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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, OCTOBER 26, 1939.

NUMBER 2336 : VOLUME 90

### PRINCIPAL CONTENTS

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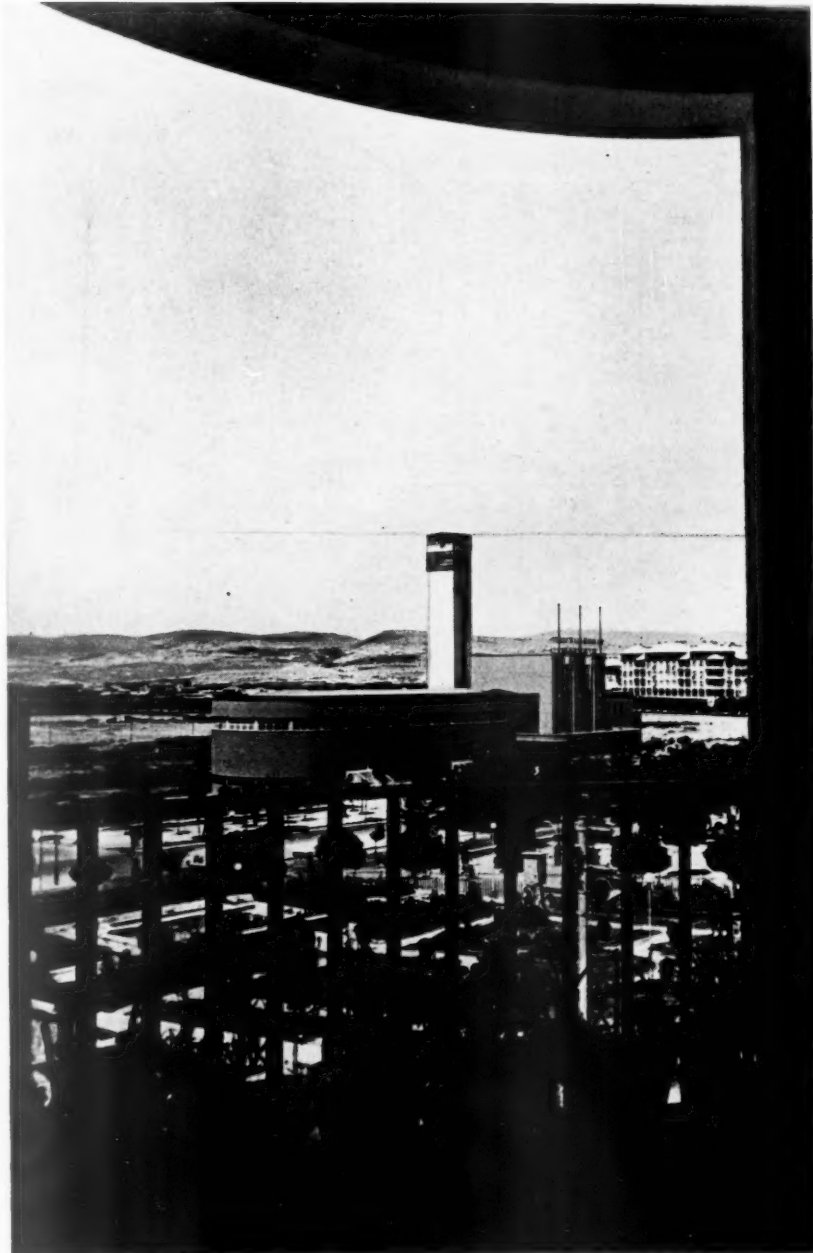
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The Editor will be glad to receive MS. articles  
and also illustrations of current architecture in this  
country and abroad with a view to publication.  
Though every care will be taken, the Editor cannot  
hold himself responsible for material sent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

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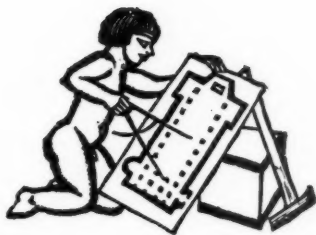
*A general view of the Exhibition Building  
at Ankara, Turkey.*



## NEW YORK

*Fish Docks, New York, with the Wall  
Street skyline in the background.*





### 3-YEAR BILLETS?

**L**ONG before the war this JOURNAL urged the building of school camps to solve the problem of housing and educating evacuated children if war should come. Such camps, it was pointed out, would have immediate *peace-time* use by providing the urgently needed accommodation for a "fortnight-in-the-country" for elementary school children living in congested city areas, as well as the equally urgent holiday accommodation needed for the new "holidays-with-pay" scheme for city workers.

The idea naturally had a great appeal for architects interested in planning for a better standard of living among the poorer sections of the community. War-time evacuation needs provided an impetus for planning *peace-time* evacuation of all city school children and city workers for at least two weeks of the year.

The camps necessary to do this, it was suggested, would form a nucleus for larger war-time evacuation camps. When the emergency came, the existing camps would be rapidly increased in size by way of a pre-planned pre-fabricated unit system.

Excellent, and far from impossible. Enthusiasm for the idea grew rapidly in all architectural circles. Schools got busy on imaginary projects; the Building Centre organized an extremely successful competition; manufacturers advertised the adaptability to the purpose of asbestos, wallboard, plywood and superplywood. Some architects were actually used for planning camps for searchlight and anti-aircraft units.

*But no school camps were promoted by the Government.*

Instead, an *emergency* scheme was worked out for billeting city children in country homes. There was no suggestion of any long-term policy. The scheme is clearly an emergency measure.

Presumably, a large expenditure on camps, designed for an emergency which even the Government thought would never arise, was considered to be unnecessarily extravagant.

But the emergency *has* arrived. Most Government policy has been adjusted for a 3-years war. Yet there is still no indication that the problem of schooling and housing evacuated children is to be solved by the building of camps.

*Is the billeting system intended to operate for three years?*

Obviously, it is the duty of the country people to bear some hardship. A few lilies is a small price to pay for the good fortune of having a safe home. And it is the duty of the city people—notably the mothers—to adapt themselves as best they can, in return for the privilege of sharing the safe home. There are valuable lessons to be learnt on both sides, it is true.

But that is not the point. In spite of many courageous efforts, there is a fundamental lack of understanding between town and country, and only a few of those involved have the will, the gumption or the education to triumph over the situation. The tragedy is that this

results in a serious loss of opportunity, as far as the children are concerned.

There are serious physical and psychological difficulties inherent in the billeting system which impede the effective organization of the children's health and education. It may be well to summarize some of the more obvious difficulties which, taken together, provide the background for a major criticism of the billeting system as opposed to the camp system:—

1: Difficulty of efficient control of children's health: extra danger of epidemics.

2: Irregularities in feeding of children: impossibility of economic healthy dieting.

3: Psychological difficulties: bad effects, through misunderstanding, on a large proportion of city and country children alike. (Good effects occur only in a small number of cases.)

4: Increased anxiety, due to uncertainty for parents remaining in evacuated areas, and general discontent, due largely to ignorance on both sides, among a big proportion of evacuees.

5: Unfair amount of responsibility imposed on country people, particularly those already responsible for children of their own and those inexperienced in looking after children. General disruption of normal country life, often resulting in taking country people away from other useful war occupations.

6: Difficulties of providing and organizing evening and out of school entertainment.

These objections, though insignificant perhaps in themselves, form part of a greater, fundamental objection: *the loss of a great opportunity*. Because of unequal conditions, discontent and difficulties of control, the opportunity of organizing the health and education of evacuated children on a sound basis, taking full advantage of the new surroundings, is being lost. It is obvious that this opportunity, stressed recently by the Minister of Education, could be infinitely better exploited if appropriate *camps* were constructed.

Here is the chance, the golden chance, for an intensive campaign to be undertaken: a fundamentally *peaceful* campaign, unhampered by inefficiencies and uncertainties, for scientifically reconditioning our thwarted city children in healthy rural surroundings.

It is of the utmost importance that we should use our war effort to re-organize our national life on a permanent footing for peace. This opportunity of the evacuated children is the first that should be exploited, as a vital part of a wider plan for social re-organization. We need imagination, determination and courage for the task.

Next week an attempt will be made to show that a national camp building scheme, linked to a *peace-time* school building programme, could be made a sound investment—economically and socially.



*The Architects' Journal*

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

# NOTES & TOPICS

## OUR WAR SERVICE

**I**T did not take more than a few days after war broke out for the building industry's biggest problem to become painfully clear. It was this:

★

Sometime, the industry was going to be asked to carry out a large programme of war work in double quick time. But *how* was the industry's large sensitive organization going to be kept in working order until that programme started?

★

In eight weeks several steps have been taken to urge the Government to fill the gap or to encourage others to do so. The A.A. has formed some groups of architects who are ready to carry out work of all kinds. A war-committee has been formed for the industry and allied professions. Mr. Yerbury has suggested a central atelier to work on war-time building problems. The President of the R.I.B.A., in a letter to *The Times*,\* has asked: (1) that the industry should be given war work; or (2) that the Government should encourage peace-time work until the war work is ready.

★

As relations with our bank managers become more strained, most of us will wonder whether these isolated attempts carry the weight of one united push. The Government is being worried daily by big noises—by commandeered hotels, wives of the troops and those who think A.R.P. should be halved or doubled. Only the clearest possible common sense from a united building industry is going to get a hearing for us: and then action.

★

Biggest points seem—The need for the industry to be kept going: The usefulness of Mr. Yerbury's atelier for studying mass-produced building units and other war problems: The common sense of encouraging certain war industries to increase their factory space *now*—before they get the big orders: The common sense of encouraging

\* Reprinted in this column last week.

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THE ARCHITECTS' JOURNAL

45 THE AVENUE  
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some public works to go ahead in the present lull, rather than holding them over to take part in the scramble of renewed building when peace comes.

★

Put across by the whole industry such points must impress public opinion. Merely mentioned in the Press, first by one body, then by another, they will have little effect.

## THE AIR RAIDS BEGIN

My Scottish news-hawk writes:

Baron Haw-Haw warned us, so we had no cause for complaint. Only a few nights ago he had advised Edinburgh folk to "take a last look at their beautiful city and say good-bye to the Scott Monument," as the city would be bombed at the week-end. (Strictly speaking, the Germans visited us on the Monday, but, for the German radio, that is comparative accuracy.)

So far Edinburgh had had three air-raid warnings, but no air raids. By way of a change, on Monday we had an air raid—but no warning. As a result, the air raid became a public spectacle on a singularly glorious autumn afternoon, and the "dog-fight," as it has been called, was watched from every vantage point—roofs, windows, and front-door steps. Most of the fighting occurred over the Forth, as the raid was directed at Rosyth, but in the chase the City received its baptism of shrapnel. Had a warning been given and the civil population shepherded into their shelters, our air defence would (so it is said) have been able to deal with the raiders with much greater freedom: even as it was, several citizens were wounded. Incidentally, the Lord Provost's drawing-room mirror was shattered and his bed penetrated by bullets, so that he, naturally, is deeply provoked and shares the city's extreme displeasure at Mr. Chamberlain's evasive explanation that the sounding of Air Raid Sirens on this occasion was considered "inappropriate."

Anyone who was in Edinburgh on Monday will be able to judge for himself whether Mr. Chamberlain's explanation was adequate. *The Scotsman* at any rate had no doubt that it was *not*—and said so in a blunt leader. Academically it may have been a "raid on Rosyth," but actually the whole Forth area was affected.

The importance of this test occasion is considerable. How would London readers of the JOURNAL feel, one wonders, if enemy raiders penetrated as far as Woolwich or the London docks and the sirens remained silent?

## WHEN IS A RAID NOT A RAID?

One last item: When the raiders were approaching the Forth Bridge, a train was also approaching from Edinburgh to cross the bridge. Telephone enquiries were at once put through from Dalmeny station, where the train had halted at the south end of the bridge, to ask Waverley for instructions—should the train not wait in safety? The answer came, "*Proceed. There is no air raid.*" And the train went across, with bombs falling

alongside into the water below. At any rate, the passengers had a grandstand view, almost worth the return fare to Dunfermline (2s. 8d.).

#### £1,000 PRIZE

A Glasgow citizen will shortly be the richer by £1,000. This sum (the first award of the St. Mungo Prize) goes to the person who, in the opinion of the trustees, has done most to improve the City of Glasgow and the lot of its inhabitants during the past three years. The money, states the *Sunday Chronicle*, will be awarded to the person who, in the opinion of the selection committee, has done most during the preceding three years to:

Beautify Glasgow or any of its architecture.  
Increase the city's well-being.  
Mitigate the smoke nuisance or improve the city's atmosphere.  
Foster better relations among the classes of the city.  
Increase opportunities for culture and education, or bring the city into worthy prominence in any other way.

★

Question: Will the first prize be awarded to an architect for the answer to the first item?

#### "IT'S THAT MAN AGAIN"

... I saw that life might be made dependent upon push button and steering wheel—saw it without flinching. I saw human energy reduced to Ohms and K.W., germs and glands—saw life centralized until it was at the mercy of the push button and steering wheel—still believing salvation lay in creative artist control. I had faith in that.

I still have faith. But, *where is that creative force today?* The man is not using the machine! *The machine is using the man* and is using him so he is losing himself... becoming a "thing" beneath his push button and steering wheel...

★

Right first time. Frank Lloyd Wright—in this month's *Journal of the R.I.B.A.* He is replying to printed reactions to his talks in London, which reached him at Taliesin shortly before the outbreak of war. He seems to imagine, without very good reason, that he succeeded in getting himself misunderstood and well disliked—an odd impression for one who filled the R.I.B.A. hall to record capacity four times in succession and got the best press ever accorded to any architect in this country.

★

But what worries Frank Lloyd Wright most is that our "58th variety" should be mistaken for "the fruit of his own orchard."

★

This new sermon of his must have been written before war came, but it has added point at this moment. The machine is now "using the man" with a vengeance. "*Where is that creative force today?*"

#### ONWARD AND UPWARD...

*A propos* of which, I have had a letter, full of genuine, most noble sentiment and without any of the Taliesin note

#### WEEKLY FEATURES

Information Sheets and Prices for Approximate Estimates  
are held over from this issue.

of despair, from the "School of Planning and Research for National Development." The School refuses to succumb to adverse circumstances. It is carrying on from temporary headquarters at

Mountfield Park Farm,  
Robertsbridge,  
Sussex.

#### A CANTERBURY QUARREL

Everyone seems to approve the removal of the old glass, together with other movable treasures, from Canterbury Cathedral, the protection of the monuments, even the sandbagging of the Black Prince's tomb; but the measures taken to safeguard the crypt and Chapel of Our Lady have been severely criticized and denounced, sometimes in unmeasured terms. The Council of the Friends of Canterbury Cathedral have gone so far as to pass a resolution asking that this protective work should be undone. To this the Dean and Chapter, with real regret, unanimously feel unable to accede, and point out, in a reply to the criticism just issued, that to do so would deny the validity of all the expert opinion they have taken.

★

Under the expert advice, including that of Sir Charles Peers, the Dean and Chapter have sandbagged the sides of the crypt and shored up the ceiling, but they were informed that the crypt vaulting was too thin to withstand a fall of masonry upon it. Therefore steel girders, to bear some feet of earth to act as a cushion, were placed over the aisles outside the choir in order there at least to prevent masonry breaking through on to people taking refuge below.

★

To do the work quickly a mechanical digger was hired, rails put down in the nave and trolleys run into the choir with dry earth to be distributed into the aisles at the sides. During this work the nave and choir presented a sad spectacle and the criticism became most bitter. The nave and choir are now being cleaned and will shortly present their normal aspect.

