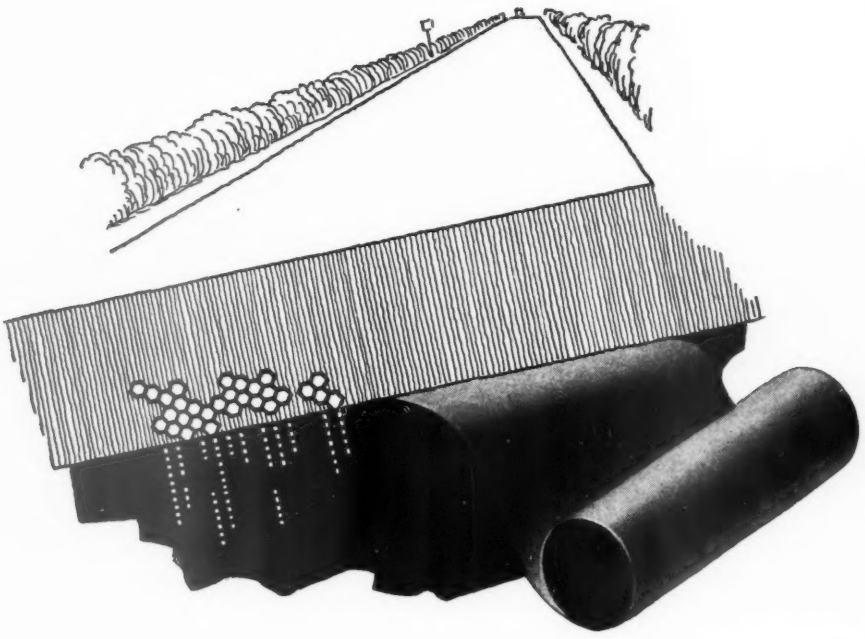

Bees at work under roads?

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

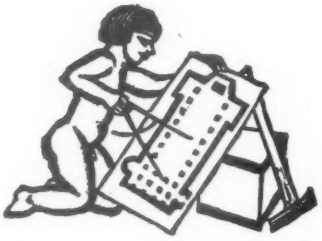
THURSDAY, APRIL 30, 1942. NUMBER 2466: VOLUME 95

PRINCIPAL CONTENTS

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this JOURNAL *should not be taken as an indication that they are necessarily available for export.*

Owing to the paper shortage the JOURNAL, *in common with all other papers, is now only supplied to newsagents on a "firm order" basis. This means that newsagents are now unable to supply the* JOURNAL *except to a client's definite order.*

In common with every other periodical and newspaper in the country, this JOURNAL *is rationed to a small proportion of its peace-time requirements of paper. This means that it is no longer a free agent printing as many pages as it thinks fit and selling to as many readers as wish to buy it. Instead a balance has to be struck between circulation and number of pages. A batch of new readers may mean that a page has to be struck off, and conversely a page added may mean that a number of readers have to go short of their copy. Thus in everyone's interest, including the reader's, it is important that the utmost economy of paper should be practised, and unless a reader is a subscriber he cannot be sure of getting a copy of the* JOURNAL. *We are sorry for this but it is a necessity imposed by the war on all newspapers. The subscription is £1 3s. 10d. per annum.*



from AN ARCHITECT'S *Commonplace Book*

"No man builds to himself alone . . . . Bad plays need not be seen, books need not be read, but nothing but blindness or the numbing of our faculty of observation can protect us from buildings in the street."

Prof. W. R. Lethaby, in Form in Civilization.

NEWS

ROYAL ACADEMY

Mr. Arthur J. Davis, F.R.I.B.A., has been elected a Royal Academician and Mr. Louis de Soissons, F.R.I.B.A., an Associate of the Royal Academy.

A.A.

The following are visiting the Architectural Association School of Architecture at the Mount House, Monken Hadley Common, Barnet, to speak to the students on the subjects indicated: May 4, J. M. Richards, "The Architect and Popular Taste;" May 18, Gordon Russell, "Architectural Students and Industrial Design;" June 8, S. Pointon Taylor, "Housing."

PAYMENT BY RESULTS

Revisions and additions to the operations bonused in building and civil engineering works scheduled under the Essential Work Order are announced by the Ministry of Works and Planning following recommendations by the special Industrial Joint Advisory Panel.

Schedules of output and bonus rates were previously approved for: excavating work, stone hardcore, concreting, bricklaying, pipelaying, reinforcing steel, carpentry and joinery, hutting, plastering, painting, glazing. Revisions have now been made in the schedules relating to: brickwork, hutting, excavating work.

New schedules have been approved to cover the following operations, viz.: asbestos cement sheeting, air raid shelters, wall and ceiling linings, brick chimneys, steel scaffolding, kerb fixing, tarmacadam and unloading and stacking materials and other similar operations.

Details of all revisions and additions are now included in a comprehensive memorandum entitled *Payment by Results*, obtainable at H.M. Stationery Office, price 4d.

HOUSING ARREARS

The magnitude of the post-war house building problem was referred to by Brig.-Gen. Sir Edward N. Whitley in his Presidential speech at the 89th annual general meeting of members of the Halifax Building Society.

The problem, he said, would have to be looked at both from a short-term view of immediate need of houses and a long-term view of the re-planning of many overgrown cities. It had been estimated that to complete the slum clearance schemes held up by the war, to overtake the deficiency in the normal number of new houses caused by the cessation of house-building since 1939, and to replace the houses destroyed by enemy action would require a million new houses for each year that the war continued.

