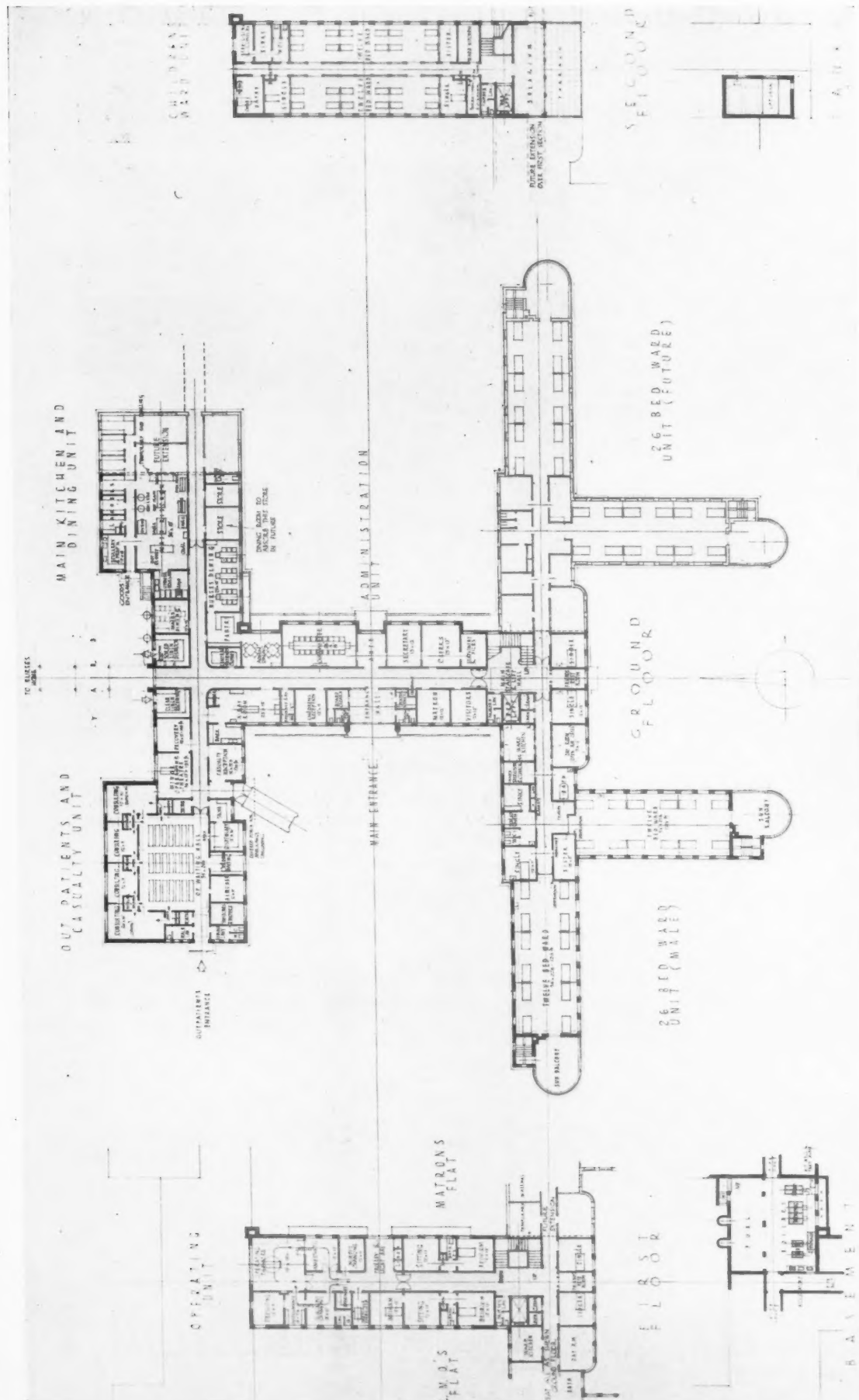
On this and the following page we illustrate the winning design.

KEY TO BLOCK PLAN: 1, Nurses' Home; 2, Nurses' Home, future extension; 3, Main building; 4, Paying patients; 5, Future wards; 6, Cottage; 7, Site for laundry.



NURSES HOME

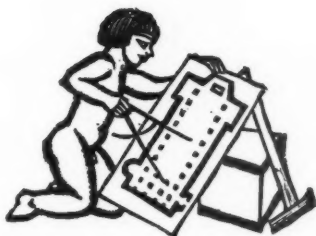




# THE SLOUGH COMPETITION

Winning Design,  
Herbert H. Clark,  
the limited competition  
for a hospital at Slough





## INFORMATION CENTRE

**M**OST of the will-o'-the-wisps which we normally chase having disappeared overnight, the larger realities of the present situation begin to take shape.

It cannot for instance escape architects that a war means *planning* on a national scale. Any modern war involves large-scale national planning. The peculiarity of the present one will be found, this JOURNAL believes, in the fact that the planning involved will be directed towards carrying on a full national life even under a state of emergency. If that turns out to be the case it is probable that, as the professional planners of the community, architects, allowing for the inevitable time lag, will be required, to play an increasingly important part in the national effort.

So now that a national effort has become not merely the pious hope which so many lip-servers wished it always to remain, but a reality, and not only a reality, but a necessity, the necessity to plug the word *planning* disappears. This will be a relief to many right-thinking people who have seen the word go through all the usual metamorphoses (like *rationalization* in a how much earlier epoch) up to its final apotheosis in pure jargon.

But because planning is going on, and going on on a national scale, it does not follow that by some miracle every dark place will suddenly be made plain. It does not follow that architects whose normal work has ceased can expect immediately to enter some technique-heaven of organized professional effort. On the contrary, the early stages of a great planning effort—and the greater it is the more the warning applies—tend to take place in a technical black-out.

Neither the sudden reversal of the ordinary routine, nor the major and minor privations, starting with the stoppage of work and ending with a congested telephone system, a fuel-less car, and the abstracted expression of the big-man-in-the-key-job politely declining a well-meant offer of service, are conducive to a feeling of trustful calm; even temporary inconveniences can cause a certain irritation in the man whose normal work has been suddenly cut off at the source. Nor is it easy to contemplate with equanimity the inevitable time-lag between the paper-completion of a great planning venture like the R.I.B.A. Register and the implementing of it. Large or small the confusions inseparable from the early stresses and strains of a collective effort are bound to create a certain amount of dislocation.

It is in such emergencies that THE PRESS, generally considered by well-balanced people to be nothing but a damned nuisance, can really perform a service.

Today the Press has an undisputed function. It is still, on the whole, *the most potent line of communication* between hundreds of thousands of private and separate individuals. It unites nations, regions, industries, professions. It gathers the essential news, mobilizes expert knowledge, gives currency to official formulæ, disseminates technical data. When other channels of communication come unstuck, even if only temporarily, then the Press comes into its own as one of the community's basic services.

It may be, of course, that in time some new invention may seek to provide a better information service than the technical Press can hope to offer. On that it is hardly our place to comment. *Until* that day dawns, however—that happy day—this JOURNAL proposes to do what it can to provide its readers, the architectural profession and the building trade, with the essential information on the emergency building front.

At the present moment this service is not so easy to provide as the reader who idly thumbs these pages might imagine, unless he himself has tried to get a simple answer to a simple question out of one of the overworked officials who have carried the burden of the last days (and carried it not only with fortitude, but with almost incredible efficiency). We have decided, therefore, to create our own organization, with access, needless to say, to official sources of information. This organization, temporarily at any rate, will act as an unofficial Bureau of Information on all subjects relating to A.R.P. and Civil Defence.

So from this week for an unspecified time, any reader who is in need of advice on a matter connected with the present emergency, whether it relates to blast-proof doors or the disappearance of a valued sub-contractor into the wilds of the Home Counties, can apply to *The Architects' Journal* INFORMATION CENTRE for light on his darkness. We cannot, of course, guarantee that the INFORMATION CENTRE will be equal to every call on its intelligence or ingenuity, but its members are already at work and expert advice is at this moment available to any reader of this JOURNAL who has a problem to be answered, personal, legal, administrative, or technical.

Use it. A section in the JOURNAL will be set aside from now on for the purpose.\* It will not cost you a fee, since the JOURNAL is organizing this service as its own particular contribution to the present emergency.

All you have to do is to put your query into an envelope addressed to *The Architects' Journal* INFORMATION CENTRE, 45 The Avenue, Cheam, Surrey. You will get your answer as quickly as we can get it to you.

\* Page 387, this week.



*The Architects' Journal*

45 The Avenue, Cheam, Surrey

Telephone: Vigilant 5762

# NOTES & TOPICS

## BLACK-OUT

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## LIGHT ON THE BLACK-OUT

Many people are finding that to obtain a hundred-per-cent. aircraft-, warden-, and police-proof black-out of their house lights at night is a bigger problem than they bargained for. Official recommendations for masking windows include close-fitting blinds, thick black paper on batten frames, and the painting of the edges of the window panes if the ordinary curtains are sufficiently opaque but do not fit closely.

Schemes which appeared to be perfect when tested in pre-war conditions do not seem to be so good on dark nights now. Everyone has his own particular method, in the same way as he has his own pet cure for a cold. In the suburbs, they tell me, the rivalry is keen but of course friendly, for we British are really toppers at heart (*see Press*).

Possessors of the old-fashioned roller-blind and wide frame wood windows would now seem to be at least one up on owners of straight-to-brickwork metal casements, for which batten frames are the only really successful solution. They fit easily and quickly, but seem to take up an extraordinary amount of room when not in use. Black cloth pinned to wood window frames at the top and rolled up in the daytime is very efficient, but going the round in the morning before breakfast is quite as strenuous as a ten-mile run.

A nephew of mine concocted an ingenious mixture of poster paints for darkening electric light bulbs. It was extremely efficient, and no glimmer of light was visible from outside. The only drawback was that none was visible inside either.

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Each morning's crop of overturned refugees is the most obvious sign of inefficient roads. Black-out conditions must necessarily make all driving difficult, but double-tracked trunk roads barred from pedestrians and a few first-class through routes in all cities would, beyond question, have halved the nervous strain and the accident rate—and have given us a reliable network of transport routes which we may need later on. We see now that both should have been made, both *could* have been made, for about the cost of a week of this war.

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That nothing like this has ever been done is much more than a matter of inconvenience for commuters. Consider. The dropping of a large number of incendiary bombs is the most probable (and if the population below is awake the most humane) method of disorganizing civilian life from the air. It is common knowledge that if a serious fire occurs in London, engines are moved to it from stations

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Further inquiries revealed the fact that indelible pencil *only* may be used on the forms. Because it might run if deluged by amateur firemen?

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A. It's not me I'm worried about, it's my dog.

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If we are obliged to vacate this office, our business will be conducted at the bank's main London office. . . . Should the City become untenable, we shall endeavour to provide our usual services from—

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*It was suggested in this JOURNAL last week that the sudden change from a state of complacency to a state of emergency has produced—not unnaturally—a mild confusion in the building world. We suggested that the watchword for the building trade should be CARRY ON and for the technical Press KEEP CONTACT. Since then we have been able, pursuing the above slogan, to form an organization which may conceivably be of some use at any rate in the next few weeks. By tying up the various contacts immediately available to this JOURNAL we are in a position this week to provide the service described in the column below. If you have any problems arising out of A.R.P. or the present emergency please read it.*

---

## A R C H I T E C T S '                      J O U R N A L

## E       M       E       R       G       E       N       C       Y

# I N F O R M A T I O N       C E N T R E

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- How to find your way around the Government Departments .. .. . page 387
- Information Centre. Questions and Answers .. .. . page 387
- Materials .. .. . page 389
- Architectural Front .. .. . page 389
- Changes of Address .. .. . page 390
- Register .. .. . page 390

IT has long been the policy of THE JOURNAL to give information—specialized information—to assist the architect in a building world that grows more complex with the introduction of every new building material and every new type of equipment.

Now it becomes urgent to make this information even more specialized. Most normal building work has stopped for the time being, but the building industry is faced with a whole new series of problems arising out of A.R.P. and Civil Defence.

In recent months THE ARCHITECTS' JOURNAL has published much general A.R.P. information including the A.A.S.T.A. report (May 26) and the Civil Defence issues (June 1 and 8), and a series of Information Sheets.

Now information of a much more detailed nature is required. The present emergency confronts all technicians with a whole new set of problems, the answers to which have not yet been made available.

In course of time there may be special organization for dealing with them. In the meantime THE ARCHITECTS' JOURNAL EMERGENCY INFORMATION CENTRE has been formed to fill the breach.



- If you have an A.R.P. problem which demands an expert answer.
- If you want information regarding A.R.P. appliances.
- If you have an A.R.P. problem which requires knowledge you have not got of official recommendations.
- If you want information regarding MATERIALS.
- If you want guidance in finding your way around the new Government Departments.
- If you want the change of address of a firm or manufacturer.
- If you are looking for an Emergency, Civil Defence, or War job and want advice relating to your special case.

Write to:—

THE ARCHITECTS' JOURNAL,  
45, THE AVENUE,  
CHEAM,  
SURREY.

The INFORMATION CENTRE itself is working from London but inquiries should be addressed to this journal unless the question is urgent.

If the question is urgent, ring the ARCHITECTS' JOURNAL Information Centre at FLAXMAN 5322.

PLEASE write, don't ring the Centre unless the question is urgent.

*How to find your  
way around the new*

*Government  
Departments*

#### MINISTRY OF SUPPLY

started in August, 1939, co-ordinating the whole resources of the country. Of the Departments which concern building the most important is the

#### RAW MATERIALS DEPARTMENT

which is under the direct control of the Ministry of Supply. For list of controls so far set up, see MATERIALS, p. 389.

#### MINISTRY OF HEALTH

is still responsible for housing work in

○ Indicates Official Information.

England and Wales. It recommends:

Local authorities to suspend the preparation of new housing schemes and to enter into no further commitments for the building of houses.

Houses now under construction by local authorities to be completed as speedily as the supply of building labour and materials available in their districts will permit, without interference with essential war work.

Rent and Mortgage Restriction Act came into force on September 2. It prolongs the existing rent restriction Acts until six months after the end of the war. New Act extends the scope of control to cover all houses in existence at that date.

#### THE SECRETARY OF STATE FOR SCOTLAND

deals with housing in Scotland.

#### INFORMATION BUREAU

has been set up and general, legal and technical questions should be addressed to:

GENERAL: Home Office, A.R.P. Information Bureau, Thames House, S.W.1.

LEGAL: P. Osmond, Cleland House (Victoria 4433).

TECHNICAL: Sir Alexander Rouse, Chief Engineer, Cleland House (Victoria 4433).

Owing to pressure of work these three departments are very busy just now; don't communicate with them unless it is absolutely necessary.

#### BOARD OF EDUCATION

in connection with schools in neutral areas, urges local education authorities to complete the necessary measures of protection against air raids without which schools may not be reopened. The question of the sufficiency of the protection is one in which education authorities would naturally consult the A.R.P. authority.

## INFORMATION CENTRE

#### QUESTION:

*At the Generating Station of this Undertaking there is a brick chimney 330 ft. high, and 17 ft. 6 in. diameter at the top, and I am desirous of forming some idea of the area which would be covered with gross debris in the event of this chimney collapsing due to the effect of a large H.E. bomb in the vicinity.*

#### ANSWER:

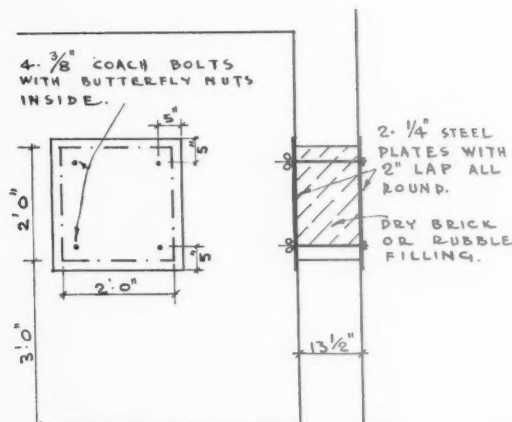
With a diameter of 17 ft. 6 in. at top, the chimney almost certainly has at least 3 ft. thick brickwork at the base, and being a circular structure is highly resistant to blast. A bomb dropping 20 or 25 ft. from it should have little effect, and at even closer range might damage the brickwork without bringing the chimney down.

If a bomb strikes the top of the chimney there will be relatively little damage. Greatest danger is if the bomb falling obliquely strikes the shaft near its base demolishing the brickwork on one side so that the stack falls, when the debris will spread as far as 210 ft. from the stack.

Zone of greatest danger is then in the neighbourhood of 100 ft. from stack.