★

What has been done has earned the warm commendation of the city authorities and of Government officials. But I am surprised to learn that the cost, something like £3,000, falls on the six members of the Chapter.

#### YOU HAVE BEEN WARNED

We now have gas-mask containers of every material and any price; a crop of identity-card wallets; and luminous flowers, badges and armlets for bodily protection in the black-out. The general use of these last is to be recommended, but should you happen to see two luminous badges coming towards you, do not try to slip between them. They may both be worn by one person.

★

If this seems a flippant remark, let me hasten to say that I know a motor cyclist who tried to pass between what he thought to be two bicyclists on a country road one dark night, and it was several weeks before he realized that the lights were the sidelights of a lorry.

ASTRAGAL



*Defence measures and emergency legislation are now a very direct concern of the architect, who finds his information, in the main, in the new official literature, that must, in its abundance, be confusing. The INFORMATION CENTRE exists to clear the air for him, to function rather as an exchange, complementary to all existing organizations and superseding none, but as much a corollary to the new legislation as question time to an abstruse technical lecture.*

## ARCHITECTS' JOURNAL

### EMERGENCY

- 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.

#### Write to :—

THE ARCHITECTS' JOURNAL,  
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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.

These are typical of the questions we have already answered:

How are ventilated black-out window screens formed?

How is sandbagging rotproofed?

How much safer is a 20-ft. deep shelter than a semi-surface type?

How is a light lock formed?

How should screen walls be arranged?

How is a basement shelter protected from bursting water mains?

What is the definition of a light-proof material?

What publications are there on farm buildings?

What would be the maximum spread of debris if an h.e. bomb hit a 330-ft. stack?

What publications are there on camouflage?

What protection is needed for light shafts?

What is adequate provision for a first aid and decontamination centre?

Is a 1938 contract binding?

## INFORMATION CENTRE

**Q<sup>50</sup> LONDON.**—The specification which forms the basis of the contract for an alteration job being carried out under our supervision provides that the contractor shall bear the risk of fire damage to unfixed materials, but does not deal with the question of AIR-RAID DAMAGE. The contract is a small one and there is no formal agreement. We shall be obliged if you will inform us whether the responsibility for making good air-raid damage to unfixed materials would fall upon the employer or the contractor?

The employer should be responsible for any damage to unfixed materials except such as is caused by fire. If damage is caused by fire the contractor is responsible. If the building collapses the employer is responsible. As there is no contract it would be advisable for your client to come to an understanding with the contractor before work proceeds further.

**Q<sup>51</sup> LEEDS.**—A client has asked me to provide a shelter in a basement, but the only space which could reasonably be used adjoins the main road and is in the immediate vicinity of WATER MAINS AND SEWERS. Is this part of the basement suitable?

This problem will often occur, and it is not reasonable to disregard a basement for the reason that heavy water

Rather than hold over replies owing to lack of space, we are answering personal questions through the post, and selecting those of most general interest for publication.

mains and sewers are in the immediate neighbourhood. There is no doubt that their presence is a source of danger to the occupants of the shelter, and steps must be taken to overcome the danger, or at least to minimize it. If a water main bursts, the basement will rarely be flooded before the occupants have time to leave. What will usually happen is that the water will rise slowly and make escape difficult owing to the panic it creates. This can be avoided if drainage of the basement is provided into an underground tank, and if thresholds are arranged at the openings to the shelters from the surrounding parts of the basement. These thresholds should be 6 in., 12 in. or 18 in. high, depending on the size of the water mains in the neighbourhood, and should be fixed in accordance with local water and sanitary authorities' advice. They will retard the rise of the water for long enough to enable the occupants of the shelter to reach the open. It goes without saying that emergency exits should be planned where they would not be flooded.

**Q<sup>52</sup> HULL.**—Do you know of any reliable SANDBAG PRESERVATIVES, please?

Sandbag preservatives seem in great demand. We get this question in almost every post. Preservatives are

made by Szerelmey, Ltd., 277 Rotherhithe New Road, S.E.16, and Cuprinol, Ltd., 27 Horseferry Road, S.W.1. Willesden Paper and Canvas Works, Ltd., St. Leonard Works, Hancock Road, E.3, make rot-proofed bags. The general opinion is that it is better to buy proofed bags than to treat ordinary ones. Rot-proofing costs about 1d. per bag. If the sandbags are already filled and in position, the best thing to do is creosote them.

give any power to an owner to let property which he was not authorized to let prior to the passing of this Act.

**Q56 BIRMINGHAM.**—*I shall be glad if you can inform me:—*

1. Will the Exchequer GRANT which is to be paid at the rate of income tax for the year 1939-40 on capital expenditure for shelters be paid in cash, or in the form of a rebate on the income tax for that year? If it is to be paid in cash when will it be paid?

2. In computing the rent increases for tenants in a commercial building, should the Exchequer grant be deducted from the gross expenditure?

1. The Treasury grant under Section 22 of the Civil Defence Act, 1939, will be paid on a Treasury warrant and is not paid in the form of a rebate on income tax. Application should be made to the local authority. If the local authority is satisfied that the standard and position relating to the construction, etc., of the air raid shelter have been complied with, it will give a certificate to that effect, which will ultimately be passed to the Treasury who will make the payment.

2. Yes, as provided by Section 18, sub-section 3, of the Civil Defence Act, 1939.

**Q53 WESTMINSTER.**—*Where can I obtain TARPULINS?*

There is a shortage of tarpaulins at present, but you could try the following firms: John Edgington & Co., Ltd., Sardinia House, Kingsway, W.C.2; John Smith & Co., 44 East Smithfield, E.1 (Royal 6321); Stormtex Manufacturing Co., 16 Brewery Road, N.7 (Gul. 4364); William Smith, 219 East India Dock Road, E.14 (East 1881).

**Q54 HOLBORN.**—*Where can I obtain Special Order (No. 906) mentioned in THE ARCHITECTS' JOURNAL for October 12?*

This is **STATUTORY RULES AND ORDERS**, 1939 (No. 906), obtainable from His Majesty's Stationery Office, Kingsway, W.C.2. (Price 1d.)

**Q55 HUDDERSFIELD.**—*A client owns cottage property condemned under a SLUM CLEARANCE order prior to the war. Some tenants vacated their houses before the war, one since, while some still remain. Under the Rent Restriction Act now in force, is our client able to re-let to fresh tenants the property already vacated?*

We do not know the terms of the clearance order issued on your client, but powers given to the local authority under the Housing Act to obtain possession of property where a clearance order has become operative are not affected by the new Rent Restriction Act. Neither does the new Act

(3) The same type as group (2) with insufficient natural, and additional artificial, ventilation.

(4) Artificially ventilated shelters.

(5) Shelters of such internal dimensions that, although closed, no ventilation is necessary.

(1) Trench shelters, being completely surrounded by earth, have the advantage that the heat caused by the occupants can be quickly absorbed by the earth. Where such shelters have proper openings at both ends and where the area allows a space of at least 3½ sq. ft. per person, no special requirement is made for ventilation.

(2) Official documents do not define exactly what is sufficient natural ventilation. It might be inferred that natural ventilation should be as efficient as artificial ventilation, however, and that it should be able to provide 150 cu. ft. of air per person per hour. This will doubtless be the case with surface shelters having unimpeded openings at both ends. With basement shelters the question is doubtful and depends very much on the connections of the basement with the open air and also on how much of the basement is used for shelter purposes. If, for instance, a 300 sq. ft. shelter for 50 people is situated in the centre of a large basement of, say, 2,000 sq. ft., and if this shelter has two unimpeded openings to the remainder of the basement, it might be assumed to be efficiently naturally ventilated. If, however, the same shelter is situated in a basement which has only a slightly larger area, say 500 sq. ft., and if the remainder of the basement is connected with the ground floor only by a staircase, and thus indirectly to the open air, it can hardly be maintained that the shelter is naturally ventilated. On the other hand, if one part of this basement has a shaft which leads up to the roof so that any increase in temperature would produce an air current (see page 1006, ARCHITECTS' JOURNAL, June 8, 1939), even a basement largely occupied by a shelter could be considered as being naturally ventilated. It is quite evident that no shelter can be naturally ventilated if all the openings are sealed by doors. For shelters of this type, the Air Raid Shelter Code requires 6 sq. ft. of floor area, 25 sq. ft. of surface area and 50 cu. ft. capacity per person. It is only reasonable that the same limits should be maintained for any shelters which are not governed by this Code.

(3) Where the natural ventilation is insufficient, artificial ventilation has to be of the intake type (see 5). There are no requirements for closing openings in such artificially ventilated shelters; in fact, the openings may be taken as air outlets. If such artificial ventilation provides at least 150 cu.

It is, of course, impossible to give a definite answer to such a general question as this. The type, situation and size of the shelters will be determining factors for ventilation. However, the following notes, giving five different types of shelter, may serve to indicate how to deal with the matter generally. The five types of shelter are:—

(1) Trench shelters open at both ends.

(2) Basement, surface and other shelters open to the air with sufficient natural ventilation.



ft. of air per hour per person the same minimum shelter dimensions are prescribed as for group 2. Where more than 450 cb. ft. are provided per hour the requirements can be reduced to those of group 1. Although no final indication is given it might be inferred that for ventilation rates between 150 and 450 cb. ft. per hour, shelters with areas and surfaces between those prescribed for groups 1 and 2 would be acceptable.

(4) In every case shelters in this group can be dealt with in exactly the same way as those of group 3. They have the advantage of being considered gas-proof, in case gas attacks are imminent. Most shelters of group 3 can, however, be converted easily into gas-proof shelters.

(5) No ventilation whatsoever is required by the Air Raid Shelter Code for such shelters. If a shelter is completely sealed and if the surface area is not less than 75 sq. ft. per person, and the requirements for area and capacity as for group 4 are fulfilled, it is considered adequate. This statement is made under the assumption that the shelter would not be used for longer than three hours without being properly aired. If there is a special reason for making a shelter good enough for a longer period, the surface area would have to be increased. Apart from shelters of group 5, which are very rare as they take up a great amount of space and are, therefore, very expensive, all shelters may have to be gas-proofed at some future date, and then artificial ventilation would become necessary under any circumstances. It seems prudent, therefore, to provide such ventilation in as many cases as possible from the outset, particularly for shelters serving important factories. All such ventilation should be of the intake type so that a slight pressure can be maintained in order to keep any accidental opening or pores in the walls closed against gas. It should be realized that extract ventilation, which is used more often for civil buildings, is to be discarded entirely. The air drawn in should be taken from as high a point as possible, and this will help to preserve the filtration equipment. Quite a number of firms produce standardized ventilation equipment which is arranged so that air filtration plant can be added later when necessary; the appliances are driven by electricity, but arrangements are made that in an emergency they can be driven manually or by pedals. Among the many firms producing such apparatus are: Abair Engineering, Ltd., 1 Devonshire Square, E.C.2; Carrier Engineering Co., London; Richard Crittall & Co., Ltd., Bush House, W.C.2; Mellor Bromley, St. Saviour Road East, Leicester; Sturtevant Engineering

Co., Ltd., 149 Queen Victoria Street, E.C.4; Sutcliffe Speakman and Co., Ltd., Leigh, Lancs.

**Q58 ESSEX.**—We have fitted one or two of our most important factory doors with **LIGHT LOCKS** which allow the entry of lorries and factory scooters, etc., but we are anxious to avoid as far as possible the expense of this construction round the remainder of the factory doors and should be glad if you can refer us to any information, official or otherwise, published on the subject. We are interested, for instance, to know whether, if direct light and intense light is avoided, light locks can be dispensed with?

Your question is one which has not to date been satisfactorily answered by any regulations. That is to say, the regulations call for a complete "black out," but in BS/ARP 15 a light intensity of .02 candles is permitted in light locks, in the part visible from outside. We can only suggest if this intensity of light will be sufficient for your purposes (and it is very low), you should endeavour to have it approved by the local police, who are the final arbiters under instructions from the Home Office. For your guidance in this matter, it should be noted there should be no reflecting surfaces near the light source. The provision of a canopy outside the entrance may also help, but should be erected experimentally before any permanent work is done. The following formulae should determine its dimensions. If "H" is the height and "W" the width, length of the canopy should be  $W + 4/3H$ . Projection of the canopy should be  $2/3H$ . If you require further information or scheme for lighting, we suggest you get in touch with one of these firms: Benjamin Electric, Ltd., Brantwood Works, Tottenham, N.17; Edison Swan Electric Co., Ltd., 155 Charing Cross Road, W.C.2; General Electric Co., Ltd., Magnet House, Kingsway, W.C.2; Holophane Ltd., Elverton Street, S.W.1; Metropolitan-Vickers Electric Co., Ltd., 1 Kingsway, W.C.2; Mortimer Gall & Co., Ltd., 115 Cannon Street, E.C.4

**Q59 HULL.**—In your issue for September 28 you recommended creosote for **PRE-SERVING SANDBAGS**. This would evidently have to be sprayed on. As in this district spraying apparatus for approximately 450 yds. super does not seem to exist, will tar spraying, with road-spraying apparatus, be as effective? Or how about cold bitumen?

Spraying with tar would have quite a different effect from spraying with

creosote. While creosote would penetrate into the material and so impregnate the fibres, tar would remain on the surface and act only as cover. Doubtless such cover is a protection as long as it is not disturbed, but it can hardly be assumed that the outside cover of a sandbag would withstand all the handling which the bags usually receive. At the points where the tar covering would be interrupted, the bags might be much more susceptible to rot than elsewhere. There is, however, a method that, as far as we know, has not yet been tried. This would be to cover, not a single sandbag, but the whole wall constructed of sandbags with tar in order to prevent air penetrating and assisting decay. Even if bags started to rot under the complete outer cover, the bags could be kept in use until the rotting progressed sufficiently for the sand to force the tar outwards. We understand there is, however, always the danger of the tar becoming ignited by contact with the contents of an incendiary bomb. To what extent ordinary sandbags can withstand incendiary bombs remains to be seen. Cold bitumen in the form of paint has been used with success.

**Q60 SURREY.**—A Sub-Contractor quoted us for supplying and laying 250 sq. yds. of Columbian **PINE BLOCK FLOORING** in a small block of flats here which is now almost completed. The price was accepted and the order given some months ago, the reason for placing the order so far in advance being to secure the reservation of the necessary material. The sub-contractor confirmed the material was reserved. On September 21 last, the contractor wrote to the sub-contractor requesting him to proceed to deliver and lay the blocks. Now today we have a letter from him saying that, owing to Government restrictions, he is unable to release the material without a licence, which he asks us to obtain for him. Is such a licence necessary in this circumstance; if so, is it for us to obtain it and to whom do we apply for it? Another sub-contractor is making a steel access staircase for these flats, so far he has not raised any question. Will a licence be required before this staircase can be supplied, and to whom do we apply in that case?

In spite of war conditions the sub-contractor is bound by his contract. We assume the sub-contractor is also a timber merchant, in which case he will want to be sure that he can replace any stock he uses in his capacity as sub-contractor. He should write to the Timber Control Area Office, 35 Savile Row, W.1, stating the position and asking for

a licence to release the quantity required. As the sub-contractor for the steel staircase has raised no question, it is probable he already has the work in hand, but if this is not the case application should be made to the Iron and Steel Control, Ministry of Supply, Steel House, Tothill Street, S.W.1, stating the quantities required.