*Q. Can you suggest a simple and economical blast-proof emergency exit for escape from a basement shelter through a 14-in. brick wall into an adjoining basement?*

A. The simplest exit is probably that recommended in the Home Office publication "Directions for the Erection of Domestic Surface Shelters" (H.M.S.O., price 2d.). An opening is left in the brickwork and this is protected by means of a  $\frac{1}{4}$ -in. thick mild steel plate on each side. The plates must be easily removable, and are consequently fixed in



position by means of four  $\frac{3}{8}$ -in. coach bolts, each with a washer and wing nut on the inside wall. The plates are punched with square holes to receive the coach bolts and to prevent them turning. The space between the plates is filled with dry brickwork. (Diagram 1.)

**Q.** We are faced with the problem of providing light-tight screens to windows in a room which becomes unbearably stuffy with the present black-out curtain arrangement, that provides no ventilation, and shall be obliged if you will let us know whether you have published an information sheet showing ventilated black-out curtains.

**A.** We have no information sheet on this subject, but the methods shown in the diagrams below have proved effective in practice. It is important the

inner surfaces of the screens be painted matt black. The arrangement can be modified to suit various types of window.

**Q.** When no sand is available can sandbags be filled with earth?

**A.** There is no reason why the bags should not be filled with earth, which is less liable to trickle through small apertures in the bags than dry sand, but the earth will retain water and the life of the sandbag will be reduced considerably.

**Q.** We are architects to owners of several blocks of flats in and around London. More than 50 per cent. of the tenants in each block have asked for a shelter to be provided, and we understand

that if our client provides shelters he is entitled to a grant, but to whom do we make application for this and to whom do we submit the schemes for approval?

**A.** Unless the tenants are within the income range that would make Anderson shelters available if there were space for them, it is unlikely your client will receive a grant, but he is entitled under the Civil Defence Act, 1939, to raise the rent, for a period not exceeding eight years, to cover the cost of the shelter.

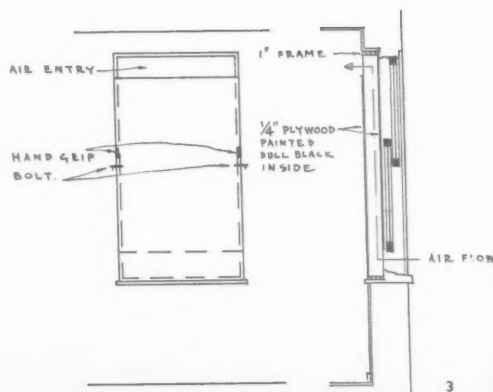
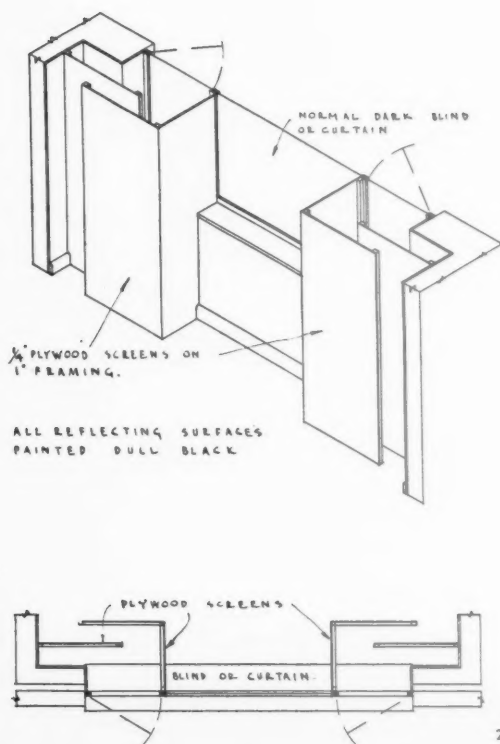
If, because more than 50 per cent. of the tenants have asked for it, he must provide a shelter, he is entitled to apply to the local authority for a loan.

The procedure varies in different boroughs. In some there is, under certain conditions, a small grant, but it is best to get in touch with the Town Clerk in the district concerned and ask his advice. Application for grant or loan should be made to the A.R.P. engineer to the borough, who will send you a form. This must be completed and returned to him with plans of the scheme in duplicate, a block plan and a specification. You should get a reply within twenty-four hours. Whether you apply for the grant or not, the scheme must be submitted to the engineer for approval.

**Q.** What is the average life of a filled sandbag?

**A.** If filled with sand, 7 to 8 months; but for sandbags now being filled with clay and stones probably not more than three months, though this is pure speculation as there is little experience of this sort of filling.

**Q.** How do I obtain a Ministry of Supply Priority number or licence? I have heard from manufacturers who are making windows for a job of mine that is in progress, and where windows are needed urgently, that orders on hand for Government Departments are to receive first preference, and that my windows must be



2. Permanent black-out for large casement windows with centre fixed light, to allow ventilation (courtesy by Isokon).

3. Removable black-out screen for double-hung windows to allow fresh air to be admitted. Can be adapted for casements by arranging screen sideways.

delayed considerably unless I can get the Priority.

A. We understand it is no longer necessary to obtain this Priority number, and suggest you get in touch with the manufacturers again. They must of course satisfy Government demands first, but the consequent delay will probably be less than was at first anticipated.

## Materials

Doubt exists among contractors, firms and others as to the method by which PRIORITY IS BEING ENFORCED under the new Priority of Work Order. It is not the intention that priority shall be exercised over the whole field of industry. There will be no general issue of Priority certificates in connection with Government work, and such certificates will only be issued where difficulties arise between the competing demands arising from an immediate shortage or non-availability of production capacity, labour, raw materials, transport or any other cause. In the case of difficulties arising in the execution of a contract or order, contractors, firms, etc., should refer to the Government Department concerned in the issue of the order (or the appropriate Government Department in the case of civil industry). If necessity is proved, the appropriate Department will receive authority from the Ministry of Supply to issue Priority certificates.

If difficulty is found in the supply of a raw material which is subject to the control of the Minister of Supply, enquiries should be addressed to the appropriate Control. A list of the raw materials so controlled and of the addresses to which communications should be sent is given below:

### CONTROL AND ADDRESS

#### ALUMINIUM:

Ministry of Supply, Aluminium Control, Raven Hotel, Castle Street, Shrewsbury. (Shrewsbury 2067/8.)

#### HEMP AND FLAX:

Ministry of Supply, Hemp (or Flax) Control, Washington Hotel, City Road, Chester. (Chester 168.)

#### IRON AND STEEL:

Ministry of Supply, Iron and Steel Control, Steel House, Tothill Street, London, S.W.1. (Whitehall 1030.)

#### JUTE:

Ministry of Supply, Jute Control, 1 Victoria Street, Dundee.

#### LEATHER:

Ministry of Supply, Leather Control, 8 St. Thomas Street, London, S.E.1. (Hop 0175.)

#### NON-FERROUS METALS (LEAD, ZINC, TIN AND COPPER):

Ministry of Supply, Non-ferrous Metals

Control, Grand Hotel, 46 Albert Street, Rugby. (Rugby 3321.)

#### PAPER:

Ministry of Supply, Paper Control, Great Western Hotel, Station Road, Reading. (Reading 60491.)

#### TIMBER:

Ministry of Supply, Timber Control, c/o Postmaster, Bristol. (Temporary Address.) (Bristol 23591.) (Temporary.)†

\* NOTE.—Enquiries regarding flax from persons and firms in Scotland should be addressed to the Deputy Controller, Ministry of Supply, Flax Control, Dundee. Enquiries regarding flax from persons and firms in Northern Ireland should be addressed to the Deputy Controller, Ministry of Supply, Flax Control, Chamber of Commerce, Belfast. All applications for licences in respect of timber, when a licensing system is introduced, should be addressed to the appropriate Divisional Area or Pitwood District Officer, whose addresses will be notified to the Trade Press as soon as possible.

NORTHERN ALUMINIUM state price of their aluminium paste pigment for manufacture of aluminium paint has not yet been advanced. Every effort will be made to keep standardized charges ruling prior to present emergency.

CRITTALL MANUFACTURING Co. are concentrating on official window contracts of extreme urgency; all other outstanding orders are being completed. Additional space has been turned over to A.R.P. production, and subject to the expected arrival of raw material, deliveries will be speeded up. Supply of steel is controlled, but the indications are that, subject to priority demands being met, there will be supplies for normal production though deliveries may be less prompt.

Basis prices of COPPER advanced, from September 16, to: Plain plates, £90 10s. per ton basis, with usual trade extras; Rods, £88, ditto; Sheets, £88, ditto; these prices being subject to 2½ per cent. discount to buyers.

THE COPPER DEVELOPMENT ASSOCIATION have not moved from their Thames House offices, where, with a staff somewhat reduced by the absence of those members at present serving with the forces, they are continuing their normal activities, hoping to be of assistance to those concerned with the use of copper and its alloys.

## Architectural Front

### ARCHITECTURAL ASSOCIATION

The Council is making plans to form GROUPS OF ARCHITECTS within the membership of the A.A. who would be prepared to place themselves at the service of the Government or local authorities, in order to further the work of emergency building. These teams, under experienced leaders, would tackle quickly and efficiently any kind of job, wherever required, and would provide their own working machinery.

The Members' Club Rooms will remain open on week-days until 10 p.m. (Saturdays, 3 p.m.).

Luncheons are being served as usual, but the service of dinners has of necessity been suspended for the present. Should the demand warrant it, the catering services will be extended.

Although certain books have been removed for safe keeping, a large number are still available for loan and reference. Periodicals may be seen as usual.

The lantern slide collection has been moved and, temporarily, is not available to borrowers. It is hoped that when arrangements have been completed, this service will be carried on from the new school premises at Hadley Common.

For the convenience of those members who have been obliged to close their offices, it is hoped that arrangements can be made for the storage of important documents, the provision of limited working space, the reception of telephone messages, the use of stenographer's services, etc. A small fee will be charged.

The Association has decided to re-open its School in a "safe" area. The School in London will be closed.

The country address will be The Mount House, a fine Georgian mansion which stands in grounds of 4½ acres on the edge of Hadley Common and Woods, Herts. It is readily accessible from High Barnet and from Hadley Wood Station.

The Mount House has been leased to the Architectural Association for the duration of the war by the trustees of the property, Messrs. Dove Brothers, on behalf of their mother, Mrs. Dove.

The autumn term will start as already arranged on Monday, October 2. The teaching and lecturing staff are under the control of Mr. G. A. Jellicoe.

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

A.A.S.T.A. has appointed Emergency Executive Committee. Members: V. L. Nash, A.R.I.B.A., President (C.W.S. Architect's Office); C. T. Penn, A.R.I.B.A., Chairman of Council and of A.R.P. Committee (Middlesex C.C.); R. D. Manning, A.R.I.B.A., Chairman of Keystone Committee (Middlesex C.C.); E. A. D. Tanner, A.R.I.B.A. (War Office).

Every effort will be made to continue the work of the Association as normally as possible. Contact has been made with the various Government Departments; advice being sought concerning best use to be made of the services of members not enrolled on the National Service Panels of either the R.I.B.A. or the Chartered Surveyors' Institution.

Head office of the Association is being moved from High Holborn to 57 Mew End, N.W.3.

### BUILDING CENTRE

Until further notice CENTRE will be open from 10 a.m. to 4 p.m. Saturdays: 1 p.m.

### D.I.A.

Offices and all activities of Association are closed down for an indefinite period.

Suitable arrangements have been made to safeguard the records and also as to the care of the finance.

Urgent communications should be addressed to 6 Queen Square, W.C.1.

### I.A.A.S.

New headquarters (75 Eaton Place, Belgrave Square, S.W.1) just completed. Not intended

† In pursuance of powers granted under the Emergency Powers (Defence) Act, 1939, the Minister of Supply announces that he has made the Control of Timber (No. 4) Order. This Order provides that from September 16, 1939, no person, being in or ordinarily resident in the United Kingdom, shall buy or agree or offer to buy or obtain or solicit any option to buy or invite any offer to sell any timber or boxboards situate outside the United Kingdom except under the authority of a licence granted by the Minister of Supply. Contracts in writing entered into before September 16, 1939, are not affected by the terms of the No. 4 Order.



to evacuate the premises or to cut down activities beyond evening meetings and lectures.

All architects may make full use of the library, reading-rooms and rooms normally reserved for members. Hours: 10 a.m. to 5 p.m. Saturdays: 10 a.m. to 1 p.m.

## BUILDING INDUSTRIES NATIONAL COUNCIL

Functions of the Council to be exercised by an Emergency Committee. Officers: President, H. J. C. Johnston; Senior Vice-President, George Hicks, M.P., HON.A.R.I.B.A.; Chairman of the General Purposes Committee, Sydney Tatchell, F.R.I.B.A.; Chairman of the Special Committee for Public Relations, Sydney Tatchell, F.R.I.B.A.; Chairman of the Advisory Committee on Building Acts and Bylaws, Maurice E. Webb, M.C., D.S.O., F.R.I.B.A.; Chairman of the Air Raid Precautions Committee, V. Lefebure; Honorary Treasurer, A. S. Bennion, F.S.I.; Honorary Secretary, I. Ernest Jones, M.A., B.S.C.

Normal activities to be continued from present offices, 85 Gloucester Place, W.1. Welbeck 3335-6.

## P.E.P.

The CLUB is being found a very useful meeting-place at the present time, and members have asked that it should be open for dinner in the evening as well, as they wish to meet and discuss, and find lunch-time only is not sufficient.

As an experiment, therefore, it has been arranged that a number of members will definitely be dining in the Club on Tuesday and Thursday evenings for the next fortnight, starting on September 19. Any member of the Club will be able to get dinner without previous notice. The bar will be open from 6 p.m. and dinner available from 7 p.m. to 8 p.m.

# Changes of Address

## ARCHITECTS

- T. P. BENNETT AND SONS,  
The Sycamores, 19 North Road, Highgate, N.6. (Mountview 6081.)
- PERCY L. BROWNE AND SON,  
22 Highbury, Jesmond, Newcastle-upon-Tyne. (Jesmond 1078.)
- K. M. B. CROSS,  
Greville House, Little Baddow, Chelmsford. (Danbury (Essex) 174.)
- CULPIN AND SON,  
Long Ridge, Carbone Hill, Cuffley, near Potters Bar, Middlesex. (Cuffley 2127.)
- FARMER AND DARK,  
390 London Road, Earley, Reading. (Reading 615871.)
- GUTTERIDGE AND GUTTERIDGE,  
31 University Road, Southampton. (Southampton 75314.)
- JAMES AND BYWATERS AND ROWLAND PIERCE,  
Hornbeams, Winton Road, Hampstead Garden Suburb, N.W.2. (Speedwell 1089.)
- BERTRAM LAST,  
90 Worcester Road, Cheam, Surrey. (Vigilant 0899.)
- RICHARD NICKSON,  
Hinderton Lodge, Hinderton Road, Neston, Wirral, Cheshire. (Neston 159.)
- NORMAN AND DAWBARN,  
Julian Hill, Brooklands Road, Weybridge, Surrey. (Weybridge 2344.)
- E. S. NORTH,  
Woodside Road, Beaconsfield, Bucks.
- W. PALMER-JONES,  
Spreakley, Frensham, Surrey.
- GEORGE PEARSON AND SON,  
162 Hamilton Avenue, North Cheam, Surrey.
- PITE, SON AND FAIRWEATHER,  
16 Market Square, Westerham, Kent. (Westerham 78.)
- C. S. RIGHTON,  
Brookfield, Ley Hey Park, Marple. (Manchester Office.)

## MANUFACTURERS

CRITTALL MANUFACTURING Co., LTD. Head office at 210 High Holborn (Telephone No.

Hol. 6612) is open, and a reduced staff is in attendance to deal with all enquiries. The majority of the staff, although depleted by the exigencies of National Service, is at the Braintree Works, Manor Works, Braintree, Essex (Telephone No. Braintree 106), and others are distributed among their branch offices.

- CEMENT AND CONCRETE ASSOCIATION,  
Lincoln Building, 15 Pearl Street, Oxford.
- EXCEL ASPHALTE Co., LTD.,  
4 Kingston By-pass, Hinchley Wood, Esher, Surrey. (Emberbrook 4152-3-4.)
- EXPANDED METAL Co., LTD.,  
"Dunedin," Underwood Road, Caterham, Surrey. (Caterham 76.)
- LIMMER AND TRINIDAD LAKE ASPHALT Co.,  
Berry Hill, Taplow, Bucks. (Maidenhead 2222.)
- RAINFORDWARE, LTD.,  
Mill Lane, Rainford, near St. Helens, Lancs. (Rainford 225.)
- SYNCHRONOME Co., LTD.,  
Sales, Service and Contracts Dept.: Abbey Electric Clock Works, Mount Pleasant, Alpertown, Middlesex.
- THE VAL DE TRAVERS ASPHALTE PAVING Co.,  
Merele Wood, Mount Harry Road, Sevenoaks. (Sevenoaks 1827-1828.)
- ADAMSEZ LTD.  
York Cottage, Holdfast Lane, Haslemere, Surrey. (Haslemere 920.)
- BRITISH INSULATED CABLES, LTD.,  
Fairmile House, Cobham, Surrey. (Cobham 2893-2894.)

# Register

★ THE REGISTER is now in the hands of the Ministry of Labour.

★ It is being handled by the ARCHITECTURE AND ALLIED TRADES COMMITTEE of the MINISTRY, who select names according to their qualifications for a given post.

★ Selection is confidential and NAMES CANNOT BE PUBLISHED. R.I.B.A. report that architects have already been chosen from it for jobs.

★ REGISTER still open; enrolment at R.I.B.A., 66 Portland Place.

Notes from the Building Research Station\* on

## THE TECHNIQUE OF SOUND INSULATION

### PART I.—RIGIDLY CONTINUOUS STRUCTURES

#### Preliminary

IN common with many other laboratories throughout the world the Building Research Station, in conjunction with the National Physical Laboratory, has devoted considerable attention in recent years to the problem of sound transmission in buildings. Much further research remains to be done, but it has been felt that the essentials of the subject are now sufficiently well understood to make possible comprehensive recom-

mendations for practice and a report giving practical recommendations for builders and architects has been prepared.† The purpose of this note is to give, so far as is possible within short compass, an indication of the methods of treatment now recommended which will be dealt with more fully in the report.

Before proceeding to discuss these methods of treatment it is important to emphasize that success must always be dependent on the wise initial planning of a building. For instance, to place a room which will inevitably be noisy next or above sleeping apartments is to introduce from the start

serious difficulties which may well render uneconomical any form of treatment that can be suggested. Another point is care in the choice of equipment. Quietness in operation should always be a factor in the selection.

#### Transmission of Sound

For the practical treatment of sound transmission in buildings it is necessary to distinguish between what is termed "air-borne" sound and "impact" or "contact" sound. "Air-borne" sound is that which starts as a vibration in the air, e.g. speech, the wireless, etc. "Impact" or "contact" sound starts as a vibration in the building structure, caused, may be, by a footstep on a floor, or a blow with a hammer. The distinction is important because insulation against the two types of sound needs separate consideration and treatment.

Air-borne sound may be transmitted throughout a building along continuous air paths, through open doors, windows or even the narrow crack round a poorly

† Sound Transmission in Buildings. Practical Notes for Architects and Builders. H.M. Stationery Office. In the press.

\* Crown Copyright Reserved.

# HOUSE AT WESTMILL, HERTS

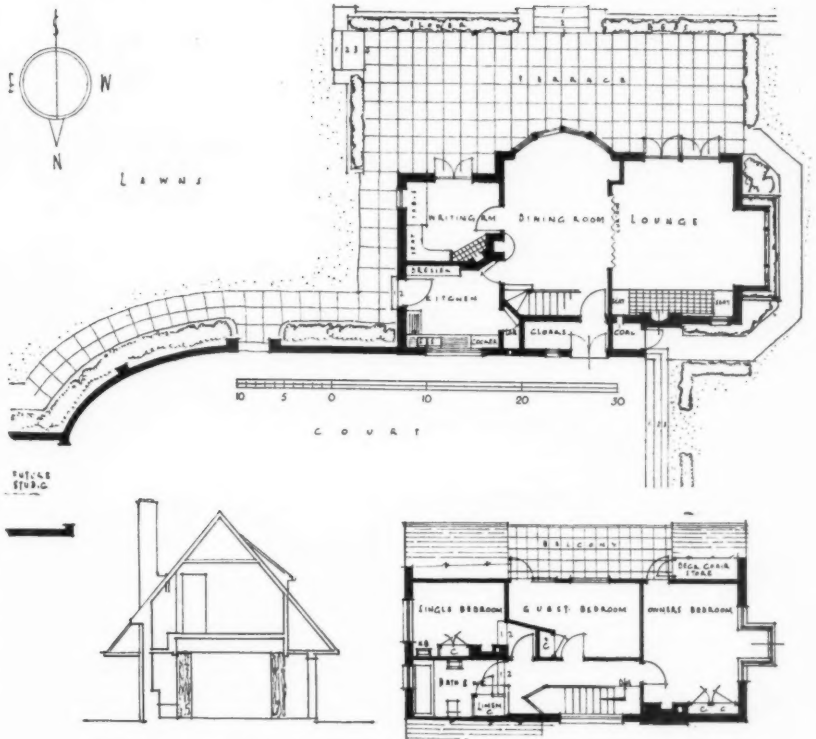
BY E. L. W. DAVIES (OF DAVIES AND KNIGHT)

**GENERAL**—A country house for the architect's own occupation. The house to be openly planned and to be easily run, as in winter months it would be used at week-ends only.

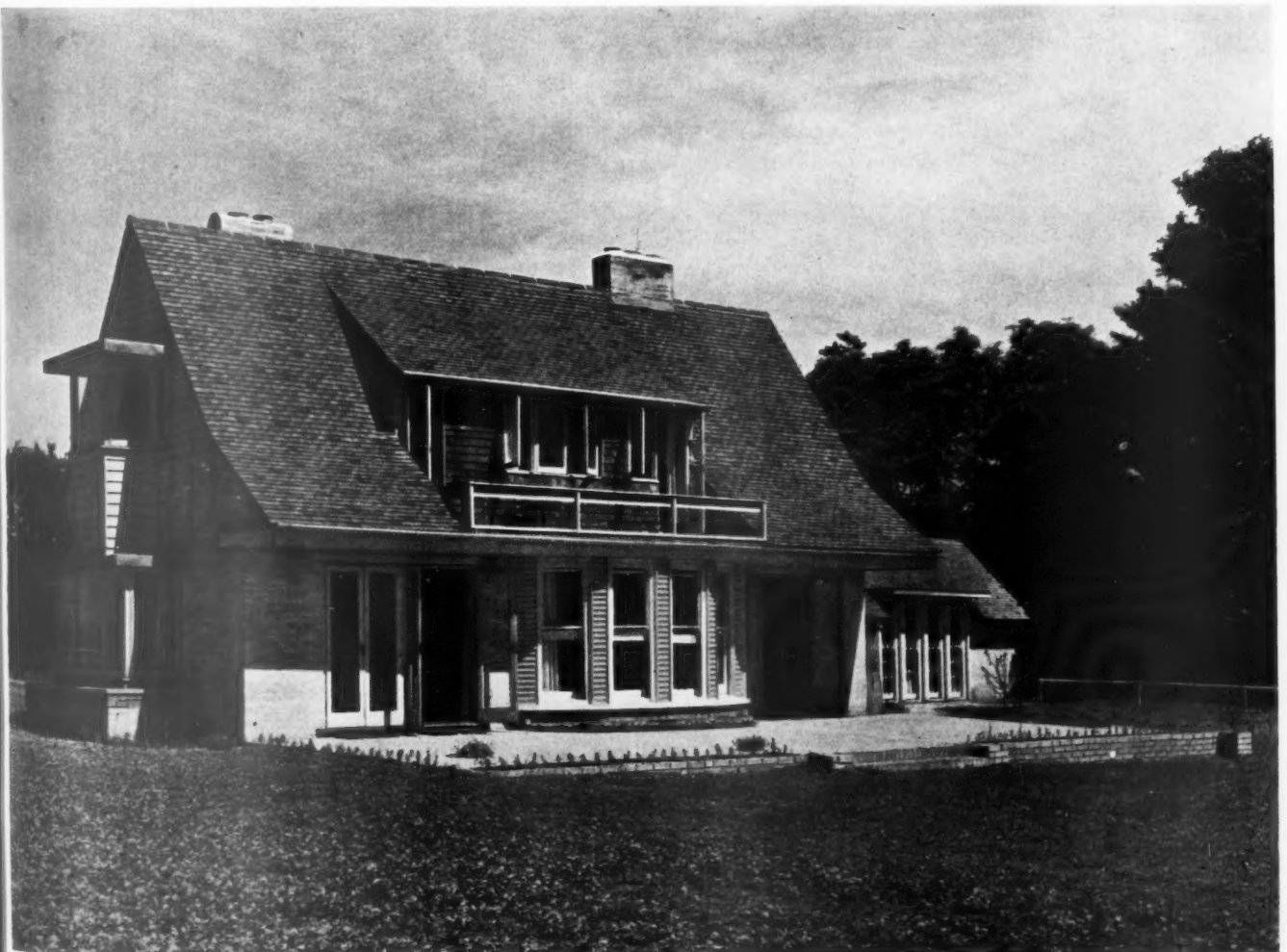
**SITE**—On a ridge about 400 ft. above sea level. The east side is protected from the east winds by a small copse. The house is kept away from the road so as to give a small cultivated garden at the back and open meadow land in front. The house and studio have been connected by a screen wall.

**PLAN**—The open planning on the ground floor was designed to give the appearance of space and a small writing-room off to give seclusion in which to work. These rooms all face direct south, and the large bays in the lounge face due west. The first floor has the owner's double bedroom facing west, and a guest's bedroom facing south, both having access to a sun balcony on the south. A single bedroom and bathroom are on the east side at a slightly lower level than the rest of the first floor.

BELOW : SOUTH FRONT

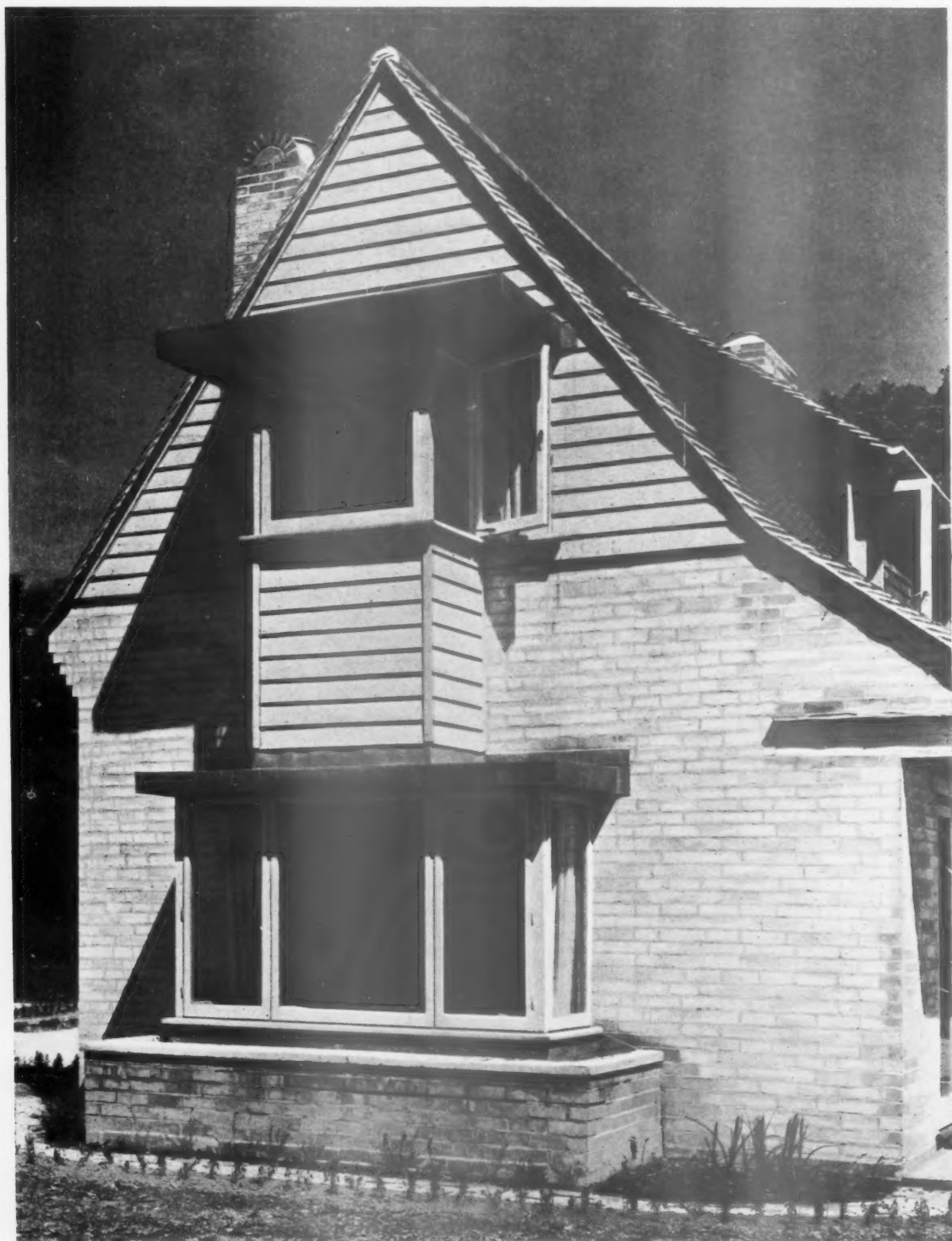


GROUND AND FIRST FLOOR PLANS AND SECTION



## HOUSE AT WESTMILL, HERTFORDSHIRE

DESIGNED BY E. L. W. DAVIES (OF DAVIES AND KNIGHT)



THE WEST FRONT

**CONSTRUCTION AND EXTERNAL FINISHES**—External walls are 11-in. cavity and  $4\frac{1}{2}$ -in. internal walls. The first floor is timber framed and partitioned and lined with wall boarding. The ground floor is a solid concrete floor covered with pine blocks, and the first floor with 1-in. boarding. The roofs are all covered with double camber concrete tiles; selections of seven different

shades being combined to give an old matured appearance. The elevation had to have rural character. The sash windows to the dining room are divided externally by corrugated asbestos horizontally fixed between moulded linings. All windows are of storm-proof type. All woodwork is painted pale cream, and all soffits are painted sky blue.



RE  
GHT)

ONT

elevation  
room are  
a moulded  
s painted



## THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

## ISOMETRIC DETAILS SHOWING FIRE RESISTING COVER TO STEEL BEAMS :

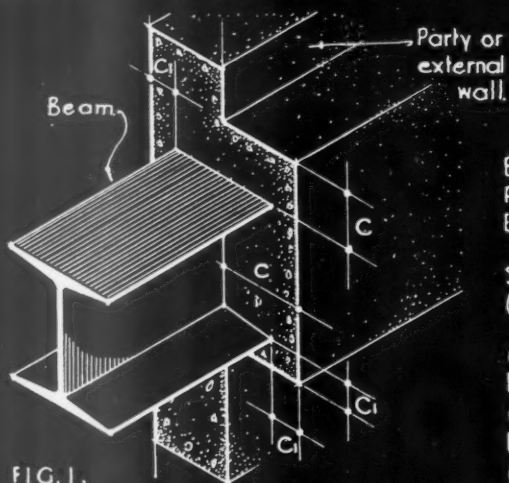


FIG. 1.

BEAMS IN  
PARTY AND  
EXTERNAL  
WALLS:  
See clauses (a) &  
(b) on back of Sheet.

C must not be  
less than 4"  
C1 must not be  
less than 2"  
(See also fig. 5.)

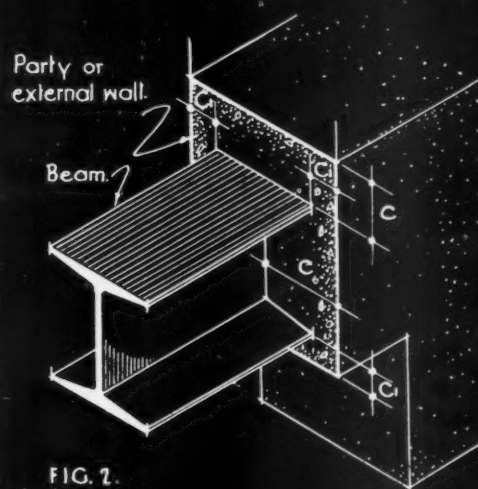


FIG. 2.