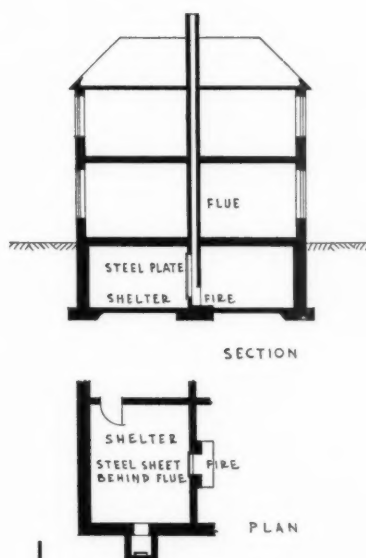
**Q61 HAMPSTEAD.**—*There will be highly extended agricultural activities during the war. Could you kindly mention some books which describe planning and equipment of FARM BUILDINGS? Could you also tell me the names of firms who are able to supply information on this subject?*

We enclose a full list of publications on the planning and equipment of farm buildings. The list\* is one prepared by the R.I.B.A., and many of the books can be consulted in the R.I.B.A. library.

The following firms will probably be able to give you some assistance:—Beatty Bros., Ltd., Park Royal Road, N.W.10. The Salopian Cattle Bowl Co., Prees, Whitchurch, Salop. Evelyn Barford, Ltd., Grantham, Lincs. Alfa Laval Co., Ltd., Great West Road, Brentford, Middlesex.

ground level, divided into two sections, and capable of accommodating at least 50 persons per section. The size of each section is 32 ft. by 11 ft. by 6 ft. 6 in., complete with steel doors and w.c. It is suggested some form of HEATING is necessary, but I am doubtful whether any form of heating using solid fuel such as coke or coal is desirable on account of wasted room and absorption of essential oxygen. In any case the heating pipes of a further extension to the main building will pass under the ceiling of the shelter.

Your doubt is not unfounded. There should never be an open fire in a shelter. There is no reason, however, why a fire getting its oxygen from a source outside the shelter should not heat a screen in the shelter (Fig. 1). If there is already a



**Q62 WESTMINSTER.**—*I have been asked to provide a SHELTER IN EITHER THE BASEMENT OR SUB-BASEMENT of a combined shop and office building in the West End. There is ample space in both. In which should the shelter be accommodated?*

If proper emergency exits can be arranged the sub-basement is preferable, particularly if the shelter can be closed and artificial ventilation installed. Shelter in the upper basement might be impracticable in that all strutting must be carried through to the foundations. If division walls are required, they also must be carried through to proper foundations. Each floor of a substantial building provides a certain degree of protection, even against a direct hit, and the more floors there are over, i.e. the deeper the shelter, the better.

heating pipe in the shelter, this might be sufficient, and small electric fires in addition would be useful. The heating in a shelter depends on the number of occupants. Where shelters are larger than the minimum sizes required by the Code, it can be assumed the heat produced by the occupants will not be sufficient to produce a comfortable atmosphere; but where shelters are in accordance with the minimum required sizes it will be different. If a prolonged stay in the shelter is necessary, it will usually be found that after a short period the atmosphere will become close rather than cold, and in most so-called naturally ventilated shelters the higher the temperature the closer the atmosphere.

The size mentioned, 32 ft. by 11 ft. to include w.c., is just in accordance with the requirements and if a steel door is provided natural ventilation can scarcely be assumed. If artificial

ventilation is considered, it might be as well to heat the air before it is blown into the shelter, an arrangement which is never wasteful as it stops automatically when ventilation is not required.

**Q64 BATH.**—*What is the specification for BLAST AND SPLINTER-PROOF DOORS? Can such doors be used for naturally ventilated shelters?*

There are so-called blast and splinter-proof doors on the market which are not really blast and splinter-proof. According to the definition in the Code, the lateral protection required of steel is  $1\frac{1}{2}$  in., and there is, of course, no exemption for door openings. Doors of  $\frac{3}{8}$ -in. steel, often put forward as blast-proof, would not offer a resistance to blast equal to that of a normal oak door, and would certainly be inferior in resistance to splinters. They would have little protective value. Blast-proof doors should close tightly so that in an emergency they can serve also as gas-proof doors. Only materials that will not deteriorate should be used for tightening, and the material should be arranged so that it is protected by the door against the effects of gas. There is no rule in the Code to say whether a door should open inwards or outwards, but it is doubtful if a blast-proof door can be constructed to open inwards satisfactorily as the blast tends to press inwards, while if the door is pulled outwards owing to the suction pulse of blast, no harm will be done to the occupants of the shelter. It is convenient if an escape opening can be arranged in the door, covered with the same thickness of material as the door, and fastened by means of wing bolts, to be opened from the inside. This gives a means of escape if the door should be jammed by debris. Naturally ventilated shelters should under no circumstances be provided with blast-proof doors, as the ventilation can be sustained only if the doors are open.

**Q65 BURY.**—*Are CINEMAS to be provided with shelters?*

Curiously enough, they are not at present required to be provided with shelters. Because a cinema is a public building, it is the duty of the local authority to provide the shelter. Most local authorities have failed to do this, and, with few exceptions, there is no apparent intention to provide shelter. Doubtless it would be of advantage if cinema owners

**Q63 NOTTS.**—*I am supervising the construction of an air raid shelter in brick and concrete, entirely below*

\* Too extensive for publication here, but available to readers on application to the Information Centre.

would take the initiative, and see that proper shelters are arranged in the immediate vicinity. At present, announcements in front of cinemas give directions to the nearest air-raid shelter, which is in many cases:

- (1) So far away that it could not be reached in time;
- (2) Composed of a few sandbags, and does not give the degree of protection required by the Government;
- (3) Of insufficient space to accommodate even half the number of people to be expected in a cinema.

## Architectural Front

### R.I.B.A.

Informal meeting held on Monday last, E. Stanley Hall (president) in the chair. There was a large attendance. Fifteen written questions on such subjects as reserved occupations, evacuation, examination, A.A. Groups, Register, etc., answered by President, W. H. Ansell and T. E. Scott. President stated that bricked-up entrance of Institute in Portland Place to be reopened. Examinations to continue as far as possible. Conference to be held with Ministry of Labour concerning private work not affected by Government work. Education—suggestion made to pool all London schools; questionnaire sent out to schools; replies so far received indicate majority of schools in vulnerable areas to function as usual. Travelling exhibitions to continue. *Journal* to be published monthly as far as possible. Next meeting of Council in January.

### L.C.C.

Building and Arts Departments of Hammer-smith L.C.C. School re-opened; day and evening classes being held in all art and building subjects, including full course of study leading to R.I.B.A. Intermediate and Final Examinations. Unemployed students admitted to day school on payment of small registration fee.

### P E P

Supper discussions, "Looking Ahead: a Symposium," at 16 Queen Anne's Gate, S.W.1. 6.45 for 7 p.m. Discussions close 9.30 p.m. Tuesday, November 7: Speaker, Julian Huxley; chairman, Max Nicholson. Tuesday, November 21: Speaker, H. N. Brailsford; chairman, L. K. Elmhirst.

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

Series of A.R.P. lectures in Oak Room, Kingsway Hall, Kingsway, W.C.2, from 6.30 to 8.30 p.m. Thursday, October 26: "Bomb Proof Shelters." By P. Rosenfeld. Monday, October 30: "A.R.P. Surveys and Public Shelters." By R. T. F. Skinner.

### INSTITUTION OF STRUCTURAL ENGINEERS

Yorkshire Branch carrying on activities in limited form; to hold meetings in various Centres, e.g. Leeds, Sheffield, Hull, Bradford, etc., on Saturday afternoons. Two meetings arranged: Saturday, October 28, at 2.30 p.m., Council Chamber, Town Hall, Brighouse, near Huddersfield. Chairman's address by H. A. Sneezum, Saturday, December 2, at 2.30 p.m.

Hotel Metropole, Leeds. Paper by G. McLean Gibson, entitled, "Coastal Erosion and Defence Works."

### TOWN PLANNING

Minister of Health has addressed a circular\* to local authorities on their work under the Town and Country Planning Act, 1932, during the war.

Circular indicates that whilst it is clear that conditions during war will not permit planning authorities to continue activities as in normal times and that in many cases a proportion of planning staff of local authorities will be required for other duties, nevertheless, it is not possible for planning work to be entirely suspended. It will, in any event, be necessary for authorities to continue to deal with any applications they may receive for permission to develop either under interim development arrangements or under operative planning schemes. In Minister's view it is of importance that development during the war should be adequately guided both in order to preserve amenities and to secure that local authorities are not involved later in premature or excessive expenditure in the provision of public services. Minister accordingly recommends that planning authorities, whilst giving due regard to exceptional considerations arising from war-time conditions, should continue to deal with applications for development in accordance with sound planning principles. Minister will continue to deal, as before, with any appeals against decisions of local authorities which may be submitted to him.

Extent in which a planning authority will be able to continue during the war in the preparation of its planning proposals will depend on local circumstances of each authority and the staff available. Minister suggests that local authorities should bear in mind that they must retain some organization to deal with interim development and other local planning questions which may arise during the war, and that it is desirable that if possible they should maintain a nucleus of staff which would preserve continuity and secure that full planning activity may be resumed without delay so soon as circumstances permit.

As regards planning schemes which have already been made and are at present before the Minister for his approval, the Minister has decided that local inquiries must be deferred for time being. He hopes, however, to continue consideration of a number of schemes in respect of which a local inquiry has already been held with a view to the approval of the scheme in due course, if local authority consider in light of the local circumstances that it is desirable to proceed.

### Change of Address†

MARSHALL AND TWEEDY  
41B Chagford Street, Dorset Square, N.W.1.  
(Ambassador 2143.)

OLIVER P. BERNARD AND PARTNERS  
Practice temporarily suspended. Communications to Marshall and Tweedy at above address.

## Building Front

**BULL MOTORS.**—Super Silent motors in constant demand for use in hospitals, Government offices, etc., for heating and ventilating and air filtration units. Greatly increased facilities in new Foxhall Works.

**JOSEPH FREEMAN AND SONS.**—Carry on with normal Cementone lines, and, in addition, camouflage, light-obscuring, gas-resisting and light-reflecting paints, etc.

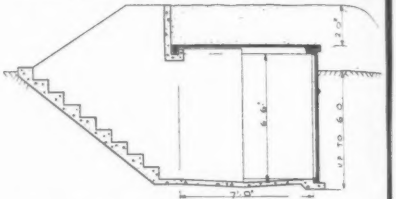
**LEAD INDUSTRIES DEVELOPMENT COUNCIL.**—Confusion arisen in minds of consumers owing to statements in press to effect that purchase of lead for consumption except under licence is prohibited. Word "lead" in this case refers to pig lead and not to pipes or sheet. Supplies of metallic lead for these products come almost

\* Circular 1872 (October 19). H.M.S.O. Price 1d.

† A full list of changes of address was published in last week's issue.

entirely from Empire sources, now controlled. Manufacturers expect to obtain sufficient supplies of their raw material to fulfil customers' requirements.

**MARLEY TILE CO.**—This diagram, showing firm's pre-cast units assembled



to form H.O. approved air raid shelter, inadvertently printed sideways in A.J. October 19.

**THERMACOUST PRODUCTS.**—Much Thermacoust being used for self-supporting external walls. Quotations for either material delivered or for finished building to architects' specifications. Thermacoust thicknesses normally specified for walls: 2 in., 2½ in., 3 in. and 4 in. Cost, within 50 miles London, finished complete with reinforced outer rendering and 2 coats plaster inside, approx. 11s., 11s. 6d., 12s. 6d. and 13s. 6d. for above thicknesses.

**JOSEPH WEBB AND SONS.**—Able to supply all forms of steelwork for A.R.P. services and to advise on basement strengthening and supply of steel shelters.

Minister of Health, Secretary of State for Scotland, and Parliamentary Secretary to Ministry of Labour, received on October 18 deputation from National Federation of Building Trades Operatives, and Federation of Building Trades Employers.

Deputation urged that Government should do everything practicable to keep building industry occupied during war to maximum possible extent. They realized that the Government had undertaken a very extensive building programme of its own, but this was concentrated in a relatively small number of areas (other areas such as Eastern Counties being left with very little at all). Moreover, it would be carried out by methods which would not utilize services of all crafts, e.g. plasterers, and provided employment mainly for younger operatives willing and able to travel. Necessary that local authorities and private enterprise should continue or resume as circumstances made it possible their normal activities so far as war conditions would permit. Unless plans were made to keep industry in active operation, at perhaps a lower tempo than normally, unemployment, with consequent loss of productive power, and extinction of sources of supplies which had been gradually built up, not without difficulty, would result. Moreover, necessary pool of labour would not be available for the emergency repair of houses and other essential buildings which might be damaged as result of air raids. Industry felt Minister of Health had been too drastic in circular issued early in September asking local authorities in England and Wales to postpone for time being work on slum clearance, and to proceed only with completion of houses already in an advanced stage of construction.

Replying, Mr. Elliot said he had not issued circular from choice. But housing activities of local authorities threw a great burden on officials, both local and central, and these were, in present circumstances, almost overwhelmed by work directly connected with the war. Secondly, effective prosecution of war made it necessary to conserve capital resources of the country, and to restrict borrowings of local authorities within narrowest limits. Lastly, direct war work made an immediate demand on available supplies of labour and materials, and position as regards materials was still difficult. Whole position was under close and continuous review and, if he could be supplied with concrete examples of areas where both labour and materials were available, and there was building to be done which could be shown to be in the national interest, he would willingly consider whether it could be authorised to proceed. He had, however, to keep in mind necessity for having reserves of supplies available for emergency repairs to essential buildings damaged as result of air attacks. Secretary of State for Scotland explained that conditions in Scotland were not quite same as in England, and he had in consequence been able to authorise local authorities



to proceed to complete all houses already begun. But in Scotland as in England amount of building which could be undertaken would be conditioned by materials available. Present was a period of transition which the Government and the industry would have to try and adjust together.

Parliamentary Secretary, Ministry of Labour, spoke of machinery set up to determine priorities of building programmes of different Government Departments, and said that building programmes for which Government were responsible (in so far as they were able to make predictions) directly or indirectly, during next six months did not fall far short of industry's normal productive capacity.

Minister of Supply has issued Memorandum setting out principles which govern system of priority in regard to supplies for national purposes in amplification of the Priority of Works Order, 1939, No. 1080. \*

In view of relief from Compulsory Commodity Insurance on raw materials given by a recent Order of the Board of Trade, basis prices of Copper reduced by £1 per ton as from Monday last, to following:—

Plain Plates £87.10.0 per ton basis with usual trade extras.

|        |         |    |
|--------|---------|----|
| Rods   | £85.0.0 | do |
| Sheets | £85.0.0 | do |

## Change of Address

CONCRETE LTD.  
Green Lane, Hounslow, Middlesex. (Hounslow 0172.)