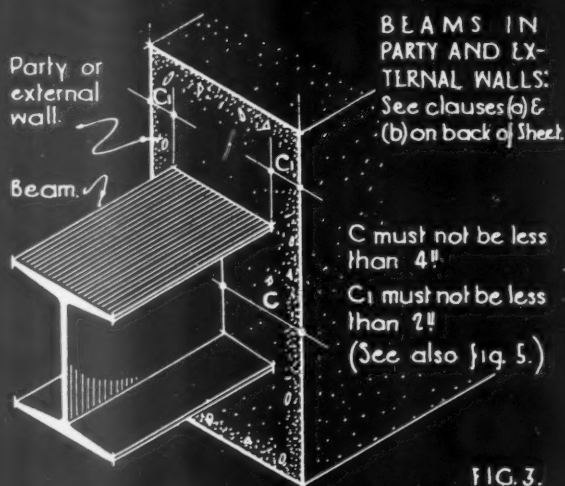


FIG. 3.

BEAMS IN  
PARTY AND EX-  
TERNAL WALLS:  
See clauses (a) &  
(b) on back of Sheet.

C must not be less  
than 4"  
C1 must not be less  
than 2"  
(See also fig. 5.)

OTHER BEAMS:  
See clauses (c) & (d) on back  
of Sheet.

Any beam except one  
in a party or external  
wall (for which see  
figs. 1, 2 & 3) and  
except for one  
elsewhere  
in a single  
storey bldg.  
not great-  
er than  
25' high.

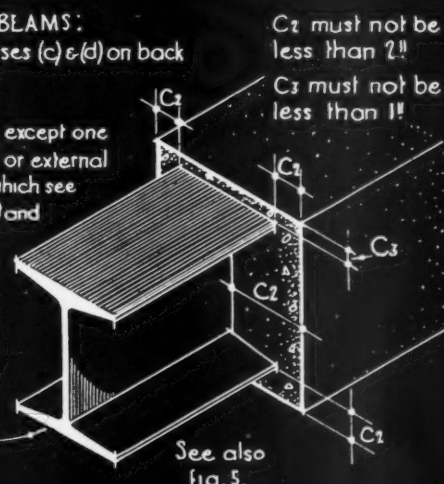


FIG. 4.

See also  
fig. 5.

C2 must not be  
less than 2"  
C3 must not be  
less than 1"

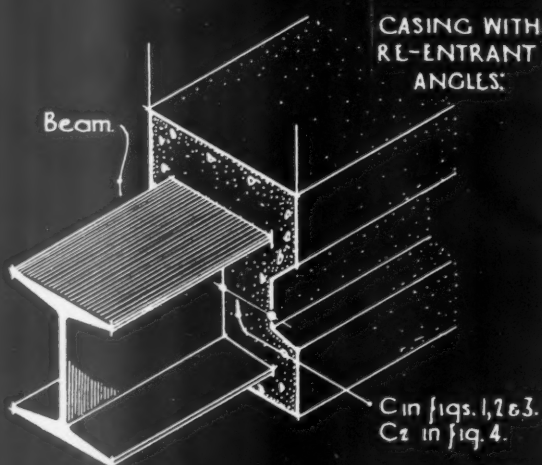


FIG. 5.

CASING WITH  
RE-ENTRANT  
ANGLES:

C1 in figs. 1, 2 & 3.  
C2 in fig. 4.

## GENERAL NOTES:

For simplicity the cover has been shown in relation to a plain joist beam. The requirements apply equally to other beam sections such as channels, plated joists, plate girders, etc.

The casing must be hard against the steel without any intervening voids, and is to consist of brickwork, terra-cotta, concrete, stone tiles, or other equally incombustible material, or of a suitable combination of these.

Issued by Braithwaite & Co, Engineers, Ltd.  
Compiled by C.W. Hermann, Consulting Engineer.

THE ARCHITECTS' JOURNAL  
LIBRARY OF PLANNED INFORMATION

# INFORMATION SHEET

• 763 •

## STRUCTURAL STEELWORK

**Subject :** Encasing of Steelwork for fire resistance

**General :**

This series of Sheets on steel construction is not intended to cover the field of engineering design in steel, but to deal with those general principles governing economical design which affect or are affected by the general planning of the building. It also deals with a number of details of steel construction which have an important effect upon the design of the steelwork.

Both principles and details are considered in relation to the adjoining masonry or concrete construction, and are intended to serve as a guide in the preliminary design of a building, so that maximum economy may be obtained in the design of the steel framing.

This is the tenth Sheet of the series, and illustrates the minimum dimensions of fire-proof casing for steelwork.

**Regulations :**

By-law 68 of the London County Council's Building By-laws which came into operation in January, 1938, sets out the standards for the fireproofing of structural steelwork. These standards are generally acceptable throughout the country as are also the other building by-laws of the London County Council. Waivers of the requirements are freely granted by the Council in favour of the reduction or the entire omission of the fire cover ; but satisfactory reasons why the requirements should be modified must, of course, be put before the Council in each particular case. The Council have also published a document, "Fire Protection for Structural Steelwork : Application for Modifications or Waivers," which sets out the requirements for fire tests, the results of which would determine, in many cases, the permissible reduction in fire cover.

**Encasing of Beams :**

Except in a single-storey building, not higher than 25 ft., in which there is no structural steel in any party or external wall, every structural steel beam must be protected against the effects of fire by a casing of incombustible materials. The casing is to consist of brickwork, terra-cotta, concrete, stone tiles, or other equally incombustible material or of a suitable combination of these. Portland cement mortar must be used for the bedding and jointing of all materials which are in the form of blocks and all joints must be completely filled. Casing must be hard against the steel without any intervening voids, and the thickness must comply with

that given for the appropriate case in the following paragraphs :—

(a) *Beams in Party and External Walls.*—On the top flange and the web of every beam wholly or partly in—

(i) an external wall, or

(ii) a recess in a party wall,

not less than 4 in., except on plates and angles connected to the flange, where the casing must be not less than 2 in. See Figs. 1 and 2 on the front of this Sheet.

(b) On the bottom flange, at the edges of all flanges, and on all plates and angles connected to the flanges, of every beam wholly or partly in—

(i) an external wall, or

(ii) a recess in a party wall,

not less than 2 in. See Figs. 1, 2 and 3 on the front of this Sheet.

(c) *Other Beams.*—On the bottom flange and the web and at the edges of the flanges of every beam (except one in an external or party wall and except one elsewhere in a building less than 25 ft. high of only one storey), not less than 2 in. except on projecting cleats and rivet heads, etc., where the casing must be not less than 1 in. See Fig. 4 on the front of this Sheet.

(d) On the top flange and on projecting cleats and rivet heads, etc., of every beam (except one in an external or party wall and except one elsewhere in a building less than 25 ft. high of only one storey), not less than 1 in. See Fig. 4 on the front of this Sheet.

**Re-entrant Angles :**

There is no restriction on re-entrant angles in the casing, which therefore may be made to follow the lines of the section encased. This is not to be recommended, nor has it any economic advantages, but in certain special cases it may be necessary. See Fig. 5 on the front of this Sheet.

**Reference :**

The explanations of the by-law requirements above and on the front of this Sheet have been taken from "Building Design and Construction," volume I, by F. J. Samuely and C. W. Hamann, and reprinted here by permission of the publishers, Messrs. Chapman and Hall.

**Previous Sheets :**

- No. 729.—Basic Steel Sections.
- No. 733.—Mechanics of Sections, 1.
- No. 736.—Mechanics of Sections, 2.
- No. 737.—Economical Framing, 1.
- No. 741.—Economical Framing, 2.
- No. 745.—Economical Beam Sections, 1.
- No. 751.—Economical Beam Sections, 2.
- No. 755.—Economical Beam Sections, 3.
- No. 759.—Riveted Plate Girders.

**Issued by :** Braithwaite & Co., Engineers,  
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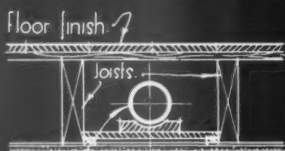
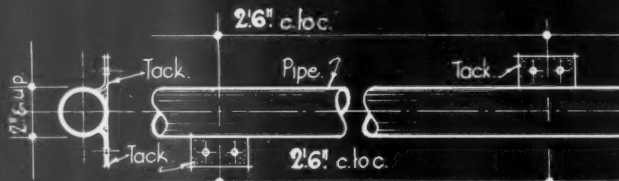
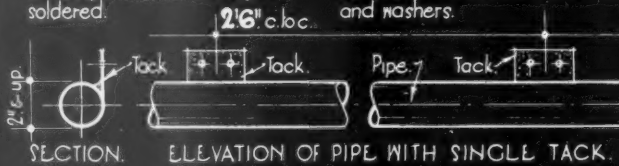


## METHODS OF FIXING AND SUPPORTING HORIZONTAL OR VERTICAL LEAD SOIL &amp; WASTE PIPES:

## (A) HORIZONTAL RUNS:

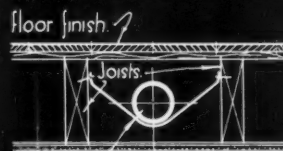
Tacks are cut of 8-10 lb. sheet-lead, 5 1/2" long, & may be back or face soldered.

Tacks are secured to wall by pipe nails or by round-headed brass screws and washers.



Pipe laid horizontally between joists carried on shaped wood layboard on bearers.

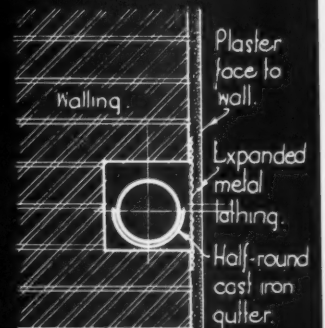
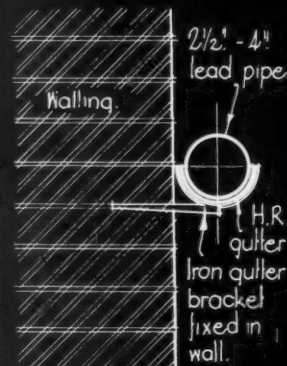
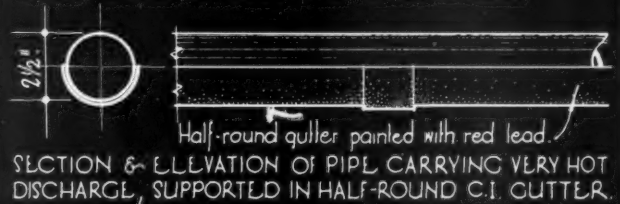
PIPE FIXED UNDER FLOOR.



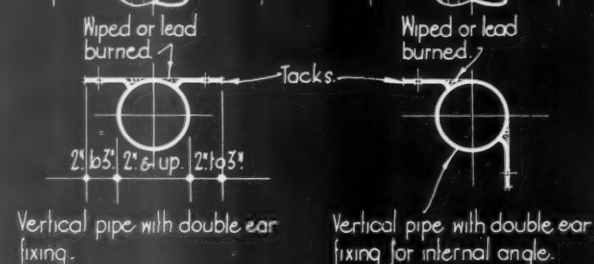
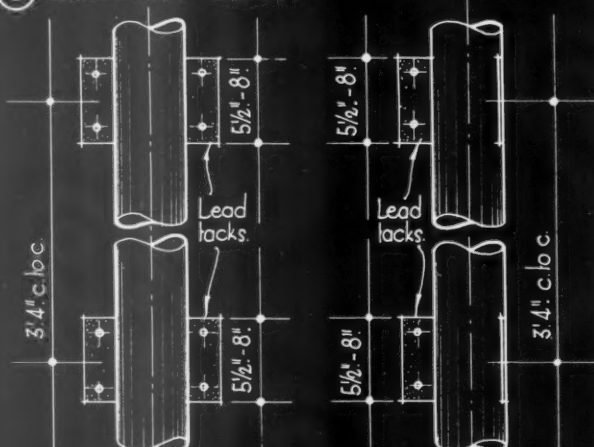
Pipe slung horizontally between floor joists in 2" wide 18 S.W.G. hoop iron straps at 2 1/2" c.c.

PIPE SLUNG UNDER FLOOR.

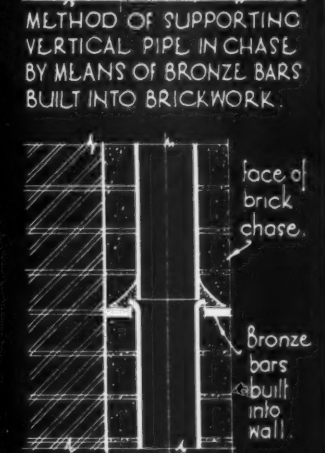
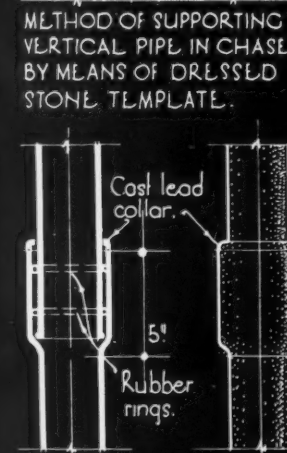
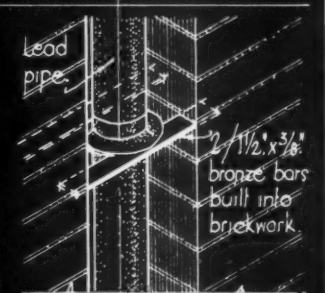
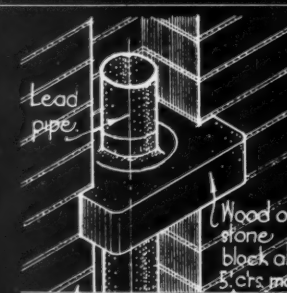
SPECIAL PRECAUTIONS NECESSARY WHERE PIPES CARRY EXCEPTIONALLY HOT DISCHARGES.



## (B) VERTICAL RUNS:



DOUBLE EAR CAST LEAD FIXING TO PIPES.



Information from Lead Industries Development Council.

INFORMATION SHEET: THE FIXING OF LEAD SOIL & WASTE PIPES: 58.  
SIR JOHN BURNETT TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C1.

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## INFORMATION SHEET

• 764 •

## PLUMBING

**Subject :** Fixings for lead soil and waste pipes.**General :**

This Sheet shows correct methods of fixing and supporting lead soil and waste pipes. Adequate fixing is essential in all plumbing work, since poor fixing practice may permit of sagging or distortion of the section and causes concentration of stresses in the pipe wall which may give rise to cracking. Figures shown on this Sheet are those accepted as good practice, but it will be recognized that each installation must be considered separately, and the position of the fixings will be as important as the actual spacing between centres. Careful layout of the position of fixings will prevent the concentration of stresses at particular points.

Where the discharge carried by the waste or soil pipe is cold, or does not normally exceed 120° F. (i.e. bath heat) tack fixing is adequate, but where large quantities of waste water at temperatures in excess of this are to be carried, continuous support is essential. Whatever the temperature of the discharge, where continuous support can be economically provided, it is desirable.

**Horizontal Runs :**

Continuous support can be obtained for horizontal pipes by laying them in chases and boxing them in, or, where they need not be concealed, by laying them on continuous bearers fixed to the wall face similar to narrow shelving.

Soil and waste pipes are fixed with lead tacks soldered or leadburned to the pipe. Tacks should be spaced at distances not greater than 2 ft. 6 in. centre to centre. Information on lead tacks is given on Information Sheet 161, No. 4 of this series.

Pipes run at right angles to the joists may be laid without continuous support if the joists are of normal thickness and spacing (i.e. not more than 16 in. centre to centre). Pipes run parallel to the joists may be laid on continuous shaped wood lay boards on bearers fixed between the joists, or slung in hoop iron straps fixed to the joists at 2 ft. 6 in. centre to centre. The straps should be not less than 2 in. wide and 18 S.W.G.

Pipes in direct contact with Portland cement in any form must be wrapped throughout their length with building paper or felt before being fixed in position. This wrapping allows for expansion and protects the pipe from the action of the free alkali invariably present in Portland cement during and shortly after the setting period. Bitumen coating will provide chemical protection but does not produce the desirable freedom of movement to accommodate thermal expansion and contraction.

**Vertical Runs :**

Vertical soil and waste pipes may be fixed with 8 lb. lead tacks, which should be spaced at not more than 3 ft. 4 in. centre to centre. The tacks, 2½ in. or more in width, are soldered or leadburned to the pipe.

**Exceptionally Hot Discharges :**

Where a lead soil or waste pipe is used to convey exceptionally hot discharges special precautions are necessary. The occasional flow of a small quantity of even boiling water is immaterial, but a discharge from such fittings as sterilizers, bed-pan washers, large kitchen boiling utensils and steamers where the volume is great and the temperatures are materially over 120° F., the rate of creep of lead is likely to be increased and sagging or collapse of the circular section is possible in pipes fixed horizontally. For this reason a continuous shaped support which is most conveniently provided by means of half round cast iron guttering should always be used. The gutter and its fixing brackets are shown on the face of this Sheet, but there are other methods of supporting the gutter which can for instance be cheaply and conveniently slung beneath a ceiling on hoop iron straps and can be arranged to bridge considerable gaps. Joints in the gutter must be flush inside and gutter bolts thoroughly countersunk. The iron work should be protected against corrosion with a coat of red lead paint.

Collapse of the cylindrical section is less likely to occur at any given temperature in smaller sized pipes and for this reason the minimum legal diameter for a given duty should always be specified, and adequate wall thickness provided, e.g. a 2 in. by 16 lb. per yard pipe is preferable to a 4 in. pipe of 8 lb. substance which weighs 22.8 lb. per yard. This will also effect an economy and provide a better flush where the volume of discharge is small.

**Expansion Joints :**

Pipes taking exceptionally hot discharges as defined above, whether fixed vertically or horizontally, must be provided with expansion joints (of which details are shown on the face of this Sheet) at not more than 10 ft. centres. The improved quality of rubber rings now available ensures adequate life under these conditions where there is no access for daylight and the rubber is permanently stressed, which are the optimum conditions for long life. In addition to expansion joints at suitable intervals on vertical pipes, where the discharges are exceptionally hot adequate fixing at rather smaller centres than that given for normal work is desirable, and care must be taken in the layout of the pipework to prevent excessive stresses arising particularly at the junction of one pipe with another.

For chase sizes see Information Sheet No. 687, No. 54 in this series.

**Issued by :** Lead Industries Development Council

**Address :** Rex House, 38 King William Street, London, E.C.4

**Telephone :** Mansion House 2855

# DIAGRAMMATIC INDICATION OF HOW AIR-BORNE SOUND TRAVELS IN A CONTINUOUS BUILDING STRUCTURE

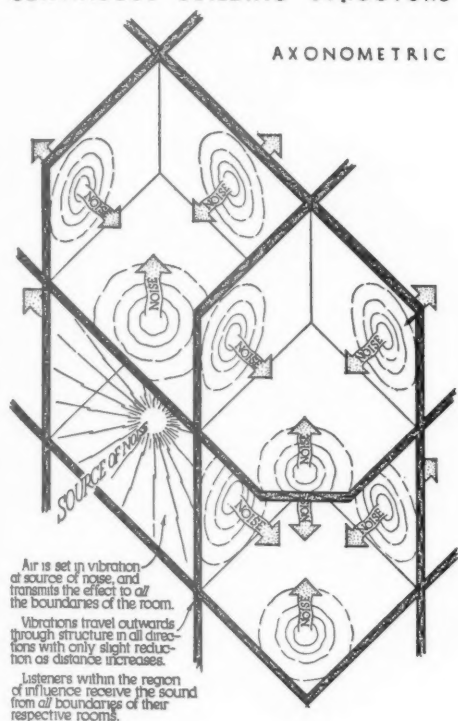
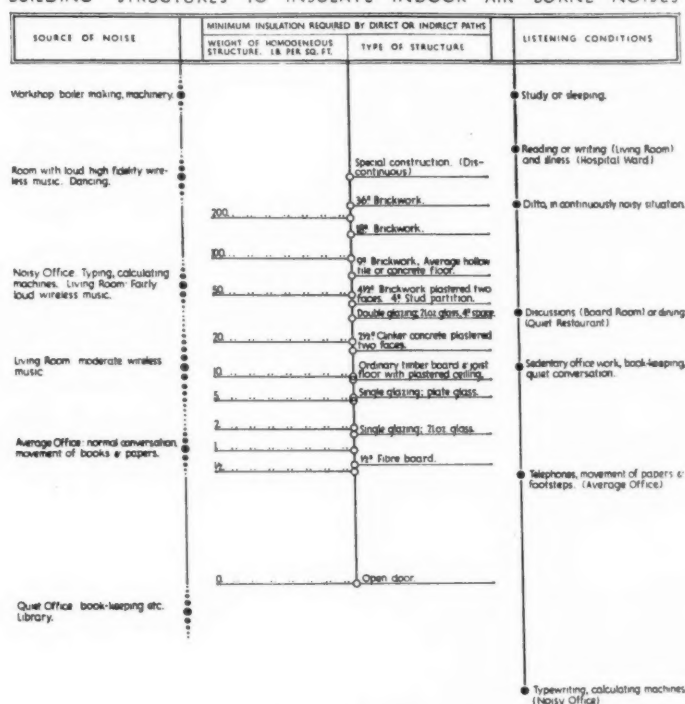


Diagram 1

# DIAGRAM TO DETERMINE APPROXIMATELY THE ADEQUACY OF BUILDING STRUCTURES TO INSULATE INDOOR AIR BORNE NOISES



## HOW TO USE DIAGRAM

1. Decide maximum amount of noise likely to be made in room which is considered as source of noise and find the appropriate point on the scale in the left hand column.
2. Decide minimum conditions likely to exist in listening room and find the appropriate point on the scale in the right hand column.
3. Join the points so determined in the two outside columns by a straight line. The intersection of this line with the centre scale shows approximately the adequacy of various structures which may be common to both rooms to give a satisfactory degree of quiet in the listening room. Any structure falling above this point of intersection should be adequate, any falling below it, inadequate.
4. A structure not listed in the centre column can be roughly placed by determining its weight per sq. ft. of superficial area or by consulting BUILDING RESEARCH Special Report NP 26.

NOTE: This diagram is based upon average sound reduction values for the average listener. If the noise source contains dominant low frequencies, transmission will be slightly greater than anticipated. Allowance should be made for this and for the listener's sensitivity to noise.

Diagram 2

(Continued from page 392)

fitting door—for that may allow the passage of a large amount of noise.

Air-borne sound may also be transmitted by the walls and floors themselves, for they will be set in vibration and pass on the vibration to the air on the other side. With a solid wall the amount so transmitted depends only on the weight of the wall per unit area, but it is to be noted that doubling the weight does not halve the transmission as might perhaps be thought at first sight; the relation between the amount of sound transmitted and the weight of the wall is not so simple—a fact which is important in considering practical treatments. For example, the difference between the amount transmitted by an 18-in. and a 9-in. wall is very small and can only just be detected by the ear.

It should be made clear that the statement that the amount of air-borne sound transmitted depends only on the weight applies only to solid walls, e.g. solid brick walls, breeze blocks, etc. Double constructions such as insulated cavity walls and stud partitions markedly surpass in sound insulation solid construction of equal weight.

A further point is that it is useless to attempt to insulate two rooms by merely having a heavy or highly efficient partition between them. The common flanking walls and floors are also set in vibration

and if any of these are of light construction they will provide a ready path for the sound from one room to the other. This is illustrated in Diagram 1 accompanying this note.

The major effect resulting from the weight relationship is the imposition, in effect, of a limit to the insulation of air-borne sound which can be economically achieved so long as the structure is rigid and continuous. The economic limit of efficiency is approximately that which obtains for 9-in. brickwork or its equivalent in weight. To surpass this by an amount which the ear can appreciate involves the use of impracticably heavy construction, since all indirect, as well as direct, paths must be treated.

Impact sounds differ from air-borne sounds not only in their origin, but in the fact that much more energy is imparted to the structure by the impact of a blow than by that of a sound wave in air. Owing to the very large amount of energy involved it is impracticable to obtain the necessary insulation in structures by increasing weight and rigidity. It can only be obtained by introducing structural discontinuity. Footsteps, for instance, are best insulated by floating floors, which are discontinuous constructions.

For practical purposes, the types of structure which will provide any specified degree of insulation can be determined

quite simply by the use of diagrams (nomograms) incorporated in the report above mentioned. These nomograms are intended to simplify the diagnosis and treatment of practical cases and designedly avoid, to that end, reference to the physicist's units of measurement, the *phon* and the *decibel*, which, though necessary for the scientific development of the subject, are apt to be confusing to those who have no occasion to be constantly using them.

Some important practical cases will now be considered for the purpose of indicating the practical methods of analysis and treatment which have been developed. The basis of the analysis will in both cases be the particular nomogram which is reproduced with this note.

## Example 1:

*It is proposed to place a room for conferences next to an existing office where typewriters, comptometers, and so on, are being used. What standard of construction is necessary to deal with the normal occupancy conditions?*

The normal extreme of noisiness in the typing office can probably be considered to be comparable with the area marked "Noisy Office" in the left-hand column of the nomogram. In the right-hand column is a point marked "Discussions (Board Room)," which no doubt will fit closely enough the degree of quiet required. A straight-edge placed between these



two areas indicates, on the centre scale, that a construction such as a stud partition, plastered both sides, would be adequate, or anything equivalent in weight to  $4\frac{1}{2}$ -in. brickwork for either the direct or indirect paths.

*Example 2 :*

*In a projected hotel building what is the construction required for adequate sound insulation between any two rooms ?*

The normal extreme occupancy conditions on the noisy side would be comparable with the region in the left-hand column marked "Average Office : Normal Conversation," while the quiet-requirements should approximate the conditions for "Study or Sleeping" in the right-hand column.

A straight-edge laid between these two points indicates that a standard equivalent to 9-in. brickwork is required.

In practice, this might be thought to be impractical for partitions, and therefore, consideration has been given to solutions providing equal insulation, but involving less weight than 9-in. brickwork. The suggestions that have been made, while quite simple, cannot be dealt with in the short space available here. It is thought that they will give satisfaction in practice.

Impact sounds, such as footsteps would also be important in a problem of this kind. Another nomogram is given in the report to deal with this aspect and various types of floor, both of timber and of concrete, which will reduce sound transmission, are indicated.

It will be observed that in both these cases insulation greater than that which is readily obtainable in rigid continuous structures is not required, and very simple

structural precautions may therefore be entirely sufficient to deal with such problems.

*Example 3 :*

*It is proposed to construct a block of flats, and it is desired to provide adequate sound insulation between any two flats.*

The extreme conditions in any flat would probably be comparable with "Noisy Office : Fairly loud wireless music," or even higher on the left-hand scale. The degree of quiet to be provided will correspond to the peak on the right-hand column.

A straight-edge laid between these two regions on the scales indicates, on the central column, that a standard of construction approximating 6-ft. or more thickness of brickwork is needed. This is, of course, an entirely impractical construction ; but it will be observed that there is a nearby point marked on the scale as "Special Construction : Discontinuous," and this has been set at approximately the level of insulation achieved in an experimental building on the grounds at the Building Research Station where discontinuous constructional methods have been tried.

Since the introduction of suitable discontinuities is apparently the only way to circumvent the limits of insulation inherent in continuous structures every effort has been made to find practical ways of effecting discontinuities. Some success has attended these efforts, and it is now possible to suggest practical treatments for almost all problems of sound insulation. It is, however, impossible to deal with this aspect of the problem in the first part of this note, and it will, therefore, be discussed in Part II, which will follow.

*Summary*

A summary of the major indications made thus far may be useful :—

1 : Of first importance is the fact that there is a limit to the insulation of air-borne sound which can be achieved in rigidly continuous structures. Roughly speaking, the limit is somewhere between what might be expected from  $4\frac{1}{2}$ -in. to 9-in. brickwork. Where impact noises are concerned, or where greater insulation of air-borne sound is required, the principle of "discontinuity" must be applied.

2 : For a large number of easy cases, sound insulation within the limit of continuous structure is sufficient. The essential condition to be borne in mind for these cases is that insulation of air-borne sound depends primarily on weight. (It follows from this, that porous, light-weight, highly absorbent materials, often useful for heat insulation, do not offer any special advantages in this method of sound insulation. The requirements for heat and sound insulation must not be confused. It is possible that a solution for the problem of sound insulation will prove beneficial in regard to heat insulation as well, but the converse is not necessarily true.)

3 : In general, the best approach to the problem of sound insulation in rigidly continuous structures is, first to determine the degree of insulation required, and the weight and type of structure which will satisfy the conditions, and, secondly, to plan with these requirements in mind. Finally, each path by which sound may travel should be checked to make sure that each is up to the required standard of resistance. In this way economy and efficiency will best be attained.

# POLICE STATION, ELTHAM

DESIGNED BY PINKNEY AND GOTT



THE MAIN FRONT TO WELL ROAD

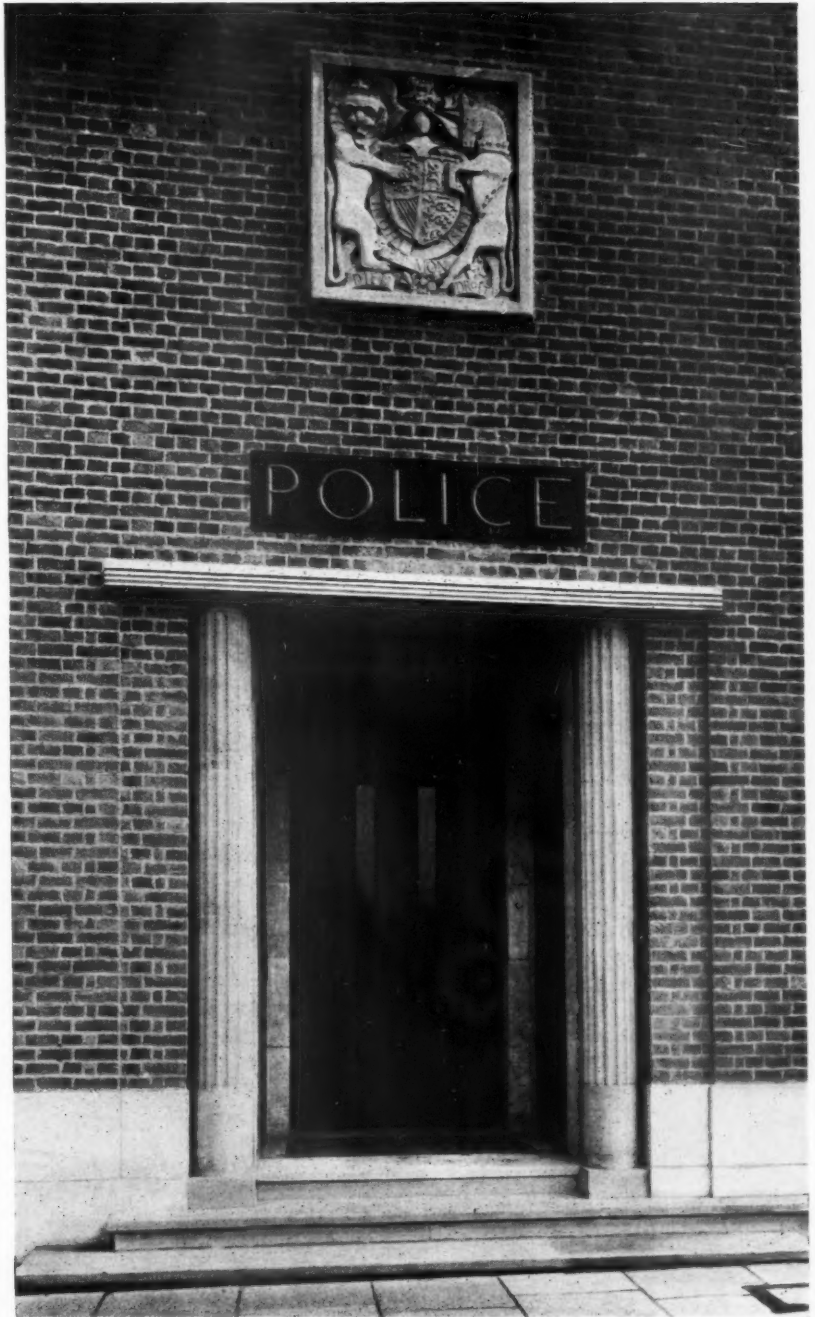
**GENERAL AND SITE**—The accommodation required on the ground floor much exceeded in area that required on the upper floors. This led to the provision of roof terraces for the recreation room and each set of married quarters. For easy access to garages separate drives in and out of the yard at rear were required.

Access to the married quarters was required without entering the station. This is provided by the staircase tower, which is approached from the public footpath which bounds the site on the north. At the base of the tower is a pram store.

**CONSTRUCTION AND EXTERNAL FINISHES**—Solid brick walls, with floors of hollow tile construction. Brick used as a facing material. Partitions are of hollow blocks. Carving (Royal coat of arms) over public entrance in Portland stone, was executed by Ralph Roberts.

**INTERNAL FINISHES**—Public entrance hall, dado in polished Taynton stone; floors, rubber. General office, flush panelling in Indian greywood; corridors, floors, rubber, in grey and blue squares; dado, grey marbled lino; metal skirtings and dado rails. Canteen kitchen, walls, tiled to ceiling; floors, buff quarry tiles.