PHILIP SCHOLBERG

on

## Equipment

### Luminous Switches

SOME weeks ago I suggested in this JOURNAL that the position of SWITCHES INSIDE DOORS should be as nearly standardized as possible, so that strangers should not have to

spend their time fiddling around to find a switch which ought, really, to be immediately under their hands. For any type of factory or basement shelter an illuminated switch may not be essential, but it is most certainly very desirable. Small pilot lights are obtainable for this purpose (see notes in this JOURNAL for October 12, page 466), but another way of doing the same job is to use some form of luminous paint on the switch, and Tucker's have just sent me leaflets illustrating their luminous dolly, which can be fitted to any of their standard size 5-ampere switches at an extra cost of 36s. a dozen. When an ordinary switch may not cost more than 1s. or so, this extra charge may seem somewhat heavy, and it is therefore worth while explaining why and how luminous paints work, and why their costs vary. First of all, it may be said that "luminous" is not a very accurate term, for it makes no distinction between the photo-luminescent paints which will glow for a period after they have been exposed to natural or artificial light, and the radio-luminescent group which, in strictly non-scientific terms, glow of themselves. In the first group various materials are used such as calcium sulphide, bismuth salts and zinc sulphide. These are comparatively cheap, and they are the usual materials employed in the luminous paint of clocks and watches. They are, in a sense, accumulators of light which will store and subsequently emit a certain quantity of light energy more or less rapidly according to the mix of the paint and the way in which it has previously been exposed to the light. In the second group are certain substances which, under the invisible rays from radio-active substances, will emit visible light. The process is a comparatively complicated one, and it may be described, again in strictly popular terms, as a kind of scintillation. All radio-active substances radiate a continuous stream of alpha particles, and if one of these particles hits a zinc sulphide crystal it produces a small visible flash. A mixture, therefore, of zinc sulphide

and a radio-active substance will show a series of almost continuous flashes and produce a luminous effect. This process will go on until the radio-activity of the substance is exhausted.

It is quite easy to distinguish between the two groups with the naked eye. The photo-luminescent group merely absorb the light and emit it again in a uniform soft glowing of the surface, whereas the radio-luminescent group possess a shimmering appearance due to the rapid repetition of scintillating flashes, and the surface looks rather like a slowly moving luminous veil. An even simpler method is to place a sample in a dark cupboard for twenty-four hours or so, when the photo-luminescent paint will have exhausted its light store, while the radio-luminescent sample will still be glowing. Since the price of the two paints is very considerably different, it is as well to make certain that one is getting what one has paid for.

The life of any radio-luminescent paints depends on the radio-active substance used. Radium itself takes about 2,000 years to lose half its activity, but it is much too precious a material to be used for this purpose, and a life of 2,000 years is perhaps not necessary under the present conditions. Mesothorium and radiothorium, however, lose about half their activity after periods of seven and two years, and the more usual radio-luminescent paints make use of a judicious mixture of these two materials.

Messrs. Tucker say nothing about the material used in their luminescent dollys, but I assume that it is some such compound as this. Protection is provided by a small glass lens fitted in the end of the dolly, and this prevents the paint from being rubbed off in use, while the luminous effect is guaranteed to last for ten to twelve years. In appearance the dollys look about the same as the normal type, with the exception that the blob at the end is a little larger. Quite apart from their possible use for A.R.P. purposes, I gather that these switches are popular in such places as ship's holds and safe deposit vaults.—(J. H. Tucker & Co., Ltd., Kings Road, Tyseley, Birmingham, 11.)

### \*MEMORANDUM ON THE PRINCIPLES GOVERNING PRIORITY OF SUPPLIES FOR NATIONAL PURPOSES

1. In the field of manufacture and supply the National effort must now be directed to the following ends:

- (a) The equipping and maintenance of the Armed Forces.
- (b) The maintenance of essential National Services.
- (c) The maintenance of sufficient export trade to produce enough foreign exchange and as far as possible of our internal trade also.

2. It would be impossible, even if it were considered desirable, to lay down a hard and fast order in which these three requirements should be met because they are all required to bring the war to a successful conclusion.

3. As regards the direct requirements of the Government in the immediate future the available industrial capacity has to a large extent been surveyed and the output of certain firms has, with their agreement, been allocated between Departments. This is a framework on which to place present orders, but additional capacity is required, and it is intended to continue the practice of allocating capacity in suitable cases. Firms will be informed of allocations when made, and those firms whose capacity is allocated should be able to rely upon as long a run as possible of a particular product or products and so avoid the waste of effort entailed in changing from one line of production to another.

4. There has been a good deal of misapprehension in regard to the issue of priority certificates which may be due to the fact that, in 1917-1918, a "Priority Certificate" was usually required before any work could be done or materials obtained. If priority certificates become necessary during the present war the system under which principal and subsidiary priority certificates are to be issued and the Classes into which Priority Orders are to be divided are those set out in the Priority of Work Order, 1939, No. 1080.

But this general system of priority has not yet become necessary, and it is not at present intended to issue Priority Certificates on any substantial scale because a general issue now on the scale obtaining during the last war would merely lead to delay and tend to upset the even flow of production which is essential for the efficient prosecution of the war.

5. To the extent that the system of granting Priority Certificates under the Priority of Work Order, 1939, September 3, 1939, is brought into operation, the only authorities who will be empowered to issue them are the Government Departments concerned. No other certificates or directions purporting to be of a "Priority" nature can be properly issued or legally enforced.

6. The supply of raw material is in some instances under control, and particulars of the various controls already set up are attached to this letter. There is no general shortage of raw materials. If you have any difficulty in this direction you are to the appropriate Control for assistance. Controllers have been instructed to give preference to the allocation of materials where reasonable information can be provided to show that the materials are needed for Government work or for work on essential National Services.

7. As a very general guide, and having regard to the foregoing observations, the following summary may be of assistance:

- (a) Other things being equal, orders should be carried out in the order in which they are received.
- (b) Difficulties in regard to raw material should be referred to the Controller concerned.
- (c) Priority Certificates having legal force will only be issued when necessary by order under the direction of the Government Department concerned. The appropriate Department will be the Department placing the order under execution (or the main contract from which a sub-contract has issued); or the Department generally responsible for the particular industry or Service concerned. As an example, the appropriate Department in the case of work or material for the Export Trade will be the Board of Trade.

## GENERAL NEWS

### ANNOUNCEMENTS

Mr. H. Victor Kerr has taken into partnership his senior assistant, Mr. G. B. Colbourn. Firm will assume the title of Victor Kerr and Colbourn. Practice has been transferred to 23 Clifton Hill, St. John's Wood, N.W.8 (Maida Vale 8751).

### COMPETITION NEWS

The Margate Town Council has asked the R.I.B.A. for permission to postpone the erection of the proposed municipal buildings; and the assessing of the designs is, however, progressing.

Owing to the war it has been necessary to postpone the adjudication of the Auckland (New Zealand) Cathedral Competition. The Diocesan Board has decided to allow until November 15th for the delivery at the New Zealand Institute of Architects of the drawings of all competitors in New Zealand. The drawings will be sent to England when it is reasonably safe to do so. Competitors in England are granted an extension of time until December 15 to send in drawings.



# CHILDREN'S HOLIDAY HOME, BEACONS. FID

DESIGNED BY SAMUEL AND H A



BIRD'S-EYE PERSPECTIVE



LAYOUT PLAN

## KEY TO LAYOUT PLAN

- A : Shelter
- B : Central Block
- C : Isolation Block
- D : Paddling Pool
- E : Sand Pit
- F : Covered Way
- G : Rock Garden
- H : Vegetable Garden

**GENERAL**—It is intended to provide a holiday home for children under school age. Batches of children will come for periods of six weeks from nursery schools and day nurseries in London. It is possible that in the winter a portion of the buildings will be used as a convalescent home. In time of war the accommodation for children can be approximately doubled.

**SITE**—Well protected by trees from wind and has a gentle slope and a distant view to the south. The access road is a minor one and runs along the west side of the site. The site is near Beaconsfield, Buckinghamshire.

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# S. FIELD, BUCKS

## HARDING

**PLAN**—The children are grouped in units of 20 which are completely self-contained. Each unit has a staff consisting of a supervisor and four helpers. Cooking and laundry are carried out in the administration block, food being collected by helpers from each unit in heated trolleys. Crockery and cutlery are stored and washed up in each shelter. The helpers take their meals and recreation in a central common-room in the administration block. The administration block is placed nearest to the point of access from the road. The units are arranged to be independent of each other and are so orientated that the dormitories receive early morning sun and the playrooms practically continuous sun. The helpers' rooms are placed on the first floor and have uninterrupted views to the south-east. Both playrooms and dormitories have complete cross-ventilation by means of clerestory windows. The isolation unit is placed near the administration for ease of supervision.

**CONSTRUCTION**—Walls: timber framed, faced externally with cedar weatherboarding and, in certain cases, waterproof plywood. Internal facing with plywood, hardboard, etc. Floors: hollow, with deal boards and linoleum. Roofs: insulated with fibreboard and covered with asbestos cement (corrugated); covered way also with asbestos cement (corrugated). Flat roofs to lavatories, cloakrooms, verandahs, etc., are covered with built-up bituminous roofing, grit finished.

**EXTERNAL FINISHES**—Windows are of timber. The main windows to the dormitories and playrooms are special sash windows which are the only type of window which will give a clear opening without obstruction. The diagrams on page 528 show the arrangement.

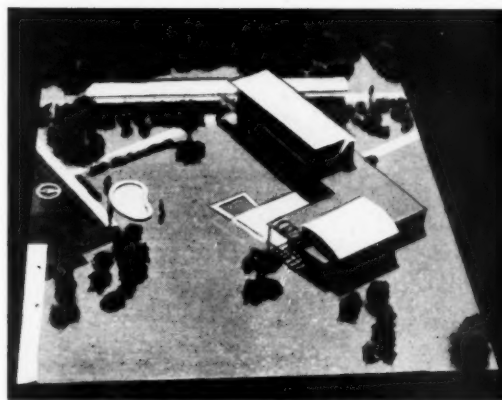
**INTERNAL FINISHES**—As far as possible the materials are chosen for their own decorative value without the use of paint, but each unit will have its own scheme of decoration by varying the colours of linoleum, window frames and small fittings. In general, finishing materials are of the very simplest kind, the main consideration in their selection being durability and ease and economy of maintenance.

**SERVICES**—Heating: electric radiant and hot water in units. Coke boiler, central heating and hot water for administration block. No open coal fires. Cooking: Aga or other heat storage cooker.

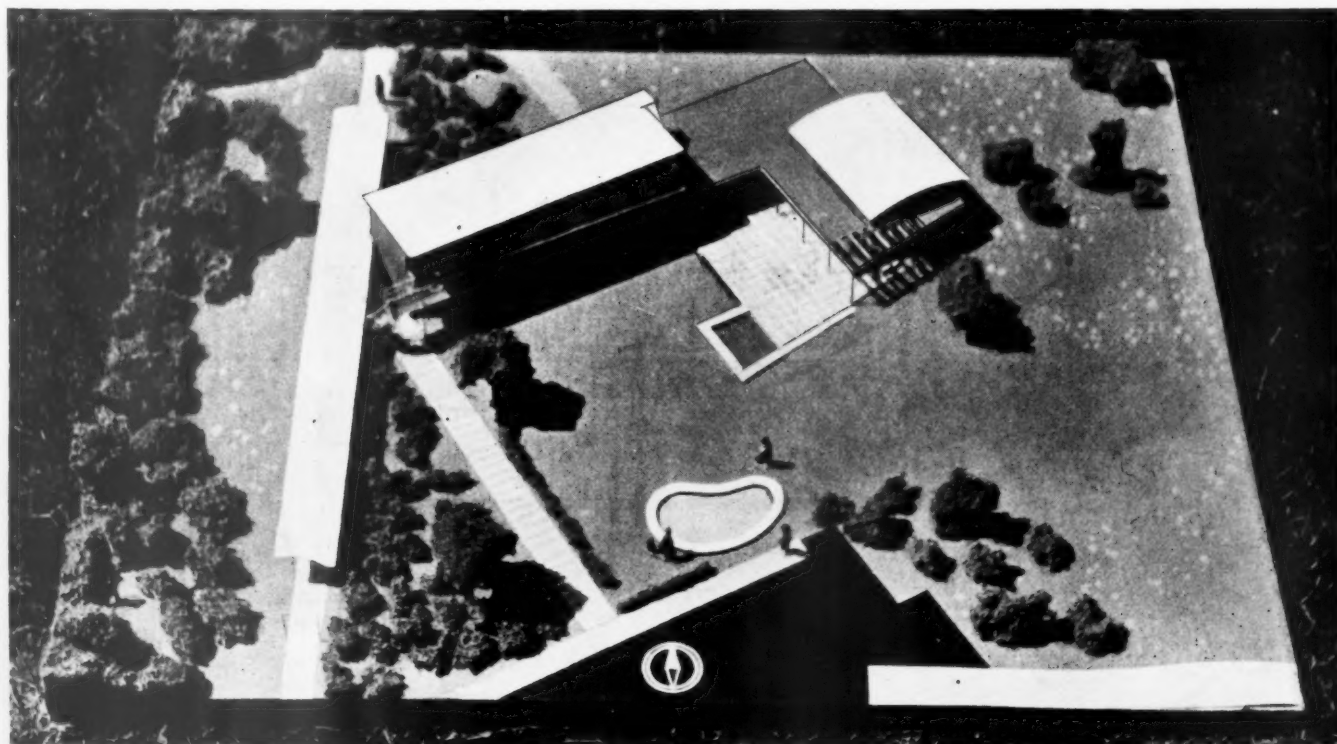
**COST**—Estimated cost of scheme: £15,000.



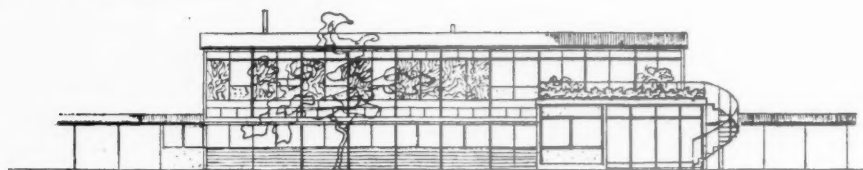
SHELTER: PLAYGROUND AND PLAYROOM



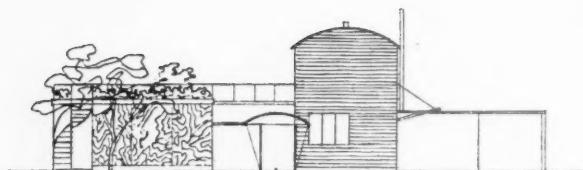
ABOVE AND BELOW: TWO VIEWS OF A MODEL OF A TYPICAL SHELTER UNIT



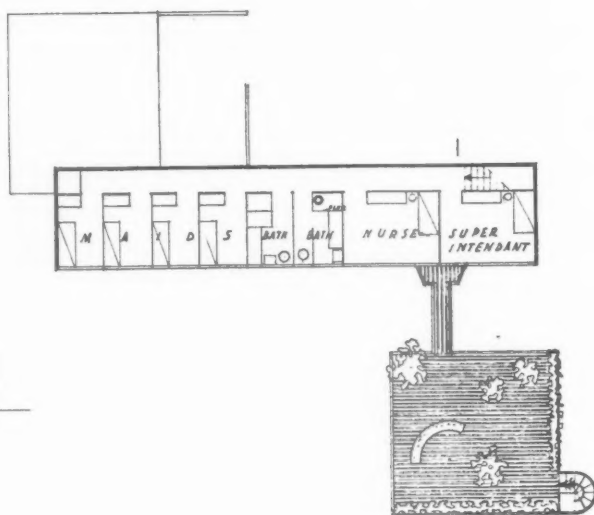
# CENTRAL BLOCK



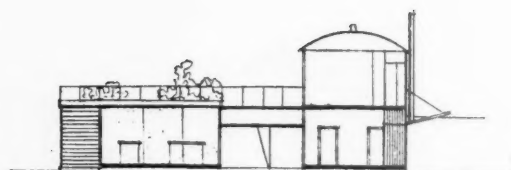
SOUTH-EAST ELEVATION



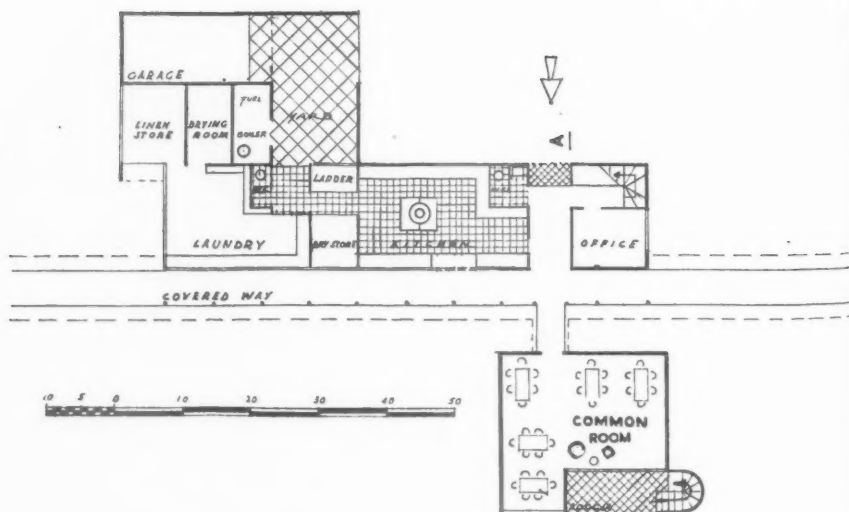
NORTH-EAST ELEVATION



FIRST FLOOR PLAN



SECTION A-A



GROUND FLOOR PLAN

CHILDREN'S HOLIDAY HOME, BEACONSFIELD,



CENTRAL BLOCK (cont.)