Doors, generally, flush Indian greywood, waxed; fittings, Indian greywood. Door frames throughout, metal, painted.



LEFT: DRIVE-IN TO POLICE ENTRANCE; ABOVE: PUBLIC ENTRANCE



ELEVATION TO WELL HALL ROAD







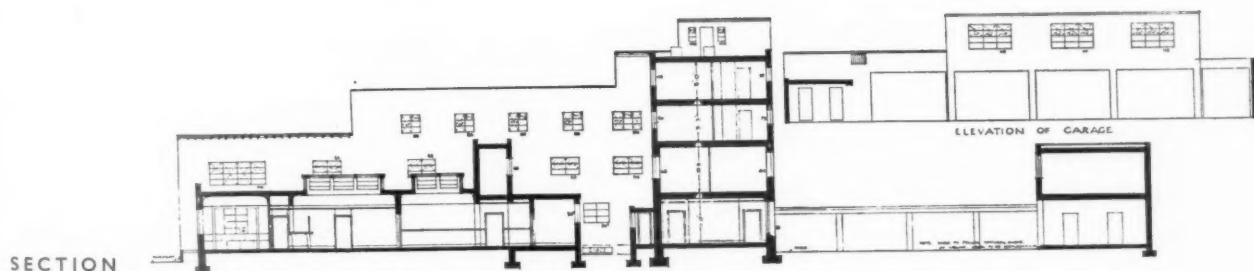
TOP, BILLIARDS ROOM; CENTRE, GENERAL OFFICE;  
BOTTOM, CANTEEN

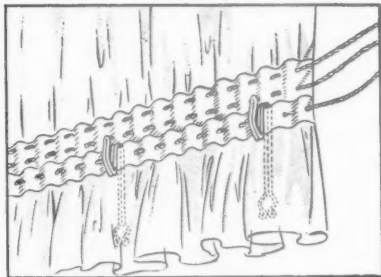


**SERVICES**—Heating, ceiling panels. Married quarters, no central heating; coal fires in two rooms in each flat, and electric heating points in each room. Kitchens, provision for gas or electric cooking.

**COST**—£27,000. Price per ft. cube, 1s. 10d.

The general contractors were W. H. Gaze and Son, Ltd., for list of sub-contractors and suppliers see page 403.





## TRADE NOTES

[By PHILIP SCHOLBERG]

### Emergency Lighting Equipment

SOME form of emergency lighting must obviously be provided in air-raid shelters, and I have already referred in these notes to various trickle charging units which are arranged to keep a set of accumulators up to the mark. In spite of the remarks made by interested parties, the ordinary torch with a dry battery is not at all bad. It is obviously quite unsuitable for any sort of continuous lighting, but dry batteries last comparatively well in storage. I have a torch which has been unused, except for an occasional flash for testing, since last September, and a portable wireless set in which the high tension battery has survived just over a year's actual use every week end. Torches and dry batteries, therefore, can be a considerable help if used intelligently, and should probably form part of the standard equipment of every shelter. For the larger jobs, built to accommodate a staff of any size, a proper lighting system should be provided, and for this the Ensuralite, made by Ediswans, seems a reasonable answer. This unit consists essentially of a charger and an accumulator in a metal case. The accumulator can be either six- or twelve-volt, and the size of it is proportioned to the output required. The unit is coupled to the mains supply, and the charger normally keeps the accumulator charged, and, in an air raid, supplies the emergency lighting, the accumulator taking over the whole load in the event of a failure in the mains supply. The system is exactly the same as the standby plant to which one is accustomed in cinemas, theatres, hospitals and other public buildings, but is merely scaled down to deal with the smaller total load of a single shelter. The normal equipment of each set includes two portable lamps on long flexes, and the unit is cased in a metal box which has a shutter over the whole of the front, so that the curious cannot fiddle about with the controls. The accumulators are supplied dry charged so that it is only necessary to pour the acid in and the set is immediately ready. The acid, incidentally, is supplied with the set.

It is perhaps worth adding that the charging unit is the normal Tungsar rectifier which many people already have in their houses for charging car accumulators in winter. These work perfectly well, as I

can testify from personal experience over a period of four or five years.—(Edison Swan Electric Co., Ltd., Ponders End, Middlesex.)

### Black Out

Even the shortest railway journey to any London suburb will show that there are still a number of people who are not taking the black out regulations very seriously, though the reason for this is perhaps that air raid wardens are assumed to be too tolerant to go round looking at the back windows. Adequate precautions, however, need not be particularly expensive, and Thomas French & Co., the manufacturers of Rufflette curtain fittings, have recently produced a small leaflet which shows how quite large areas may easily be obscured. Rufflette fittings, in case anyone does not know them by name, include the usual track and runners, and the pocketed tape which is sewn on to the back of the curtain to take the suspending hooks. Dealing with the smaller details first, I see that it is possible to obtain hooks with extra long upstands, so that any curtain with a deep hem at the top can be held up so that light will not leak out over the top of the rail. These hooks are known as the Giraffe type, and with them it is necessary to use a slightly different kind of tape. Most architects have a passion for pelmets, and with these the problem of light spill over

the top of the curtain probably does not arise, but for the more economical jobs these hooks seem a simple way out of the difficulty. They are shown adequately in the sketch on the left.

For screening glass roofs and skylights something more elaborate is necessary. Frames not more than 6 ft. square should be made up from  $\frac{3}{4}$ -in. board, with curtain rail fitted on the two upright sides of the frame. Cord control involves three double and one single pulley for each frame, and the blind can be arranged to open from the top or the bottom, though it would perhaps be better to make them open from the bottom, so that gravity would tend to keep them closed if the control cord should break. The material used for the blinds need not necessarily be black, but may be of any dense colour. If anyone is in doubt a list of suitable materials can be obtained from the Federation of British Industries. Fig. 1 shows a typical installation, and it may be noticed that plywood is used all round the edges of the frame to prevent any light escaping at the edges of the blind.

It should be pointed out that the manufacturers of these fittings do not carry out any installation work, nor do they supply curtains or blinds.—(Thomas French and Sons, Ltd., Chester Road Mills, Manchester, 15.)

### More Emergency Lighting

Handlamps based on the models used in mines are announced by the Concordia Company. These are good, tough models, substantially constructed and varying in weight from 7 to 2½ lb., and all of them have alkaline accumulators, while there is also an anti-explosive model which has been approved by the Home Office for use in explosive atmospheres. This last type should be useful in the event of burst gas mains, either in the street or the house. And talking of gas, it is as well to remember that, if you turn off your gas at the main in a raid, as you should, there will afterwards be by-passes and pilot lights to be re-lit, while someone is sure to forget the gas-operated refrigerator. Most instantaneous water heaters have a bi-metal strip which will cut off the main supply to the burners, but the pilot remains. Gas storage heaters are reliable enough to be forgotten, too, and if the alarm has lasted for any length of time the thermostat will have opened out the gas supply and there will be quite a smell quite quickly.

All of which has nothing to do with the Concordia lamp. As a test for the strength of these lamps, one of them was placed on the ground below one wall of a Bristol church which was being demolished. A section of wall weighing about four tons was pulled down on top of the lamp, and after twenty minutes digging the lamp was found still alight and unharmed except for one slightly bent guard support. Luck probably had a certain amount to do with it, for no form of lighting would be likely to survive a really wholehearted collapse, but it does give a reasonable indication that these lamps will stand a good deal of knocking about. Prices are reasonable, I suppose because these lamps are widely used in peace time, and nobody very much likes paying A.R.P. prices.

Incidentally, quite a number of people used to have paraffin-burning miners' lamps for putting under the bonnet and keeping cars warm in the winter. These

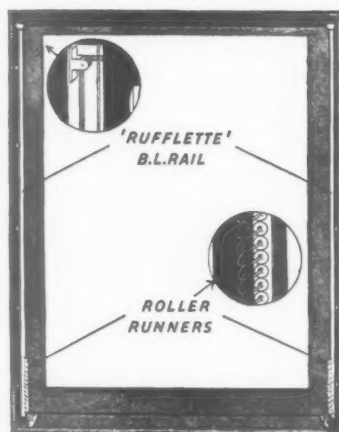


Figure 1

would be well worth digging out again and using in a small shelter, for they burn remarkably little fuel, one fill lasting at least twelve hours, while the light which they give is at least as good as you get nowadays in buses and trains.—(*The Concordia Electric Safety Lamp Co., Ltd., Sanatorium Road, Cardiff.*)

#### Boilers for Decontamination

Radiation, Ltd., announce a new boiler which has been evolved especially for the decontamination and washing of all kinds of clothing. The design conforms to the standards laid down by the A.R.P. authorities. Complete decontamination of all garments is provided for by a special grid fitted to the inside of the lid which ensures that the clothes are completely submerged during the boiling. All the fumes and steam

stances of the case, that an open window for the display of tobacconist's goods, was a window within the meaning of a covenant in a tenancy agreement.

The action was brought by Maynards, Ltd., who are confectioners and tobacconists at 539 Green Lanes, Harringay. They granted a lease for 21 years to the defendant, Mr. Charles Neale Adams, of 537 Green Lanes, for the purpose of a business of hairdresser only. Mr. Adams, however, desired to sell cigarettes, etc., and Maynards, Ltd., consented to this on condition that the window should be used only for the display of hairdressing requisites. The case for Maynards, Ltd., was, that in breach of this concession, Mr. Adams had constructed an open window and displayed smokers' requisites, and their contention was that this was a clear breach of agreement, and they now sought an injunction against Mr. Adams.

Mr. Adams denied that he had been guilty of any breach of agreement. On his behalf it was contended that the open shop front he had constructed was not a window. It was not used for the display of cigarettes and tobacco, but merely for the sale of cigarettes and tobacco, when asked for by customers.

Mr. Justice Simonds said to his mind it was clear that this shop front came within the ambit of a window. Shelves had been put up at the back and sides and front for the display of cigarettes and tobacco with the object of catching the eye of passers by. Under these circumstances, how could it be said that there was no breach of the agreement? He granted the plaintiffs an injunction, and directed an enquiry as to the amount of damages they had suffered.

Mr. Adams now appealed against this decision, and Mr. Cleveland-Stevens, K.C., on his behalf, contended that Mr. Justice Simonds had come to a wrong conclusion.

The Court, without calling upon Mr. A. Grant, K.C., to reply on behalf of Maynards, Ltd., dismissed the appeal with costs.

The Master of the Rolls said the Court came to the conclusion that there were no merits in the appeal, and that the judgment of Mr. Justice Simonds must be upheld.



RIGHT TO USE MOTOR CARS ON RIGHT OF WAY FOR HORSES AND CARRIAGES—THE LAW MOVES WITH THE TIMES.

*Lock v. Abercester, Ltd.—Chancery Division. Before Mr. Justice Bennett.*

IN this case his lordship held that where there existed a right of way over a private road for horses and carriages, the right so acquired was one which enabled the owner of the property, to which the right was granted, to use the way with mechanically-propelled vehicles. The law he said, must keep pace with the times, and to hold otherwise would result in a great many rights of way, which had been acquired by prescription, being no longer available for use, as the day of horse-driven carriages was becoming more and more rare.

The action was one in which Mrs. Mary Jane Lock, of the Old Rectory, Holt, Worcestershire, sought a declaration against Abercester, Ltd., the owners of Naunton Farm, which adjoined the Old Rectory, that she was entitled to a private right of way on foot and with horses and carriages across the farm to the main road which ran from Holt, Worcester.

Mrs. Lock submitted evidence that from 1882 till last year successive rectors of Holt and other persons having business at the Old Rectory, used the way in dispute to and from the Old Rectory.

Defendants admitted some user of the way, but disputed Mrs. Lock's claim, and disputed her right to use the way for motor cars.

His lordship found in favour of Mrs. Lock, and held that she had established her right to use the way as she claimed. She said she was entitled to a carriage way, and he held that she was not infringing her right if she drove a carriage propelled by some form of engine.

His lordship, after expressing his opinion that the law must move with the times, held that Mrs. Lock had established her case, and gave judgment for her with costs.

## DURESCO COMPETITION

Following is the result of the Duresco competition for designing a living-room, study or bedroom. Some three hundred entries were submitted to the judges on August 29. Mr. F. R. Yerbury and Mr. Duncan Miller were the assessors:—

1: No. 7348 (£6 6s.).—Miss C. Wood, 48 St. Albans Avenue, London, W.4.

2: No. 7344 (£4 4s.).—C. H. Hogley, 31 Savile Road, Chapeltown, Leeds, 7.

3: No. 7938 (£2 2s.).—B. C. Beard, 25 St. George's Road, Wallington, Surrey.

4: No. 7732 (£2 2s.).—D. I. Maddrell, 36 Catherine Street, Liverpool, 8.

5: No. 7710 (£2 2s.).—S. Brown, Aysgarth, Station Road, Mirfield, Yorks.

6: No. 7377 (£1 1s.).—C. Featherstone, 14 Henconner Avenue, Chapel Allerton, Leeds, 7.

7: No. 7309 (£1 1s.).—Miss B. E. Atkinson, South Lodge, Swanland, N. Ferriby, E. Yorks.

8: No. 7359 (£1 1s.).—G. Williams, 105 Wickham Chase, West Wickham, Kent.

The assessors considered that entries Nos. 3, 4 and 5 were of equal merit and similarly Nos. 6, 7 and 8. They have split the prizes accordingly.

## THE BUILDINGS ILLUSTRATED

**PRIVATE HOUSE, WESTMILL, HERTFORDSHIRE** (pages 390-392). Building was carried out under direct supervision of Elidir Davies. The sub-contractors included: Fison, Packard and Prentice, second Burwell whites; Leighton Buzzard Tile Co., tiles; Vigers, wood-block flooring; Pithers Radiant Stove, Ltd., central heating; Dunbrik, Ltd., concrete brick grates; Austins (East Ham), Ltd., wood casements; Ellis of Luton, water supply—own bore well.

**NEW POLICE STATION AT ELTHAM** (pages 398-401). General contractors were W. H. Gaze and Son, Ltd., who were responsible for the electric wiring, plumbing and joinery. The sub-contractors included: Ragusa Asphalt Co., Ltd., dampcourses and asphalt; Concrete, Ltd., reinforced concrete and structural steel; Empire Stone Co., Ltd., artificial stone and paving slabs to flat roofs; London Brick Co., Ltd., partitions; J. A. King & Co., Ltd., roof lights and cell windows; Hollis Bros. & Co., Ltd., wood-block flooring; Korkoid Decorative Floors, Ltd., rubber floors and stair-treads; Rosser and Russell, central heating and ventilation; Conway and Matthews, grates; South Metropolitan Gas Co., gas fixtures and fittings; Troughton and Young, Ltd., electric light fixtures; Dent and Hellyer, Ltd., sanitary fittings; James Gibbons, Ltd., door furniture, ironmongery, window furniture and casements; Henry Hope and Sons, Ltd., pressed steel door frames; Joseph Sankey and Sons, Ltd., pressed door skirtings and picture rails; Dennison Kett & Co., Ltd., rolling shutters; carved stone coat-of-arms over public entrance in Portland stone by M. Roberts; polished Taynton stone, Art Pavements, Ltd.; Arctock Block Co. and Leeds Fireclay Co., tiling; Synchronome Co., clocks; Falk, Stadelmann & Co., police signs.

## LAW REPORTS

AN OPEN SHOP FRONT IS A WINDOW

*Maynards, Ltd. v. Adams.—Court of Appeal. Before The Master of the Rolls and Lords Justices Clauson and Goddard.*

THIS was an appeal from a judgment of Mr. Justice Simonds, sitting in the Chancery Division, who held, in the circum-



# P R I C E S

On the following pages appear (a) Prices for Measured Work, Part II

## ★ IMPORTANT NOTE

The prices given below are for work executed complete and are for an average job in the London Area; all prices include overhead charges and profit for the General Contractor.

The prices given in italics are for "Materials Only" and represent the cost of the materials included in the measured rates. They are based on the prices given in "Current Market Prices of Materials" with the addition of 10 per cent. for overhead charges and profit, though owing to present conditions many of these prices may no longer hold good.

The cost of labour (including its proportion of overhead charges and profit) can be ascertained by subtracting the prices in italics from the prices in heavier type.

The complete series of prices consists of four sections, one section being published each week in the following order:—

1. Current Market Prices of Materials, Part I.
2. Current Market Prices of Materials, Part II.
3. Current Prices for Measured Work, Part I.
4. A.—Current Prices for Measured Work, Part II.  
B.—Prices for Approximate Estimates.

## PART 4

### CURRENT PRICES FOR MEASURED WORK—II

BY DAVIS AND BELFIELD

#### JOINER

##### Deal Flooring

		1"	1½"
Plain edge flooring in batten widths	per square	●39/2 29/2	47/5 36/5
Ditto tongued and grooved ditto ..	per square	●42/10 31/9	51/6 39/6
T. & G. B.C. Pine rift flooring in narrow widths .. .. .	per square	●58/10 45/6	—

Wood Block Flooring, laid herringbone, 100 yards and up

D.G. and T.G. kiln dried, 2 block border, laid in hot mastic composition on cement screed, including 2 feet run of straight cutting per yard super, and wax polishing at time of laying.

		1" nominal	1½" nominal
Burma teak .. .. .	per yard super	12/7	16/10
Canadian maple .. .. .	per yard super	10/8	12/4
25-30 per cent. quart Austrian Oak .. .. .	per yard super	11/10	15/-
Plain American Oak (no selection made for sap) ..	per yard super	11/-	—
Gurjun .. .. .	per yard super	11/3	14/-

#### JOINER—(continued)

		1" nominal	1½" nominal
Pitch Pine (50% rift sawn) ..	per yard super	11/7	13/8
Ditto (100% ditto) ..	per yard super	13/8	16/-
British Columbian Pine ..	per yard super	8/8	8/11
Deal, 100 per cent. rift sawn ..	per yard super	12/1	12/3
Jarrah .. .. .	per yard super	11/3	—
Additional straight cutting	5½d. per foot run		

Secret Nailed Tongued and Grooved Strip Flooring, fully Desiccated, including Polishing

		1" nominal	1½" nominal
		£ s. d.	£ s. d.
Austrian Wainscot Oak ..	per square	8 18 6	10 12 7
Plain Japanese Oak ..	per square	7 10 8	9 2 2
Plain American Oak ..	per square	7 7 0	9 3 9
Pitch Pine .. .. .	per square	7 0 6	8 15 7
British Columbian Pine ..	per square	4 14 6	5 7 7
Canadian Maple .. .. .	per square	6 19 1	8 10 7
Burma Teak .. .. .	per square	8 18 6	10 17 4
English Oak .. .. .	per square	10 4 9	12 15 11
Gurjun .. .. .	per square	6 19 1	8 10 7
Jarrah .. .. .	per square	6 13 10	8 6 5

• Items marked thus have risen since August 24.



# CURRENT PRICES

## JOINER

BY DAVIS AND BELFIELD

*Wall Linings*

• $\frac{1}{2}$ " Deal tongued and grooved V-jointed Matching in narrow widths .. .. . per square	32/7	21/6
$\frac{1}{4}$ " (6 mm.) Birch (B) Plywood and fixing to walls .. .. . per square	35/7	25/8
$\frac{3}{16}$ " Asbestos cement sheets butt jointed .. .. . per foot super	-/4	-/2 $\frac{1}{2}$
$\frac{1}{2}$ " Fibre board and fixing to walls .. .. . per yard super	2/11	2/4
Deal battens as grounds plugged to brickwork .. .. . per foot super	-/1 $\frac{1}{2}$	-/0 $\frac{1}{2}$
2" x $\frac{3}{4}$ " wrot and chamfered fillets .. .. . per foot run	-/1 $\frac{1}{2}$	-/0 $\frac{1}{2}$
2" x $\frac{1}{2}$ " wrot and moulded ditto .. .. . per foot run	-/1 $\frac{1}{2}$	-/0 $\frac{1}{2}$

*Skirtings*

	Deal	Austrian Oak
1" stock chamfered or moulded 4" high, fixed to and including grounds and backings planted on .. .. . per foot run	-/3 $\frac{1}{2}$	-/10 $\frac{1}{2}$
Add for plugging to brickwork .. .. . per foot run	-/2	-/7 $\frac{1}{2}$
Fitted ends on hardwood price as 4" of skirtings, mitres as 6".	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Fitted ends, etc., on deal skirting included in price per foot run.		

*Casements and Fanlights*

	1 $\frac{1}{2}$ "	2"
Deal stock moulded sashes divided into squares with glazing bars .. .. . per foot super	1/4 $\frac{1}{2}$	1/5 $\frac{1}{2}$
Add for hanging casements (butts measured separately) .. .. . each	1/9	2/-

*Cased Frames and Sashes*

Deal cased sashed frame, including 2" double hung stock sashes, with 6" x 3" Oak cill and brass axle pulleys, sash line and weights, average 15 feet super .. .. . per foot super	3/9	1/7
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*Doors in Deal*

	$\frac{3}{4}$ "	1"	2"
Matchboarded, ledged and braced door .. .. . per foot super	1/-	1/2	
	-/4 $\frac{1}{2}$	-/5 $\frac{1}{2}$	
	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	2"
Framed, ledged and braced door, filled in with matchboarding .. .. . per foot super	1/7 $\frac{1}{2}$	1/10	2/1
	-/6	-/6 $\frac{1}{2}$	-/8 $\frac{1}{2}$
Ditto garage doors in pairs .. .. . per foot super			1/10
			-/5 $\frac{1}{2}$
Labour rebated and beaded meeting styles, per foot run			-/1
			4-panel
1 $\frac{1}{2}$ " square framed, both sides .. .. . per foot super	1/8	-/7 $\frac{1}{2}$	
2" ditto .. .. . per foot super	2/-	-/9 $\frac{1}{2}$	
1 $\frac{1}{2}$ " bead butt panels one side, but square the other .. .. . per foot super	1/9	-/7 $\frac{1}{2}$	
2" ditto .. .. . per foot super	2/2	-/10 $\frac{1}{2}$	
1 $\frac{1}{2}$ " moulded both sides .. .. . per foot super	2/-	-/9 $\frac{1}{2}$	
2" ditto .. .. . per foot super	2/4	-/11 $\frac{1}{2}$	
For fixing only, stock or p.c. doors, allow .. .. . per foot super		-/2 $\frac{1}{2}$	

*Doors in Hardwood*

Austrian quartered oak:	
Labour, 2 x as much as deal.	
Materials, 3 $\frac{1}{2}$ x ditto.	
Labour and materials, 2 $\frac{1}{2}$ x ditto.	
Cuban mahogany:	
Labour, 3 x as much as deal.	
Materials, 4 $\frac{1}{2}$ x ditto	
Labour and materials, 3 $\frac{1}{2}$ x ditto	
Teak:	
Labour, 3 x as much as deal	
Material, 3 $\frac{1}{2}$ x ditto	
Labour and material, 3 $\frac{1}{2}$ x ditto	

Deal stock glazing beads, mitred and bradded .. .. . per foot run	-/1 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Ditto and fixed with brass cups and screws .. .. . per foot run	-/3	-/1

*Window and Door Linings*

	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "
Deal linings, 6" wide, tongued at angles and planted on including backings .. .. . per foot run	-/6 $\frac{1}{2}$	-/7 $\frac{1}{2}$	-/8 $\frac{1}{2}$
	-/2 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/4
Add for plugging to wall .. .. . per foot run	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Add for rebating .. .. . per foot run	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Add for $\frac{3}{4}$ " x 1 $\frac{1}{2}$ " stock Deal stop planted on .. .. . per foot run	-/1 $\frac{1}{2}$	-/1 $\frac{1}{2}$	-/1 $\frac{1}{2}$
	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Deal window board 9" wide, with rounded nosing, tongued at back and on and including bearers plugged to brickwork .. .. . per foot run	-/9 $\frac{1}{2}$	-/10 $\frac{1}{2}$	1/0 $\frac{1}{2}$
	-/4 $\frac{1}{2}$	-/5 $\frac{1}{2}$	-/6 $\frac{1}{2}$
1" Deal scotia mould .. .. . per foot run		-/1 $\frac{1}{2}$	-/0 $\frac{1}{2}$

## JOINER—(continued)

	1"	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "
Austrian quartered oak linings 6" wide tongued at angles and planted on including backings .. .. . per foot run	1/2 $\frac{1}{2}$	1/5 $\frac{1}{2}$	1/8 $\frac{1}{2}$
	-/8 $\frac{1}{2}$	-/10 $\frac{1}{2}$	1/0 $\frac{1}{2}$
Add for plugging to brickwork .. .. . per foot run	-/1	-/1	-/1
Add for rebating .. .. . per foot run	-/1	-/1	-/1
Add for $\frac{3}{4}$ " x 2" Austrian quartered oak stop planted on .. .. . per foot run	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$	-/3 $\frac{1}{2}$
	-/1 $\frac{1}{2}$	-/1 $\frac{1}{2}$	-/1 $\frac{1}{2}$

Austrian quartered oak window board 9" wide, with rounded nosing tongued at back and on and including bearers plugged to brickwork .. .. . per foot run	1/9	1/11 $\frac{1}{2}$
	1/0 $\frac{1}{2}$	1/3 $\frac{1}{2}$

1" Austrian quartered oak scotia mould .. .. . per foot run	-/3 $\frac{1}{2}$	-/1 $\frac{1}{2}$
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*Window and Door Frames*

	Deal	Austrian Quartered Oak
4" x 3" door frames .. .. . per foot run	-/9 $\frac{1}{2}$	2/2
	-/4 $\frac{1}{2}$	1/4 $\frac{1}{2}$
4" x 3" window frames .. .. . per foot run	-/11 $\frac{1}{2}$	2/6
	-/4 $\frac{1}{2}$	1/4 $\frac{1}{2}$
4" x 3" transoms and mullions .. .. . per foot run	1/3 $\frac{1}{2}$	3/2
	-/4 $\frac{1}{2}$	1/4 $\frac{1}{2}$

6" x 3" door cill, sunk weathered twice throated and grooved for water bar (measured separately) .. .. . per foot run	—	3/5 $\frac{1}{2}$
		2/0 $\frac{1}{2}$
6" x 3" window ditto .. .. . per foot run	—	2/9 $\frac{1}{2}$
		2/0 $\frac{1}{2}$

Add or deduct for variation in sectional area per square inch .. .. . per foot run	-/0 $\frac{1}{2}$	-/1 $\frac{1}{2}$
Add for each labour, for chamfer, bead or rebate, etc. .. .. . per foot run	-/0 $\frac{1}{2}$	-/1
Add for each moulding .. .. . per foot run	-/0 $\frac{1}{2}$	-/1 $\frac{1}{2}$

*Architraves*

	Deal	Japanese Oak
1" x 3" stock chamfered or moulded architraves, including mitres on softwood, planted on .. .. . per foot run	-/3	-/7 $\frac{1}{2}$
	-/1 $\frac{1}{2}$	-/4 $\frac{1}{2}$
Mitred angles on oak price as 6" of architrave.		
Add for plugging to brickwork .. .. . per foot run	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$
Add for narrow splayed grounds .. .. . per foot run	-/1 $\frac{1}{2}$	-/1 $\frac{1}{2}$
	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$

*Shelving*

	Deal	Austrian Quartered Oak
Slat shelving of 1" x 2" spaced $\frac{1}{4}$ " apart .. .. . per foot super	-/9	—
	-/3 $\frac{1}{2}$	
1" shelving .. .. . per foot super	-/10	2/2 $\frac{1}{2}$
	-/5	1/4 $\frac{1}{2}$
1 $\frac{1}{4}$ " ditto .. .. . per foot super	1/0 $\frac{1}{2}$	2/8 $\frac{1}{2}$
	-/6 $\frac{1}{2}$	1/8 $\frac{1}{2}$
1" cross-tongued shelving .. .. . per foot super	1/-	2/6 $\frac{1}{2}$
	-/5 $\frac{1}{2}$	1/5 $\frac{1}{2}$
1 $\frac{1}{4}$ " ditto .. .. . per foot super	1/2 $\frac{1}{2}$	3/0 $\frac{1}{2}$
	-/6 $\frac{1}{2}$	1/9 $\frac{1}{2}$

1" x 2" chamfered bearers planted on .. .. . per foot run	-/2 $\frac{1}{2}$	-/5 $\frac{1}{2}$
	-/0 $\frac{1}{2}$	-/2 $\frac{1}{2}$
Add if bearers plugged to brickwork .. .. . per foot run	-/0 $\frac{1}{2}$	-/0 $\frac{1}{2}$

*Teak Draining Boards and Twice Oiling*

1 $\frac{1}{2}$ " Moulmein cross-tongued fluted draining board fixed to slight falls .. .. . per foot super	3/9	1/11 $\frac{1}{2}$
$\frac{1}{2}$ " x 2" rounded rim bedded in white lead and screwed to edge of draining board .. .. . per foot run	-/6 $\frac{1}{2}$	-/2 $\frac{1}{2}$
$\frac{3}{4}$ " x 4" rounded skirting fillet ditto .. .. . per foot run	-/8 $\frac{1}{2}$	-/3 $\frac{1}{2}$

*Staircases*

	Deal	Austrian quartered Oak
1 $\frac{1}{2}$ " treads and 1" risers .. .. . per foot super	2/-	4/6
	-/9	2/-
2" strings, fixed .. .. . per foot run	1/9 $\frac{1}{2}$	4/6 $\frac{1}{2}$
	-/7 $\frac{1}{2}$	2/8 $\frac{1}{2}$
Housing treads and risers to strings .. .. . each	-/9	1/6
3" x 2 $\frac{1}{2}$ " Moulded handrail .. .. . per foot run	—	1/6 $\frac{1}{2}$
		-/10 $\frac{1}{2}$
1 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " square balusters 2' 6" long .. .. . each	-/10	1/9
	-/2	-/5 $\frac{1}{2}$
4" x 4" Newels with chamfered edges and fixing .. .. . per foot run	1/4 $\frac{1}{2}$	3/2
	-/8 $\frac{1}{2}$	1/11

• Items marked thus have risen since August 24.

# CURRENT PRICES

## Ironmonger, Steel and Ironworker, Plasterer and External Plumber

### IRONMONGER

<i>Fixing only</i>					
4" Butt hinges to softwood	..	..	..	per pair	1/-
4" ditto to hardwood	..	..	..	per pair	1/4
16" T. hinges to softwood	..	..	..	per pair	1/6
48" Collinges patent gate hinges to softwood	..	..	..	per pair	7/6
				Softwood	Hardwood
6" Cabin hooks	..	..	..	each	-7½
Hat and coat hooks	..	..	..	each	-3
Cupboard knobs	..	..	..	each	-3
Night latches	..	..	..	each	1/6
Thumb latches	..	..	..	each	1/6
Letter plate and knocker, including perforation in door	..	..	..	each	2/6
Barrel or tower bolts	..	..	..	each	-10
Flush bolts	..	..	..	each	1/6
Rim locks and furniture	..	..	..	each	2/-
Mortice ditto	..	..	..	each	3/-
Rebated ditto	..	..	..	each	3/6
Grip handles	..	..	..	each	-6
Cupboard locks	..	..	..	each	1/-
Spring catches	..	..	..	each	-10½
Casement fastener	..	..	..	each	1/-
Ditto stays	..	..	..	each	-10
Sash fastener	..	..	..	each	-8

### STEEL AND IRONWORKER

(For Rainwater Goods—see "Plumber.")

<i>Steelwork</i>				£	s.	d.
Basis for plain rolled steel joists	..	..	per ton	16	17	0
				14	2	0
<i>Fabricated Steelwork</i>				£	s.	d.
Joists cut and fitted	..	..	per ton	20	0	6
Stanchions, ordinary sections with riveted caps and bases	..	..	per ton	23	10	6
Stanchions, compound	..	..	per ton	25	11	6
Plate girders	..	..	per ton	27	19	6
Framed roof trusses, 25' 0" span	..	..	per ton	30	4	6
Ditto ditto 60' 0" span	..	..	per ton	28	5	0

#### *Wrot Iron Work*

Simple balusters and handrail fixed (excluding mortices, etc.)	..	..	per cwt.	56/-		
Bolts and nuts fitted	..	..	per cwt.	45/-	38/6	

#### *Galvanized Corrugated Sheetting*

	20 B.G.	22 B.G.
Sheetting in 3" corrugations and fixing on wood framing with screws and galvanized embossed curved washers including laps	per square	per square
	52/3	46/1
	42/3	36/8
Ditto fixed to steel framing	per square	per square
	60/1	54/7
	47/7	42/1

### PLASTERER

#### *Lime and Sirapite Plastering*

	Per yard super	In narrow widths per foot super
Expanded metal lathing	1/8	-3
1" x 1/8" sawn laths	1/1½	-1½
Render and set in lime and hair	-9½	-3½
Render, float and set in lime and hair	-6½	-3½
Plaster, float and set ditto on lathing (measured separately)	2/1½	-4
Render and set with Sirapite	-9½	-3½
Plaster, float and set ditto on lathing (measured separately)	2/3	-4
Skimming coat Sirapite	-10½	
1" thick plaster board fixed including covering joints with scrim cloth	1/5½	
	-4½	
	2/-	
	1/2½	

### PLASTERER—(continued)

<i>Keenes</i>				Per yard super	In narrow widths per foot super
Cement plain face on and including a backing of Portland cement and sand	..	..	..	2/6	-5
				-8½	-
<i>Mouldings and Labours</i>				Lime and Sirapite	Keenes
Plain cornices and mouldings 6" girth	per foot run	-9½	-11		
		-1½	-12		
Labour arris, quirk or throat	per foot run	-1½	-1½		
Ditto rounded angle	per foot run	-2	-2		
Ditto staff bead	per foot run	-	-7½		
Mitres price as 12" of moulding, stopped ends as 6", and rounded angles as 18".					