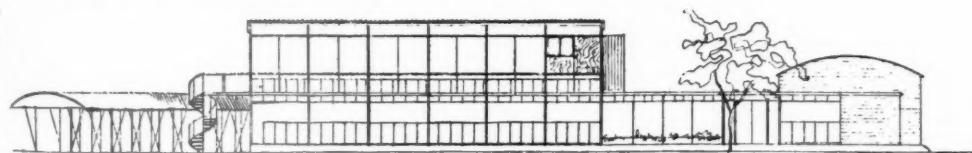


SOUTH VIEW

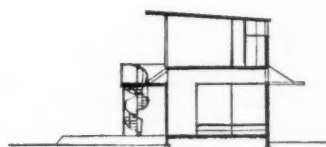


EAST VIEW

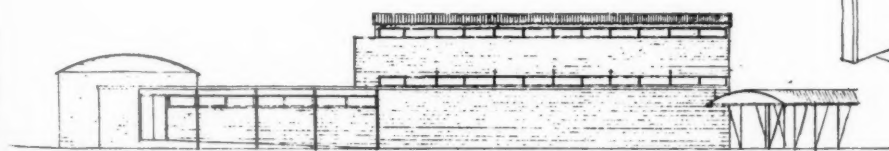
SHELTER AND DORMITORY BLOCK



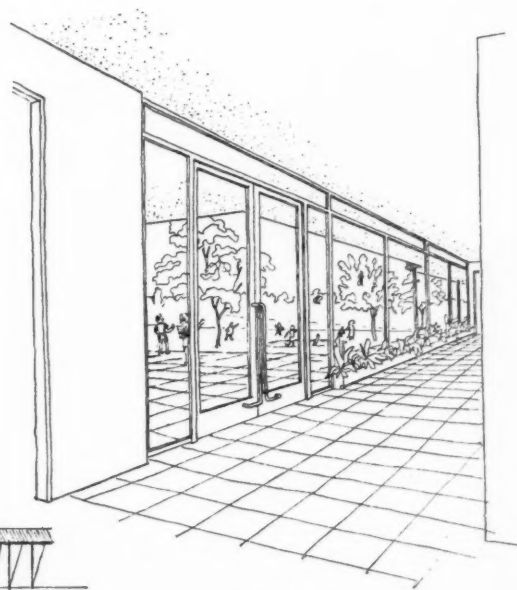
SOUTH-EAST ELEVATION



SECTION A-A

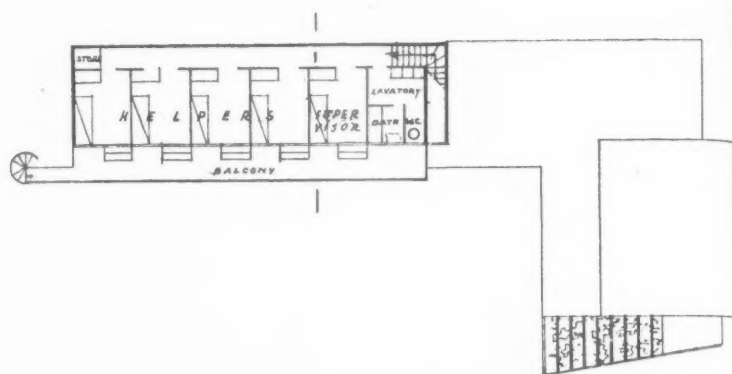


NORTH-EAST ELEVATION

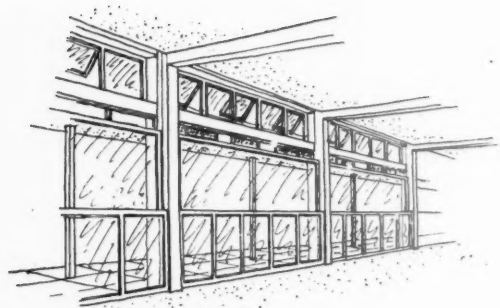


HALL

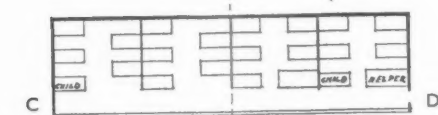
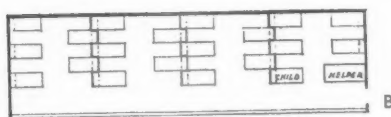
# SHELTER AND DORMITORY BLOCK (cont.)



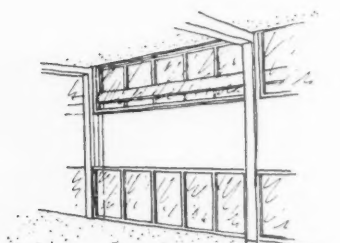
FIRST FLOOR PLAN



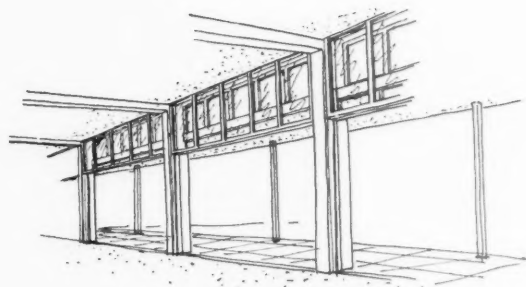
WINDOWS: WINTER VENTILATION



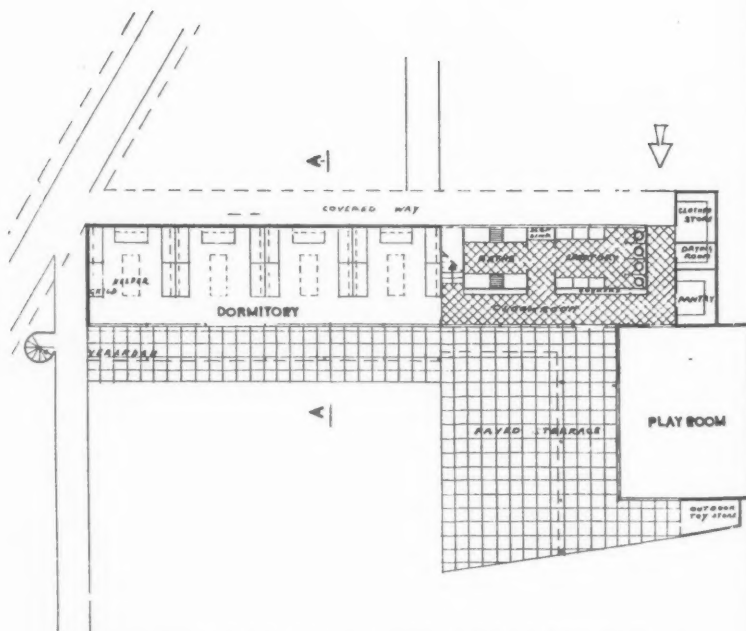
ALTERNATIVE BED ARRANGEMENTS



SUMMER VENTILATION: 2



SUMMER VENTILATION: 1



GROUND FLOOR PLAN: BED ARRANGEMENT, A

CHILDREN'S HOLIDAY HOME, BEACONSFIELD, BUCKS

SOLA  
BLOC

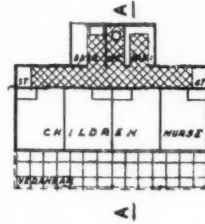
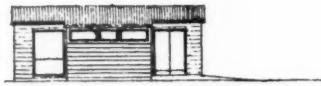
EV  
CR

ENTRANCE FROM



GENERAL  
College  
possible  
war 220  
near-by  
Classroom  
provided  
and the  
arranged

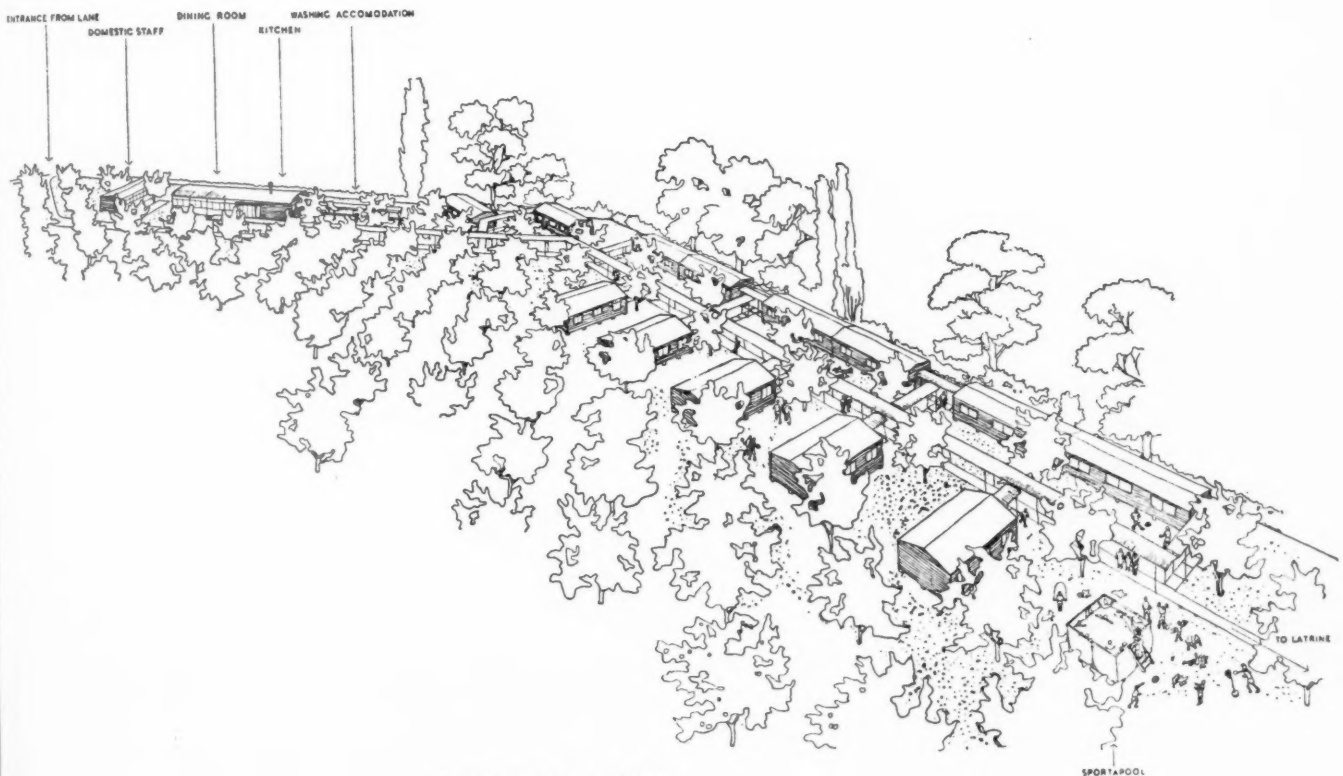
PLAN—

ISOLATION  
BLOCK

NORTH ELEVATION AND PLAN

EVACUATION AND HOLIDAY CAMP,  
CRANBROOK, KENT

BY SAMUEL AND HARDING



BIRD'S-EYE VIEW

**GENERAL AND SITE**—Evacuation and Holiday Camp for the Dulwich College Preparatory School. Requirements: to provide as economically as possible a camp to accommodate in time of peace 120 boys and in time of war 220 boys. Site consists of about 10 acres, and a house and two cottages near-by provide sanatorium and some administration accommodation. Classrooms, swimming-bath and playing fields at Cranbrook School are provided in war-time. The position chosen for the camp is in an orchard, and the buildings are placed as far as possible from the house and are arranged to give ease of access and reasonable orientation.

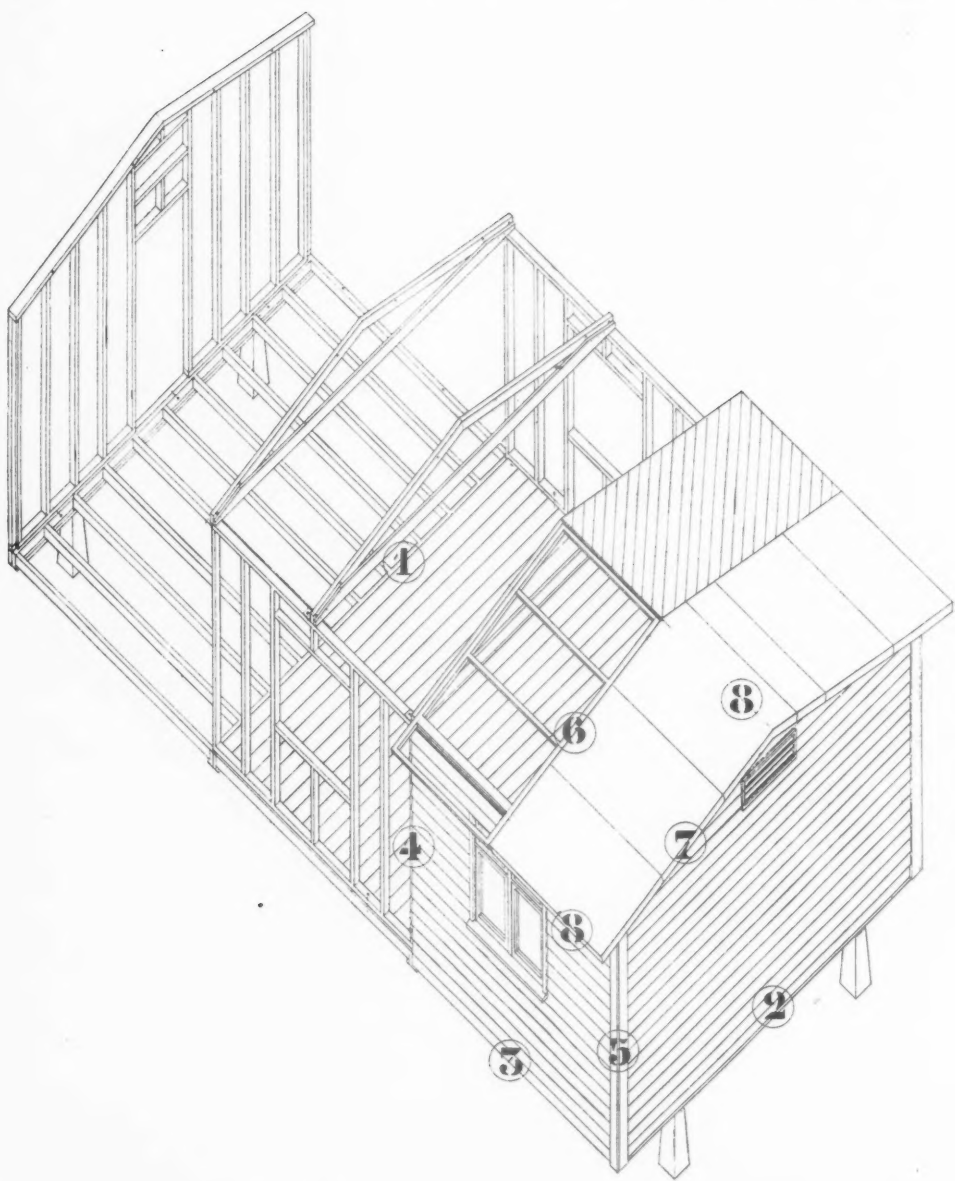
**PLAN**—Staff and kitchen near road for easy access. Lavatories at opposite

end for privacy. Between each pair of huts closets are provided for night use. Covered access to every hut.

**CONSTRUCTION AND FINISHES**—Prefabricated timber units. The whole job was constructed and erected in six weeks. External walls 3 in. by 2 in. studs faced with diagonal boarding, building paper and cedar weather-boarding. Internal facing, gaboony mahogany faced plywood. Roofs, 2-ply felt on diagonal boarding; internal insulation, fibreboard. Covered way covered with corrugated asbestos cement.

**SERVICES**—Heating throughout: electric radiant heaters high up on walls. Cooking: coke; camp cookers.

**COST**—£2,500, excluding equipment, roads and paths.

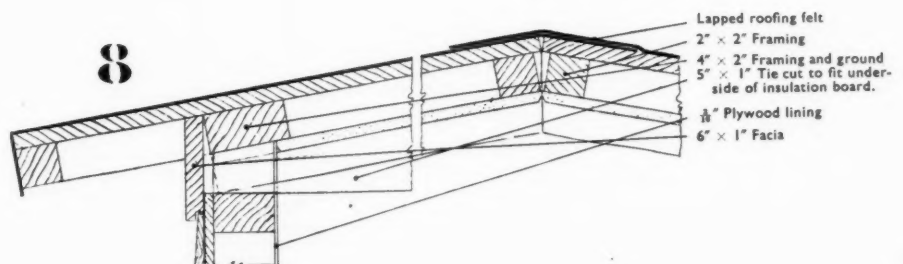
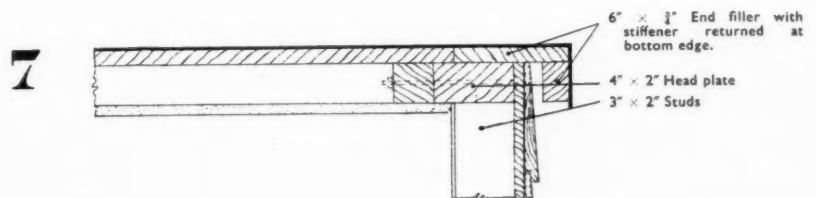
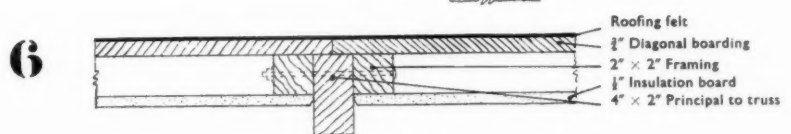
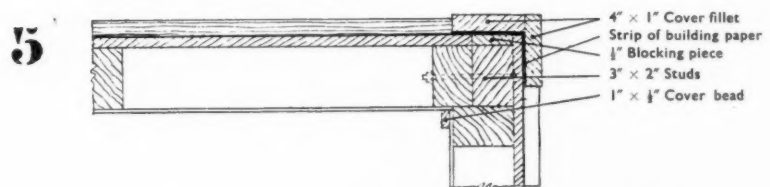
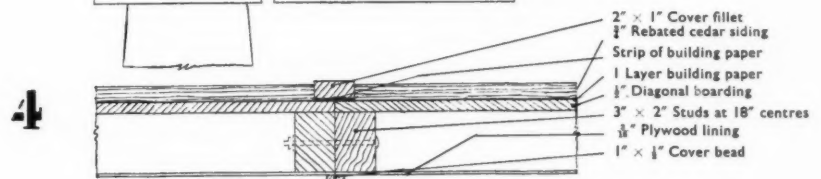
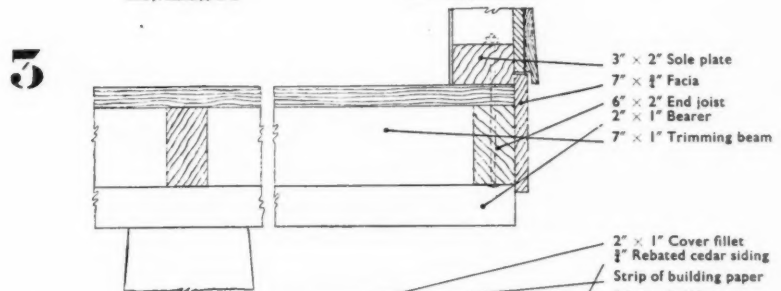
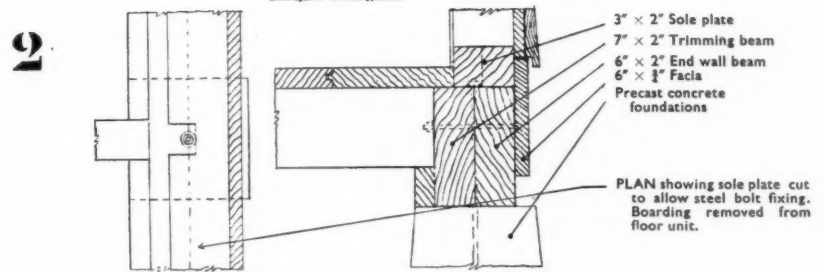
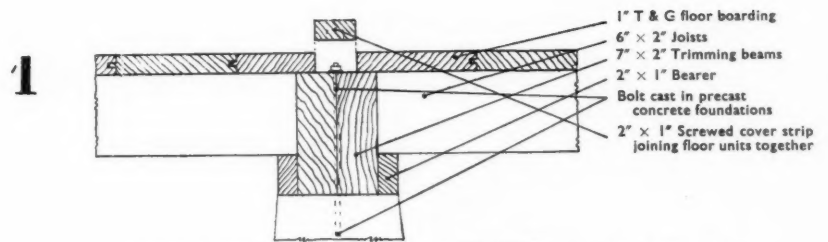


## EVACUATION AND HOLIDAY CAMP, CRA



DESIGNED BY SAMUEL AND H A





P, CRANBROOK



D H A R D I N G

# TRADE NOTES

[By PHILIP SCHOLBERG]

## Ever So Helpful

AN acquaintance of mine wrote to a firm of furnisiers in the Tottenham Court Road asking them if they could move some furniture out of London. Their answer was a slightly apologetic "No," but they enclosed, helpfully, a folder of their latest tea service: "Gay, almost flamboyant, yet restful in its rhythmic balance of panelling and spray. This decoration has quite a distinct trace of 17th-century Chinese influence in the subtle and yet incitive drawing of flowers and birds." The Babu English and spellings of Dutch bulb growers are often said to be done deliberately, just as most T model stories were manufactured in the Ford publicity department, but is the cult spreading among the furnisiers? But what admirable salesmanship to sell new stuff to all those who have been forced to leave their china behind them.

## B.R.S.'s Floating Floor

The latest report from the Building Research Station\* contains, amongst many other things, details of a most ingenious cast *in situ* floating floor which has been developed by the officials of the Station.

\* *The Reduction of Noise in Buildings.* By A. H. Davis and C. J. Morreau. B. R. Special Report No. 26. H.M. Stationery Office. 1s.

The structural floor is covered with a layer of paper, and the 2-in. subsidiary concrete floor is cast on top of it. This subsidiary floor is reinforced with steel mesh, and, at 2-ft. centres, banded pipe sockets, threaded internally, are cast in. These sockets are 2 in. deep so that they are open at the top and the bottom rests on the paper underlay. 1-in. square rubber cubes are then placed at the bottom of each socket, and a plug is screwed down into each socket after the subsidiary floor has had time to harden. As the plugs are screwed down on to the rubber, the whole of the subsidiary floor is jacked up, leaving an air space whose depth is adjustable according to the length of the screwed plugs. The layer of paper allows the subsidiary floor to be lifted from the structural floor, and this beautifully simple method also makes it possible to replace the rubber buffers at any time without disturbing the concrete. After the plugs have been screwed in, a cover cap follows at the upper end of each socket, leaving a flush surface to the floor.

While the jacking-up process will have to be done with a certain amount of care, there seem to be no difficulties likely with this form of construction. Costs, in comparison with other types of sound-proof floor, should be remarkably low, and this seems to be one of the rare occasions when one may justifiably adopt a Rothermereish

habit and take off one's hat to all concerned. The Report is guarded about the actual responsibility for this design, "developed at the Station" being a doubtless accurate but somewhat guarded statement. If the credit should go to the authors of this report, we can still say "Thank you" to Dr. Davis. Before his death a short time ago, Mr. Morreau had saved goodness knows how many architects from doing stupid things: now it would seem that he has helped to provide an adequate answer to a whole lot of people's troubles.

## Cooking in the Country

Nobody seems quite to know just how many Londoners are now living in the country, but a number of people were said to have bought cottages in remote parts even during the business of September, 1938. Miles from anywhere, cooking is likely to be a problem. It can, of course, be solved once and for all by either of the smaller Aga or Esse models, but so many people are used to cooking with gas that it is worth remembering that gas has for some years been obtainable compressed in bottles. Not the ordinary town gas, but a methane or butane of quite considerable calorific value, and just as easy in use. Almost any apparatus designed for town gas can be altered for the bottled kind at small cost, since it is only a matter of increasing the gas supply holes. Bottles are changed by the local distributors as necessary, and it is possible to fit a change-over valve and use two bottles

Continued on page xxx

# PRICES

**IMPORTANT NOTE.**—Prices given below are for works executed complete and are for average job in the London area: all prices include overheads 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 material with the addition of ten 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.

**NOTE:**—Prices for Approximate Estimates are held over from this issue.

## 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 | 42/- | 51/2 |
|                                                            |            | 32/- | 40/2 |
| ● Ditto tongued and grooved ditto ..                       | per square | 46/7 | 56/8 |
|                                                            |            | 35/6 | 44/8 |
| * T. & G. B.C. Pine rift flooring in narrow widths .. .. . | per square | 53/9 | —    |
|                                                            |            | 40/5 |      |

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

|                             |            | 1" nominal | 1½" nominal |
|-----------------------------|------------|------------|-------------|
|                             |            | £ s. d.    | £ s. d.     |
| ● Austrian Wainscot Oak ..  | per square | 11 3 2     | 13 5 9      |
| ● Plain Japanese Oak ..     | per square | 9 8 4      | 11 7 8      |
| ● Plain American Oak ..     | per square | 9 3 9      | 11 9 8      |
| ● Pitch Pine .. .. .        | per square | 8 15 8     | 10 19 6     |
| ● British Columbian Pine .. | per square | 5 18 2     | 6 14 6      |
| ● Canadian Maple .. .. .    | per square | 8 13 10    | 10 13 3     |

● Items marked thus have risen since September 21.

### JOINER—(continued)

|                       |            | 1" nominal | 1½" nominal |
|-----------------------|------------|------------|-------------|
|                       |            | £ s. d.    | £ s. d.     |
| ● Burma Teak .. .. .  | per square | 11 3 2     | 13 11 8     |
| ● English Oak .. .. . | per square | 12 15 11   | 15 19 11    |
| ● Gurjun .. .. .      | per square | 8 13 10    | 10 13 3     |
| ● Jarrah .. .. .      | per square | 8 7 4      | 10 8 0      |

#### Wall Linings

|                                                                              |                |      |      |
|------------------------------------------------------------------------------|----------------|------|------|
| ½" B.C. Pine tongued and grooved V-jointed Matching in narrow widths .. .. . | per square     | 34/2 | 23/1 |
| ½" (6 mm.) Birch (A) Plywood and fixing to walls                             | per square     | 52/5 | 42/6 |
| ¾" Asbestos cement sheets butt jointed                                       | per foot super | -/4  | -/2½ |
| ● ½" Fibre board and fixing to walls                                         | per yard super | 3/1  | 2/6  |
| Deal battens as grounds plugged to brickwork                                 | per foot super | -/1½ | -/0½ |
| 2" x ½" wrot and chamfered fillets .. .. .                                   | per foot run   | -/1½ | -/0½ |
| 2" x ½" wrot and moulded ditto .. .. .                                       | per foot run   | -/1½ | -/0½ |

\* Items marked thus have fallen since September 21.