#### *Portland Cement and Sand (1 : 3)*

	per yard super	1/2"	3/4"
Screeds to floors for wood or tiles	1/2½	1/4	
	-4½	-6½	
Screeds for tiling, etc., on walls	1/4	1/6	
	-4½	-6½	
Renderings to walls—one coat float finish	per yard super	1/6	1/8
		-4½	-6½
Plainface	per yard super	2/-	-6½

#### *Coloured Cement Plainface*

Cullamix No. 2 or 3 cream, on and including water repellent cement and sand backing	per yard super	3/10
		1/9
Snowcrete mixture on and including ditto	per yard super	3/10
		1/8½
Snowcrete and white silica sand on and including ditto	per yard super	3/4½
		1/3½

For keyed bricks or hacking face of concrete, to form key for plastering, see "Bricklayer."

#### *Wall Tiles, Commercial Quality*

6" x 6" x 3/8" ivory or white	per yard super	16/-
		11/3
Extra for rounded edge tiles	per yard run	1/1½
		1/0½
6" x 6" x 3/8" coloured enamel bright glazed	per yard super	21/3
		16/6
Extra for rounded edge tiles	per yard run	-4
		-3
6" x 6" x 3/8" eggshell gloss enamelled	per yard super	22/1
		17/4
Extra for rounded edge tiles	per yard run	-4
		-3

### EXTERNAL PLUMBER

<i>Lead</i>				Gutters, Flashings, etc.	Stepped Flashings	Soakers cut to size
● Milled sheet lead and labour	per cwt.	40/8	41/9	42/11	35/6	
		27/2	27/2	27/2	27/2	
Bedding edges in white lead	per foot run	-2				
Lead wedgings to flashings	per foot run	-1½				
Ditto to stepped flashings	per foot run	-2				
Dressing 6-lb. lead over glass and glazing bars	per foot run	-3½				
Copper nailing	per foot run	-1½				
Close ditto	per foot run	-2				
Bossed ends to rolls	each	-7½				
Extra labour dressing through shoots and into rainwater heads	each	3/-				
Ditto to cesspools, including extra solder	each	5/3				

● Items marked thus have risen since August 24.

## CURRENT PRICES

BY DAVIS AND BELFIELD

## EXTERNAL AND INTERNAL PLUMBER

## EXTERNAL PLUMBER—(continued)

## Cast Iron Rainwater Goods

Rainwater Pipes fixed to brickwork.

	3"	4"
Round pipes .. .. . per foot run	1/6 1/2	3/4
Extra for bends .. .. . each	2/4	2/11
Ditto 6" offset .. .. . each	2/4	2/11
Ditto single branches .. .. . each	2/10	3/8
Ditto shoes .. .. . each	2/4	3/-
Square and rectangular pipes .. .. . per foot run	3 1/2 x 3 1/2	4 x 4
Extra for elbows (fitted) .. .. . each	6/6	5/11
Ditto single branches .. .. . each	6/7	6/3
Ditto shoes .. .. . each	7/2	6/6

Gutters fixed to fascia.

	4"	5"	6"
Half-round gutters .. .. . per foot run	1/1	1/2 1/2	1/7 1/2
Extra for angles .. .. . each	1/9	2/-	2/6
Ditto nozzles .. .. . each	1/7	1/10 1/2	2/3
Ditto stop ends .. .. . each	1/0 1/2	1/3	1/4 1/2
Ogee gutters .. .. . per foot run	1/2	1/4	1/8 1/2
Extra for angles .. .. . each	1/9	2/1 1/2	2/3
Ditto nozzles .. .. . each	1/8 1/2	2/2 1/2	2/5
Ditto stop ends .. .. . each	1/1 1/2	1/4 1/2	1/7 1/2

## INTERNAL PLUMBER

## Lead Pipes

	1/2"	3/4"	1"	1 1/4"
● Pipes laid in trenches .. .. . per foot run	-11	1/3	1/9 1/2	2/5 1/2
Add if fixed on walls .. .. . per foot run	-1 1/2	-10 1/2	1/3 1/2	1/8 1/2
Ditto if in short lengths .. .. . per foot run	-1	-2	-2 1/2	-3 1/2
● Pipes laid in trenches .. .. . per foot run	1 1/2	2"	2 1/2	3"
Add if fixed on walls .. .. . per foot run	2/2	3/0 1/2	—	—
Ditto if in short lengths .. .. . per foot run	-3	-4	—	—

Distributing.

	1/2"	3/4"	1"	1 1/4"
● Cold water pipes fixed to walls .. .. . per foot run	-11	1/3	1/8 1/2	2/3 1/2
Add if in short lengths .. .. . per foot run	-1	-1	-1 1/2	-2
● Cold water pipes fixed to walls .. .. . per foot run	2/10 1/2	3/8 1/2	—	—
Add if in short lengths .. .. . per foot run	-3	-4	—	—

Waste and Warming.

	1/2"	3/4"	1"	1 1/4"
● Waste and overflow pipes fixed to walls .. .. . per foot run	-9	-11 1/2	1/2 1/2	1/5 1/2
● Waste and overflow pipes fixed in short lengths .. .. . per foot run	1/10 1/2	2/6 1/2	—	—

## Soil and Ventilating

	3 1/2"	4"	4 1/2"
● Pipes fixed, including lead tacks per foot run	4/4 1/2	5/5 1/2	6/6 1/2
Bends .. .. . each	1/8	2/-	2/9
Soldered joints to fittings .. .. . each	1/9	2/-	2/3 1/2
Soldered branch joints (price as largest branch) .. .. . each	1/11	2/2	2/5 1/2
Soldered branch joints (price as largest branch) .. .. . each	3/7	4/-	4/7
Wrap small pipes with hair felt .. .. . per foot run	-6	-3 1/2	—

## INTERNAL PLUMBER—(continued)

## Drawn Lead Traps

	1 1/4"	1 1/2"	1 3/4"	2"	2 1/2"	3"
● P. Traps 6 lb. with cleaning eye and two soldered joints .. .. . each	7/5	7/11 1/2	8/7	9/2	10/8	11/3
● S. ditto .. .. . each	7/9	8/4	9/1	9/7	11/5	12/-

## Brasswork (Best Quality)

	1/2"	3/4"	1"
Brass screwdown stop cocks including two soldered joints .. .. . each	7/5 1/2	9/10	13/7
Ditto, including two red lead joints for iron .. .. . each	5/6	6/6 1/2	9/6
Ditto, including one soldered and red lead joint .. .. . each	6/4	7/5 1/2	11/10
High pressure Portsmouth pattern ball valve with flynut and union and one soldered joint .. .. . each	8/3	11/-	18/10
Ditto, including red lead joint for iron .. .. . each	6/9	8/4	15/11
Brass thimble and soldered and cement joints .. .. . each	5/1	9/-	13/4
Ditto, with solder and caulked lead joints .. .. . each	5/8	10/1	10/6

## Fixing Only (Connections to Pipes measured separately)

24" x 18" x 6" sinks including taps, etc., and pair of brackets cut and pinned to brickwork .. .. . each	6/-
24" x 18" lavatory basins ditto .. .. . each	6/6
W.C. suite comprising pan and trap, seat, W.W.P. and brackets .. .. . each	10/6
Baths, including taps, etc., and setting in position .. .. . each	10/6

## Screwed and Socketed Galvanized Steam Quality Steel Tubes and Fittings

Pipes up to and including 1 1/2" include short running lengths, sockets, connectors, elbows, bends, fire bends; Tees and Diminishing Pieces enumerated.

Distributing.

	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Pipes fixed to walls .. .. . per foot run	-10 1/2	-11 1/2	1/3 1/2	1/10 1/2	2/4 1/2	3/-
Ditto in short lengths, fittings, etc., measured separately .. .. . per foot run	-4 1/2	-5	1/4	1/10 1/2	2/5 1/2	3/1 1/2
Extra for .. .. .						
Firebends .. .. . each	-4	-6	-9	1/3	1/6	2/-
Bends .. .. . each	1/2	1/5	1/9	2/6	3/1	4/9
Round elbows .. .. . each	1/4 1/2	1/7	1/9 1/2	2/3 1/2	2/9 1/2	4/5
Square ditto .. .. . each	1/3 1/2	1/5 1/2	1/8	2/2	2/7 1/2	4/1 1/2
Tees .. .. . each	1/6	1/9 1/2	2/-	2/6	3/0 1/2	4/9
Crosses .. .. . each	2/9	3/2	3/10	5/-	6/-	9/1
Diminishing pieces .. .. . each	-10	-11	1/2	1/6	1/11	2/8
Caps .. .. . each	-7	-8 1/2	-10	1/1 1/2	1/5	2/1
Plugs .. .. . each	-6	-7	-8 1/2	-10	1/1	1/6 1/2

## Cast Iron Waste, Soil and Vent Pipes

	2"	3"	4"	5"	6"
L.C.C. pipes in 6' 0" lengths fixed to brickwork .. .. . per foot run	1/9	2/0 1/2	2/6 1/2	4/5	5/4
Extra for bends .. .. . each	3/11	4/10	6/7	9/4	12/8
Ditto single branches .. .. . each	5/9	6/7	7/9	8/7	10/7
Ditto swannecks 6" projection .. .. . each	4/5	6/5	8/5	12/5	16/11
Extra for access door or any fitting .. .. . each	6/9	6/9	7/3	8/6	8/6

● Items marked thus have risen since August 24.

# CURRENT PRICES

## INTERNAL PLUMBER,

BY DAVIS AND BELFIELD

## GLAZIER AND PAINTER

### INTERNAL PLUMBER—(continued)

Zincworker				
	13 G.	14 G.	15 G.	16 G.
● Rolled sheet zinc on flats per foot super	-8½	-9	-10	-10½
● Ditto in gutters, cover flashings, etc.				
per foot super	-9	-9½	-10½	-11
● Ditto in stepped flashings per foot super	-11	-11½	10½	11½
Labour and risk dressing over glass				
per foot run	-4½	-4½	-4½	-4½
Capped ends to rolls .. each	-2½	-2½	-2½	-2½
Ext'l labour to cesspools .. each	2 7½	2 7½	3 2	3 2

Copperworker				
	½"	¾"	1"	1½"
Solid drawn copper tube fixed to walls per foot run	-9	-11	1 4½	1 9½
Add if in short lengths per foot run	-0½	-0½	-1	-1½

Fittings for copper tubes				
	½"	¾"	1"	1½"
Compression type				
Straight couplings each	1 9½	2 4	2 11½	3 8
Obtuse elbows .. each	2 8	3 1	4 4	5 4
Tees .. each	3 1	3 5½	5 1	7 2
Crosses .. each	4 1	4 6½	6 4½	7 10
Reducing couplings each	—	2 2	2 11½	3 8
Bends .. each	2 4½	2 10	3 11½	4 11
Brass stopcocks .. each	5 2½	7 4½	10 4	18 1

Capillary type				
	½"	¾"	1"	1½"
Straight couplings each	1 7	2 1	2 9½	3 5
45° Elbows .. each	2 6½	3 2½	4 2	5 3½
Tees .. each	2 9½	3 2	4 7½	6 4
Crosses .. each	3 4	3 9	5 6½	7 7
Reducing couplings each	—	1 7½	2 0½	2 7½
Bends .. each	2 10½	3 5	4 7½	6 1
Pillar tap connections each	2 0½	2 9½	3 4½	4 7

24 G. 23 G.				
	1/8"	1/8"	1/8"	1/8"
● Rolled sheet copper on flats .. per foot super	1 6	1 8	1 8	1 8
● Ditto in gutters, cover flashings, etc. per foot super	1 7	1 9	1 9	1 9
Ditto in stepped flashings .. per foot super	2 1½	2 4½	2 4½	2 4½
Labour and risk dressing over glass .. per foot super	-4½	-4½	-4½	-4½
Capped ends to rolls .. each	-3½	-3½	-3½	-3½
Extra labour to cesspools .. each	3 8	3 8	3 8	3 8

### GLAZIER

#### Sheet Glass (Ordinary Glazing Quality)

18 oz. clear sheet and glazing to wood, sprigged and with back and front putties, to all normal sizes not exceeding 60" in length or 40" wide .. per foot super	-6½
24 oz. ditto .. per foot super	-7½
32 oz. ditto .. per foot super	-11½
Obscured ground sheet glass, net extra to above prices per foot super	-1½
½" figured rolled white glass and glazing to wood with beads (measured separately) .. per foot super	-10½
Ditto, normal tints, ditto .. per foot super	1 2½
Hammered double rolled cathedral white ditto per foot super	-10
Ditto, normal tints, ditto .. per foot super	1 1½
Add for glazing into metal frames (ordinary rebates) per foot super	-1½
Ditto, metal sashes with ferroput .. per foot super	-2½
Ditto, solid metal casements and screw beads per foot super	-2½
Wash leather strip or similar material and bedding edge of glass .. per foot run	-3½

Glazing only, thick drawn sheet glass, polished plate or wire polished plate for all normal sizes. (For prices of glass see materials section and add profit, say 10 per cent.) per foot super -6½

● Items marked thus have risen since August 24.

### PAINTER

#### Whitening, Distempering and Painting (on new Plastered Walls)

Twice distempering white .. per yard super	-4½	-1
Ditto, in common colours .. per yard super	-7	-3½
Add for stippling .. per yard super	-2	—
Preparing and painting two coats of undercoating and one coat of enamel .. per yard super	1 9	-8

#### Preparing and Painting Two Coats of Oil Colour on Ironwork after fixing

General surfaces .. per yard super	1/-	-4
Perforated landings and staircases both sides (one side measured) .. per yard super	2 6	-8
Pipes, bars, balusters, etc., not exceeding 3" girth per yard run	-1½	—
Metal window frames .. per yard run	-2½	—
Eaves gutters .. per yard run	-7½	—
2" Rainwater pipes .. per yard run	-3	—
4" ditto .. per yard run	-6	—
Squares one side .. per dozen	1 9	—
Large ditto .. per dozen	2 3	—
Extra large ditto .. per dozen	3/-	—
Edges of casements .. each	-3	—

#### Painting on New Woodwork

	Knot, prime, stop and paint three coats oil colour	Add or deduct for each coat more or less
General surfaces .. per yard super	2/-	-8
Fascias and soffites per yard super	2 6	-8
Fillets, skirtings, etc., not exceeding 3" girth .. per yard run	-3	—
Ditto, not exceeding 6" .. per yard run	-5½	—
Ditto, not exceeding 9" .. per yard run	-7	—
Ditto, not exceeding 12" .. per yard run	-9	—
Squares one side .. per dozen	3 6	—
Large ditto .. per dozen	4 6	—
Extra large ditto .. per dozen	6/-	—
Edges of casements .. each	-6	—

#### Sundries

Twice creosoting woodwork .. per yard super	-6	-2
Twice limewhiting brickwork .. per yard super	-4½	-0½
General surfaces .. per yard super	-2	-4½
Wax polishing .. per foot super	-4½	—
Body in and French polish on hardwood surfaces per foot super	1/-	—

#### Writing

Plain letters or figures, two coats, 2" to 12" letters per dozen inches in height	1 10½
Ditto, shaded .. per dozen inches in height	2 6
Plain gold, 2" to 12" letters per dozen inches in height	2 6
Ditto, 12" to 24" .. per dozen inches in height	3 9

#### Gilding

	Single Gold	Double Gold
Preparing and gilding in best oil gold per foot super	5 3	8 4
Ditto in matt or burnished gold per foot super	7 4	11 6

#### Paperhanging

	On walls	On ceilings
Preparing new plastered walls for papering per piece (60 feet super)	1 4	-5½
Pasting and hanging only.		
Plain lining paper per piece (60 feet super)	1 4	-1½
Common printed papers per piece (60 feet super)	2/-	-1½