# CURRENT PRICES

## JOINER

BY DAVIS AND BELFIELD

| Skirtings                                                                                     |              | Deal | Austrian Oak |
|-----------------------------------------------------------------------------------------------|--------------|------|--------------|
| 1" stock chamfered or moulded 4" high, fixed to and including grounds and backings planted on | per foot run | -3½  | -10½         |
|                                                                                               |              | -2   | -7½          |
| Add for plugging to brickwork ..                                                              | per foot run | -0½  | -0½          |
| Fitted ends on hardwood price as 4" of skirtings, mitres as 6".                               |              |      |              |
| Fitted ends, etc., on deal skirting included in price per foot run.                           |              |      |              |

| Casements and Fanlights                                                                                                                                    |                | 1½"       | 2"       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|----------|
| Deal stock moulded sashes divided into squares with glazing bars                                                                                           | per foot super | 1/4½ -/4½ | 1/5½ -/5 |
| 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      |

| Doors in Deal                                                   |                | ¾"   | 1"    |
|-----------------------------------------------------------------|----------------|------|-------|
| Matchboarded, ledged and braced door                            | per foot super | 1/-  | 1/2   |
|                                                                 |                | -/4½ | -/5½  |
|                                                                 |                | 1½"  | 1¾"   |
| Framed, ledged and braced door, filled in with matchboarding .. | per foot super | 1/7½ | 1/10  |
|                                                                 |                | -/6  | -/6½  |
| Ditto garage doors in pairs                                     | per foot super | 1/10 | 1/10  |
|                                                                 |                | -/5½ | -/5½  |
| Labour rebated and beaded meeting styles, per foot run          |                | -/1  | -/1   |
| 4-panel                                                         |                |      |       |
| 1½" square framed, both sides                                   | per foot super | 1/8  | -/7½  |
| 2" ditto ..                                                     | per foot super | 2/-  | -/9½  |
| 1½" bead butt panels one side, but square the other ..          | per foot super | 1/9  | -/7½  |
| 2" ditto ..                                                     | per foot super | 2/2  | -/10½ |
| 1½" moulded both sides ..                                       | per foot super | 2/-  | -/9½  |
| 2" ditto ..                                                     | per foot super | 2/4  | -/11½ |
| For fixing only, stock or p.c. doors, allow                     | per foot super | -/2½ | -/2½  |

| Doors in Hardwood                            |              |      |      |
|----------------------------------------------|--------------|------|------|
| Austrian quartered oak:                      |              |      |      |
| Labour, 2 x as much as deal.                 |              |      |      |
| Materials, 3½ x ditto.                       |              |      |      |
| Labour and materials, 2½ x ditto.            |              |      |      |
| Cuban mahogany:                              |              |      |      |
| Labour, 3 x as much as deal.                 |              |      |      |
| Materials, 4½ x ditto.                       |              |      |      |
| Labour and materials, 3½ x ditto.            |              |      |      |
| Teak:                                        |              |      |      |
| Labour, 3 x as much as deal.                 |              |      |      |
| Material, 3½ x ditto.                        |              |      |      |
| Labour and material, 3½ x ditto.             |              |      |      |
| Deal stock glazing beads, mitred and bradded | per foot run | -/1½ | -/0½ |
| Ditto and fixed with brass cups and screws   | per foot run | -/3  | -/1  |

| Window and Door Linings                                                                                       |              | 1"   | 1½"   | 1¾"  |
|---------------------------------------------------------------------------------------------------------------|--------------|------|-------|------|
| Deal linings, 6" wide, tongued at angles and planted on including backings                                    | per foot run | -/6½ | -/7½  | -/8½ |
|                                                                                                               |              | -/2½ | -/3½  | -/4  |
| Add for plugging to wall ..                                                                                   | per foot run | -/0½ | -/0½  | -/0½ |
| Add for rebating ..                                                                                           | per foot run | -/0½ | -/0½  | -/0½ |
| Add for ¾" x 1½" stock Deal stop planted on                                                                   | per foot run | -/1½ | -/1½  | -/1½ |
|                                                                                                               |              | -/0½ | -/0½  | -/0½ |
| Deal window board 9" wide, with rounded nosing, tongued at back and on including bearers plugged to brickwork | per foot run | -/9½ | -/10½ | 1/0½ |
|                                                                                                               |              | -/4½ | -/5½  | -/6½ |
| 1" Deal scotia mould ..                                                                                       | per foot run | -/1½ | -/1½  | -/1½ |
|                                                                                                               |              | -/0½ | -/0½  | -/0½ |
| Austrian quartered oak linings 6" wide tongued at angles and planted on including backings                    | per foot run | 1/2½ | 1/5½  | 1/8½ |
|                                                                                                               |              | -/8½ | -/10½ | 1/0½ |
| Add for plugging to brickwork ..                                                                              | per foot run | -/1  | -/1   | -/1  |
| Add for rebating ..                                                                                           | per foot run | -/1  | -/1   | -/1  |

## JOINER—(continued)

|                                                                                                                                    |              | 1"   | 1½"   | 1¾"   |
|------------------------------------------------------------------------------------------------------------------------------------|--------------|------|-------|-------|
| Add for ½" x 2" Austrian quartered oak stop planted on ..                                                                          | per foot run | -/3½ | -/3½  | -/3½  |
|                                                                                                                                    |              | -/1½ | -/1½  | -/1½  |
| 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  | 1/11½ | 1/11½ |
|                                                                                                                                    |              | 1/0½ | 1/3½  | 1/3½  |
| 1" Austrian quartered oak scotia mould                                                                                             | per foot run | -/3½ | -/1½  | -/1½  |

| Window and Door Frames                                                                           |              | Deal  | Austrian Quartered Oak |
|--------------------------------------------------------------------------------------------------|--------------|-------|------------------------|
| 4" x 3" door frames ..                                                                           | per foot run | -/9½  | 2/2                    |
|                                                                                                  |              | -/4½  | 1/4½                   |
| 4" x 3" window frames ..                                                                         | per foot run | -/11½ | 2/6                    |
|                                                                                                  |              | -/4½  | 1/4½                   |
| 4" x 3" transoms and mullions ..                                                                 | per foot run | 1/3½  | 3/2                    |
|                                                                                                  |              | -/4½  | 1/4½                   |
| 6" x 3" door cill, sunk weathered twice throated and grooved for water bar (measured separately) | per foot run | —     | 3/5½                   |
|                                                                                                  |              | —     | 2/0½                   |
| 6" x 3" window ditto ..                                                                          | per foot run | —     | 2/9½                   |
|                                                                                                  |              | —     | 2/0½                   |
| Add or deduct for variation in sectional area per square inch ..                                 | per foot run | -/0½  | -/1½                   |
| Add for each labour, for chamfer, bead or rebate, etc. ..                                        | per foot run | -/0½  | -/1                    |
| Add for each moulding ..                                                                         | per foot run | -/0½  | -/1½                   |

| Architraves                                                                              |              | Deal | Japanese Oak |
|------------------------------------------------------------------------------------------|--------------|------|--------------|
| 1" x 3" stock chamfered or moulded architraves, including mitres on softwood, planted on | per foot run | -/3  | -/7½         |
|                                                                                          |              | -/1½ | -/4½         |
| Mitred angles on oak price as 6" of architrave.                                          |              |      |              |
| Add for plugging to brickwork ..                                                         | per foot run | -/0½ | -/0½         |
| Add for narrow splayed grounds ..                                                        | per foot run | -/1½ | -/1½         |
|                                                                                          |              | -/0½ | -/0½         |

| Shelving                                 |                | Deal | Austrian Quartered Oak |
|------------------------------------------|----------------|------|------------------------|
| Slat shelving of 1" x 2" spaced ¾" apart | per foot super | -/9  | —                      |
|                                          |                | -/3½ | —                      |
| 1" shelving ..                           | per foot super | -/10 | 2/2½                   |
|                                          |                | -/5  | 1/4½                   |
| 1½" ditto ..                             | per foot super | 1/0½ | 2/8½                   |
|                                          |                | -/6½ | 1/8½                   |
| 1" cross-tongued shelving ..             | per foot super | 1/-  | 2/6½                   |
|                                          |                | -/5½ | 1/5½                   |
| 1½" ditto ..                             | per foot super | 1/2½ | 3/0½                   |
|                                          |                | -/6½ | 1/9½                   |
| 1" x 2" chamfered bearers planted on     | per foot run   | -/2½ | -/5½                   |
|                                          |                | -/0½ | -/2½                   |
| Add if bearers plugged to brickwork      | per foot run   | -/0½ | -/0½                   |

| Teak Draining Boards and Twice Oiling                                          |                |      |       |
|--------------------------------------------------------------------------------|----------------|------|-------|
| 1½" Moulmein cross-tongued fluted draining board fixed to slight falls ..      | per foot super | 3/9  | 1/11½ |
| ½" x 2" rounded rim bedded in white lead and screwed to edge of draining board | per foot run   | -/6½ | -/2½  |
| ½" x 4" rounded skirting fillet ditto                                          | per foot run   | -/8½ | -/3½  |

| Staircases                                     |                | Deal | Austrian quartered oak |
|------------------------------------------------|----------------|------|------------------------|
| 1½" treads and 1" risers ..                    | per foot super | 2/-  | 4/6                    |
|                                                |                | -/9  | 2/-                    |
| 2" strings, fixed ..                           | per foot run   | 1/9½ | 4/6½                   |
|                                                |                | -/7½ | 2/8½                   |
| Housing treads and risers to strings ..        | each           | -/9  | 1/6                    |
| 3" x 2½" Moulded handrail ..                   | per foot run   | —    | 1/6½                   |
|                                                |                | —    | -/10½                  |
| 1½" x 1½" square balusters 2' 6" long ..       | each           | -/10 | 1/9                    |
|                                                |                | -/2  | -/5½                   |
| 4" x 4" Newels with chamfered edges and fixing | per foot run   | 1/4½ | 3/2                    |
|                                                |                | -/8½ | 1/11                   |

# CURRENT PRICES

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

### IRONMONGER

| Fixing only                                                        |          |      |  |
|--------------------------------------------------------------------|----------|------|--|
| 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      | -10  |  |
| Hat and coat hooks .. .. each                                      | -3       | -4   |  |
| Cupboard knobs .. .. each                                          | -3       | -4   |  |
| Night latches .. .. each                                           | 1/6      | 2/-  |  |
| Thumb latches .. .. each                                           | 1/6      | 2/-  |  |
| Letter plate and knocker, including perforation in door .. .. each | 2/6      | 3/4  |  |
| Barrel or tower bolts .. .. each                                   | -10      | 1/1  |  |
| Flush bolts .. .. each                                             | 1/6      | 2/-  |  |
| Rim locks and furniture .. .. each                                 | 2/-      | 2/8  |  |
| Mortice ditto .. .. each                                           | 3/-      | 4/-  |  |
| Rebated ditto .. .. each                                           | 3/6      | 4/8  |  |
| Grip handles .. .. each                                            | -6       | -8   |  |
| Cupboard locks .. .. each                                          | 1/-      | 1/4  |  |
| Spring catches .. .. each                                          | -10½     | 1/1½ |  |
| Casement fastener .. .. each                                       | 1/-      | 1/4  |  |
| Ditto stays .. .. each                                             | -10      | 1/1  |  |
| Sash fastener .. .. each                                           | -8       | -11  |  |

### STEEL AND IRONWORKER

(For Rainwater Goods—see "Plumber.")

| Steelwork                                                       |         |         |  |
|-----------------------------------------------------------------|---------|---------|--|
| * Basis for plain rolled steel joists .. ..                     | per ton | £ s. d. |  |
|                                                                 |         | 16 3 0  |  |
|                                                                 |         | 13 8 0  |  |
| Fabricated Steelwork                                            |         |         |  |
|                                                                 |         | £ 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 Sheet                                                                                                    |            |         |      |
|--------------------------------------------------------------------------------------------------------------------------------|------------|---------|------|
|                                                                                                                                | 20 B.G.    | 22 B.G. |      |
| Sheeting in 3" corrugations and fixing on wood framing with screws and galvanized embossed curved washers including laps .. .. | per square | 52/3    | 46/1 |
|                                                                                                                                |            | 42/3    | 36/8 |
| Ditto fixed to steel framing .. ..                                                                                             | 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                             |  |
|                                                                                 | -9½            | -15                             |  |
| Render and set in lime and hair .. ..                                           | 1/8            | -3½                             |  |
|                                                                                 | -6½            | -3½                             |  |
| Render, float and set in lime and hair .. ..                                    | 2/-            | -3½                             |  |
|                                                                                 | -8½            |                                 |  |
| Plaster, float and set ditto on lathing (measured separately) .. ..             | 2/1½           | -4                              |  |
|                                                                                 | -9½            |                                 |  |
| Render and set with Sirapite .. ..                                              | 1/9½           | -3½                             |  |
|                                                                                 | -8             |                                 |  |
| Plaster, float and set ditto on lathing (measured separately) .. ..             | 2/3            | -4                              |  |
|                                                                                 | -10½           |                                 |  |
| Skimming coat Sirapite .. ..                                                    | 1/5½           |                                 |  |
|                                                                                 | -4½            |                                 |  |
| 1/2" thick plaster board fixed including covering joints with scrim cloth .. .. | 2/-            |                                 |  |
|                                                                                 | 1/2½           |                                 |  |

• Items marked thus have risen since September 21.

### PLASTERER—(continued)

| Keenes                                                                         |                   |                                 |     |
|--------------------------------------------------------------------------------|-------------------|---------------------------------|-----|
|                                                                                | 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               |                                 |     |
| Mouldings and Labours                                                          |                   |                                 |     |
|                                                                                | 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)                         |                |      |     |
|----------------------------------------------------------|----------------|------|-----|
|                                                          | 1/2"           | 3/4" |     |
| Screeds to floors for wood or tiles per yard super       | 1/2½           | 1/4  |     |
|                                                          | -4½            | -6½  |     |
| Screeds for tiling, etc., on walls per yard super        | 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 | 17/8  | 12/11 |
| • Extra for rounded edge tiles .. ..                          | per yard run   | 1/2½  | 1/1½  |
| • 6" x 6" x 3/8" coloured enamel bright glazed per yard super |                | 22/11 | 18/2  |
| • Extra for rounded edge tiles .. ..                          | per yard run   | -4½   | -3½   |
| • 6" x 6" x 3/8" eggshell gloss enamelled per yard super      |                | 23/10 | 19/1  |
| • Extra for rounded edge tiles .. ..                          | per yard run   | -4½   | -3½   |

### EXTERNAL PLUMBER

| Lead                                                                |              |                                  |           |                     |
|---------------------------------------------------------------------|--------------|----------------------------------|-----------|---------------------|
|                                                                     | Flats        | Gutters, Flashings, Stepped etc. | Flashings | Soakers cut to size |
| • Milled sheet lead and labour per cwt.                             | 45/-         | 46/1                             | 47/3      | 39/10               |
|                                                                     | 31/6         | 31/6                             | 31/6      | 31/6                |
| 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 fallen since September 21.



# CURRENT PRICES

## EXTERNAL AND INTERNAL PLUMBER

BY DAVIS AND BELFIELD

**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     |
|                                      |              | 1/1 1/2                 | 1/5 1/2 |
| Extra for bends .. .. .              | each         | 2/4                     | 2/11    |
|                                      |              | 1/6                     | 2/1     |
| Ditto 6" offset .. .. .              | each         | 2/4                     | 2/11    |
|                                      |              | 1/4                     | 1/11    |
| Ditto single branches .. .. .        | each         | 2/10                    | 3/8     |
|                                      |              | 1/10                    | 2/8     |
| Ditto shoes .. .. .                  | each         | 2/4                     | 3/-     |
|                                      |              | 1/7                     | 2/-     |
| Square and rectangular pipes .. .. . | per foot run | 3 1/2" x 3 1/2" 4" x 3" | 2/10    |
|                                      |              | 2/6 1/2                 | 2/3     |
| Extra for elbows (fitted) .. .. .    | each         | 6/6                     | 5/11    |
|                                      |              | 5/3                     | 4/8     |
| Ditto single branches .. .. .        | each         | 6/7                     | 6/3     |
|                                      |              | 5/1                     | 4/9     |
| Ditto shoes .. .. .                  | each         | 7/2                     | 6/6     |
|                                      |              | 6/1                     | 5/5     |

*Gutters fixed to fascia.*

|                            |              | 4"      | 5"       | 6"      |
|----------------------------|--------------|---------|----------|---------|
| Half-round gutters .. .. . | per foot run | 1/1     | 1/2 1/2  | 1/7 1/2 |
|                            |              | -9      | -10      | 1/2 1/2 |
| Extra for angles .. .. .   | each         | 1/9     | 2/-      | 2/6     |
|                            |              | 1/-     | 1/2 1/2  | 1/8     |
| Ditto nozzles .. .. .      | each         | 1/7     | 1/10 1/2 | 2/3     |
|                            |              | 1/-     | 1/3      | 1/7     |
| Ditto stop ends .. .. .    | each         | 1/0 1/2 | 1/3      | 1/4 1/2 |
|                            |              | -8 1/2  | 1/-      | -10 1/2 |
| Ogee gutters .. .. .       | per foot run | 1/2     | 1/4      | 1/8 1/2 |
|                            |              | -10     | -11 1/2  | 1/3 1/2 |
| Extra for angles .. .. .   | each         | 1/9     | 2/1 1/2  | 2/3     |
|                            |              | 1/-     | 1/4      | 1/5     |
| Ditto nozzles .. .. .      | each         | 1/8 1/2 | 2/2 1/2  | 2/5     |
|                            |              | 1/1 1/2 | 1/7      | 1/9     |
| Ditto stop ends .. .. .    | each         | 1/1 1/2 | 1/4 1/2  | 1/7 1/2 |
|                            |              | -9 1/2  | 1/-      | 1/2 1/2 |

**INTERNAL PLUMBER***Lead Pipes**Service.*

|                                   |              | 1/2"    | 3/4"    | 1"      | 1 1/4" |
|-----------------------------------|--------------|---------|---------|---------|--------|
| ● Pipes laid in trenches .. .. .  | per foot run | 1/0 1/2 | 1/5     | 2/0 1/2 | 2/9    |
|                                   |              | -8      | 1/0 1/2 | 1/6 1/2 | 2/-    |
| Add if fixed on walls .. .. .     | per foot run | -1 1/2  | -2      | -2 1/2  | -3 1/2 |
| Ditto if in short lengths .. .. . | per foot run | -1      | -1      | -1 1/2  | -2     |
| ● Pipes laid in trenches .. .. .  | per foot run | 3/5 1/2 | 4/8 1/2 | —       | —      |
|                                   |              | 2/6 1/2 | 3/7 1/2 | —       | —      |
| Add if fixed on walls .. .. .     | per foot run | -5      | -6      | —       | —      |
| 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 | 1/-     | 1/4 1/2 | 1/10 1/2 | 2/6    |
|                                           |              | -5 3/4  | -9      | 1/0 1/2  | 1/4    |
| Add if in short lengths .. .. .           | per foot run | -1      | -1      | -1 1/2   | -2     |
| ● Cold water pipes fixed to walls .. .. . | per foot run | 3 1/2   | 4/0 1/2 | —        | —      |
|                                           |              | 1/8 1/2 | 2/3 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 1/2  | 1/0 1/2 | 1/3 1/2 | 1/6 1/2 |
|                                                           |              | -3 1/2  | -5 1/2  | -8      | -10 1/2 |
| ● Waste and overflow pipes fixed in short lengths .. .. . | per foot run | 1 1/2   | 2"      | 2 1/2   | 3"      |
|                                                           |              | 2/0 1/2 | 2/9     | —       | —       |
|                                                           |              | 1/1 1/2 | 1/6 1/2 | —       | —       |

*Soil and Ventilating*

|                                                          |              | 3 1/2"  | 4"       | 4 1/2"   |
|----------------------------------------------------------|--------------|---------|----------|----------|
| ● Pipes fixed, including lead tacks per foot run .. .. . |              | 4/7 1/2 | 5/9 1/2  | 6/11 1/2 |
|                                                          |              | 3/-     | 3/10 1/2 | 4/9 1/2  |
| Bends .. .. .                                            | each         | 1/6     | 2/9      | 3/9      |
|                                                          |              | 3 1/2   | 4"       | 4 1/2    |
| Soldered joints to fittings .. .. .                      | each         | 1/9     | 2/-      | 2/3 1/2  |
|                                                          |              | -6      | -9       | 1/3      |
| Soldered branch joints (price as largest branch) .. .. . | each         | 1/11    | 2/2      | 2/5 1/2  |
|                                                          |              | -6      | -9       | 1/3      |
| Soldered branch joints (price as largest branch) .. .. . | each         | 3/7     | 4/-      | 4/7      |
|                                                          |              | 1/6     | 2/4      | 2/10     |
| Wrap small pipes with hair felt .. .. .                  | per foot run | -6      | -3 1/2   | —        |

**INTERNAL PLUMBER—(continued)***Drawn Lead Traps*

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

*Brasswork (Best Quality)*

|                                                                                                    |      | 1/2"     | 3/4"     | 1"        |
|----------------------------------------------------------------------------------------------------|------|----------|----------|-----------|
| ● Brass screwdown stop cocks including two soldered joints .. .. .                                 | each | 7/10 1/2 | 10/5 1/2 | 14/5 1/2  |
|                                                                                                    |      | 5/4 1/2  | 7/11 1/2 | 11/10 1/2 |
| ● Ditto, including two red lead joints for iron .. .. .                                            | each | 5/-      | 7/-      | 10/4      |
|                                                                                                    |      | 3/6      | 5/4      | 8/6       |
| ● Ditto, including one soldered and red lead joint .. .. .                                         | each | 6/8      | 7/10 1/2 | 12/7 1/2  |
|                                                                                                    |      | 4/8      | 5/9 1/2  | 10/4 1/2  |
| ● High pressure Portsmouth pattern ball valve with flynut and union and one soldered joint .. .. . | each | 9/6      | 12/3     | 21/5      |
|                                                                                                    |      | 6/9      | 9/6      | 18/6      |
| ● Ditto, including red lead joint for iron .. .. .                                                 | each | 7/9      | 10/1 1/2 | 18/3      |
|                                                                                                    |      | 5/8      | 7/10 1/2 | 15/10     |
| Brass thimble and soldered and cement joints .. .. .                                               | each | 5/1      | 9/-      | 6/-       |
|                                                                                                    |      | 2/11     | 6/-      | 10/1      |
| Ditto, with solder and caulked lead joints .. .. .                                                 | each | 5/8      | 10/1     | 6/4       |
|                                                                                                    |      | 3/5      | —        | —         |

*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/-      |
|                                                                     |              | -5      | -6      | -8      | -11      | 1/2 1/2  | 1/6 1/2  |
| Ditto in short lengths, fittings, etc., measured separately .. .. . | per foot run | -10 1/2 | -11 1/2 | 1/4     | 1/10 1/2 | 2/5 1/2  | 3/1 1/2  |
|                                                                     |              | -4 1/2  | -5      | -6 1/2  | -9 1/2   | 1/0 1/2  | 1/3 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      |
|                                                                     |              | -7 1/2  | -10     | 1/1 1/2 | 1/10     | 2/3      | 3/7      |
| Round elbows .. .. .                                                | each         | 1/4 1/2 | 1/7     | 1/9 1/2 | 2/3 1/2  | 2/9 1/2  | 4/5      |
|                                                                     |              | -10     | 1/-     | 1/2     | 1/7 1/2  | 1/11 1/2 | 3/3      |
| Square ditto .. .. .                                                | each         | 1/3 1/2 | 1/5 1/2 | 1/8     | 2/2      | 2/7 1/2  | 4/1 1/2  |
|                                                                     |              | -9      | -10 1/2 | 1/0 1/2 | 1/6      | 1/9 1/2  | 2/11 1/2 |
| Tees .. .. .                                                        | each         | 1/6     | 1/9 1/2 | 2/-     | 2/6      | 3/0 1/2  | 4/9      |
|                                                                     |              | -10 1/2 | 1/1 1/2 | 1/3 1/2 | 1/9      | 2/1 1/2  | 3/6      |
| Crosses .. .. .                                                     | each         | 2/9     | 3/2     | 3/10    | 5/-      | 6/-      | 9/1      |
|                                                                     |              | 1/11    | 2/3     | 2/10    | 3/9 1/2  | 4/6 1/2  | 7/3      |
| Diminishing pieces .. .. .                                          | each         | -10     | -11     | 1/2     | 1/6      | 1/11     | 2/8      |
|                                                                     |              | -4 1/2  | -5      | -6 1/2  | -8 1/2   | -11      | 1/4 1/2  |
| Caps .. .. .                                                        | each         | -7      | -8 1/2  | -10     | 1/1 1/2  | 1/5      | 2/1      |
|                                                                     |              | -3 1/2  | -4 1/2  | -5 1/2  | -8 1/2   | -10 1/2  | 1/4 1/2  |
| Plugs .. .. .                                                       | each         | -6      | -7      | -8 1/2  | -10      | 1/1      | 1/6 1/2  |
|                                                                     |              | -3      | -3 1/2  | -4 1/2  | -5 1/2   | -7       | -10 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   |
|                                                          |              | 1/3  | 1/5     | 1/10 1/2 | 3/8  | 4/4   |
| Extra for bends .. .. .                                  | each         | 3/11 | 4/10    | 6/7      | 9/4  | 12/8  |
|                                                          |              | 2/10 | 2/10    | 4/2      | 6/5  | 9/-   |
| Ditto single branches .. .. .                            | each         | 5/9  | 6/7     | 7/9      | 8/7  | 10/7  |
|                                                          |              | 2/11 | 3/2     | 3/7      | 3/6  | 4/3   |
| Ditto swannecks 6" projection .. .. .                    | each         | 4/5  | 6/5     | 8/5      | 12/5 | 16/11 |
|                                                          |              | 2/3  | 3/10    | 5/4      | 8/9  | 12/3  |
| Extra for access door or any fitting .. .. .             | each         | 6/9  | 6/9     | 7/3      | 8/6  | 8/6   |

Items marked thus have risen since September 21.

# CURRENT PRICES

## INTERNAL PLUMBER, GLAZIER AND PAINTER

BY DAVIS AND BELFIELD

## 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  | 1 0½  | 1 1½  |
| Labour and risk dressing over glass     | per foot run                | -4½   | -4½   | -4½   | -4½   |
| Capped ends to rolls                    | .. each                     | -2½   | -2½   | -2½   | -2½   |
| Extra labour to cesspools               | .. each                     | 2 7½  | 2 7½  | 3 2   | 3 2   |
| Copperworker                            |                             | 1"    | 1½"   | 2"    | 2½"   |
| Solid drawn copper tube                 | fixed to walls per foot run | -9    | -11   | 1 4½  | 1 9½  |
| Add if in short lengths                 | per foot run                | -5½   | -7    | -10½  | 1 11½ |
| 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                          |                             |       |       |       |       |
| 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   |
| Rolled sheet copper on flats            | per foot super              | 1 6   | 1 8   |       |       |
| Ditto in gutters, cover flashings, etc. | per foot super              | 1 7   | 1 9   |       |       |
| Ditto in stepped flashings              | per foot super              | 2 1½  | 2 4½  |       |       |
| Labour and risk dressing over glass     | per foot run                | -4½   | -4½   |       |       |
| Capped ends to rolls                    | .. each                     | -3½   | -3½   |       |       |
| Extra labour to cesspools               | .. each                     | 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

Under certain conditions the above prices are subject to 5 per cent. increase.

## 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      |
|                                                |                | Sizing | Staining |
| 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         |

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Continued from page 532

in succession so that there is no danger of running out, and the distributor has a few days' grace to change the empty bottle.



Cooking only for a small family, one bottle should last at least two or three weeks. The system is also used widely in country districts both in Germany and America,

and it is claimed that there are already 45,000 users in this country.—(*Calor Gas (Distributing) Co., Ltd., Belgrave House, Belgrave Street, London, W.C.*)

#### Another Good Cooker

In the spring of this year the General Electric Company announced a medium-size electric cooker which was not only well designed but marketed at a reasonable price. This was the D.C. 100 model, to which has now been added the slightly larger D.C. 105 designed in the same way (see illustration in the adjoining column) and selling at prices varying from £17 10s. to £21. Mottled grey or green with an oven thermometer is at the bottom of the price range, an oven thermostat adds 3s. to this figure, and the luxury model in white porcelain and with a thermostat is £21. Two boiling plates are arranged at the right-hand side of the hob, 7 and 8 in. diameter, while on the left is a large griller boiler measuring 12 in. by 10 in. The oven is 15 in. high, 14 in. wide and 16 in. from front to back. Total electrical loading of the cooker is about 8½ kilowatts.—(*The General Electric Company, Ltd., Magnet House, Kingsway, London, W.C.2.*)

## BUILDING NEWS

### PROVINCES

GUILDFORD. *Extensions, etc.* Plans passed by the Corporation: Extensions, Coombs Garage, Manor Way, for Messrs. Coombs and Sons; 10 shops and flats, Worpleston Road, for Messrs. W. Pleece and Son, Ltd.; four houses off Bryanstone Avenue for Mr. H. F. Ramsey; alterations, 4 Dapdune

Crescent, for Civil Service Housing Association, Ltd.; alterations and additions, Sandfield School, York Road, for Education Committee; alterations, Sandford Arms, Epsom Road, for Hodgsons Brewery Co., Ltd.; alterations, Unitarian Church, Martyr Road, for Trustees; two houses, Tilehouse Farm estate, for Messrs. C. C. Yeates & Co.; two houses, Tilehouse Farm estate, for Mr. N. Barclay; house, Meads Road, for Mrs. F. Bocking; five houses, Fairway, Merrow, for Onyx Country Estates, Ltd.; shop additions, Madrid Road, for Guildford Co-op. Soc., Ltd.; house, Tilehouse Road, for Mr. F. Aidie; seven houses, Rydes Hill Road, for Mount Ryde Development Co.; alterations, 73 North Street, for Messrs. Gammons, Ltd.; house, Beechway, for Mr. R. Little; house, Meads Road, for Mr. F. Bushrod; alterations, 5 Swan Lane, for People's Popular Preparations, Ltd.; alterations, 70 Sydenham Road, for Messrs. J. Lovibond and Sons, Ltd.; alterations, 75-6 High Street, for Central Commercial Properties, Ltd.; four bungalows, Queen Elenor Road, for Mr. J. Purser.

IPSWICH. *Business Premises.* The Corporation has sold land in Queen Street to Mr. W. A. Pratt for the erection of business premises.

LEYTON. *Cleansing Station.* Essex C.C. is to erect cleansing stations at Leyton at a cost of £4,900.

LOWESTOFT. *Fire Station.* The Corporation is to proceed with the scheme for the provision of a fire station in Normanstan Drive at a cost of £8,500.

RALEIGH. *Police Buildings.* Essex C.C. has purchased property at Raleigh for police purposes.

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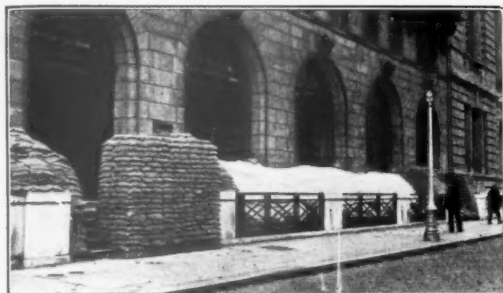
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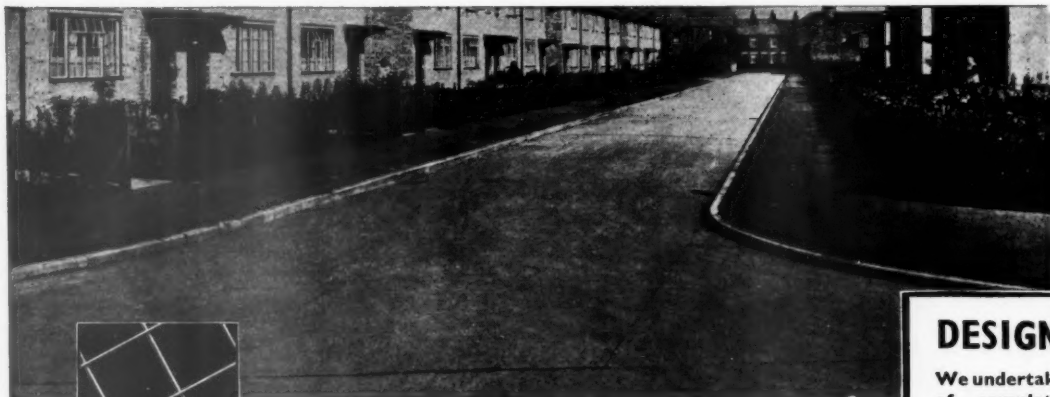


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FICATION, AND WHO'S WHO IN ARCHITECTURE)  
FROM 45 THE AVENUE, CHEAM, SURREY

THURSDAY, NOVEMBER 2, 1939.

NUMBER 2337 : VOLUME 90

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