I.A.A.S. LUNCHEON

The annual luncheon of the Incorporated Association of Architects and Surveyors was held at Claridge's Hotel, Brook Street, W.1, on Friday last. Mr. Victor S. Peel, president of the Association, presided and proposed the toast of H.M. the King. Other toasts were: "His Majesty's Government," proposed by Mr. J. E. Swindlehurst, M.A., chairman of the I.A.A.S. Council, and responded to by Mr. George Hicks, Parliamentary Secretary, Ministry of Works and Planning; "The I.A.A.S.," proposed by Mr. Alfred Bossom, M.P., F.R.I.B.A., and responded to by the President.

Mr. Swindlehurst said that the Ministry with which architects and surveyors were primarily concerned was the Ministry of Works and Planning. It was not long since they had rejoiced at its birth. Great things were expected of it and people were apt to forget that although it had developed herculean proportions it was still an infant. He had seen enough of it at close quarters to be impressed by its organization and administration. He said that the great work of planning was a matter of great moment to architects and surveyors in this country and particularly so to those in private practice. It was not, perhaps, unnatural that they should be concerned as to the measures or that part they would be called upon to play in the implementing of the policy of His Majesty's Government in the days to come. He continued: "I submit, with respect, that a pronouncement on this point at as early a time as may prove practicable would do much to allay the wonderings that beset the minds of the members of both professions at the present time."

Mr. George Hicks discussed present-day building. He said: "It is good that the Association and other bodies are anxious that methods of building adopted to meet emergency conditions should not be continued after the war. My Ministry heartily endorses this view. We have been compelled to adopt certain types of buildings—we are living in stern times which need stern measures." He thought that the Association was quite correct in now and again reverting to a criticism of his Ministry's behaviour and asking for guarantees. The Association's journal, *The Parthenon*, asked that some hutments now being erected, particularly prefabricated concrete ones, should be looked upon as for war-time only. The Ministry of Works and Planning agreed with that view. It did not want the country defaced by ugly buildings. It wanted planning and it wanted to build homes. Temporary buildings were being erected which the Government did not want to keep standing after the war was over, but circumstances might arise which would make that unavoidable. Such buildings might have to be used

Caravan City, U.S.A.

A few years ago Middle River, Maryland, U.S.A., was a small village; it consisted of two or three little shops and a dozen houses. Then, the Glenn L. Martin aircraft factory was built to meet the expanding needs of the "Defence of America" and "Aid for Britain" programmes on land near the village. Middle River became a city with many characteristics of the American boom towns of gold-rush times. Houses were not available for the thousands of workers who flocked from all over the country to work on the bombers; huts were flung up to house the workers, but it became apparent that only the Government would be able to provide satisfactory accommodation on a sufficiently large scale. The U.S. Farm Security Administration took over the job. They moved 200 family trailers to a site near the plant and formed a caravan city. Utility buildings, with sanitary facilities and rooms for washing, were built for the people living in the trailers; also, dormitories for single men. The personnel of the factory is still increasing, and another 1,000 more family trailers are to be provided. Here is the interior of one of the trailers. Further illustrations of the scheme appear on pages 311-316.

for housing of one sort or another until the country's need could be met in another way, but the Government, and the Ministry in particular, was anxious that these buildings should only be used for war purposes.

Mr. Alfred Bossom, M.P., F.R.I.B.A., congratulated the Association on its growing interlocking with other professional bodies such as the R.I.B.A. and the Institutions of Chartered Surveyors and Civil Engineers. The more the gathering together of such societies was encouraged the better it would be for the country as a whole. It was probable that a quarter, if not a third, of the buildings in this country would have to be rebuilt after the war. British architects would have to do this work and it was therefore essential to have unity and collaboration in the architectural profession.

IDEAS ON HOUSING

Views on the design, planning and equipment of houses and flats after the war are wanted by the special sub-committee recently set up by the Minister of Health's Central Housing Advisory Committee. The sub-committee, of which Lord Dudley is chairman, has two women members and is concerned with both town and country housing. Selected organizations and individuals are being approached direct by this committee. Others who have suggestions should write to the Design of Dwellings Sub-Committee, Ministry of Health, S.W.1.

WASTE PAPER

The British Red Cross and St. John Organization dispatches 87,000 parcels to our prisoners of war each week. Each parcel is packed in a strong cardboard box which is made from pulped waste paper, and which weighs, when empty, 14½ ozs.; 18 ozs. of waste paper are required to produce one new box. How many boxes can your home or your office provide? Bus tickets, cigarette cartons, old receipts and bills—more and more are needed to keep up the flow of salvaged paper for prisoners of war parcels.

R.I.B.A.

At the request of the Council of the R.I.B.A., Mr. W. H. Ansell has consented to continue in office as President for a third year, beginning on July 1, 1942.

The following members have been elected :—

As FELLOWS (10).—Drew, Miss Jane Beverly (London); Geens, Antoine Englebert (Bournemouth); Goodwin, Harry Thomas (London); Lawson, Philip Hugh, F.S.A. (Chester); Lutyens, Eadred John Tennant (Hertford); Thomson, William Innes, T.P.DIP. (EDIN.) (Edinburgh); Askey, Henry Ernest (London); Braddock, Thomas (London); and Dark, Bernard Frankland (London). (*Overseas*).—Shroff, Nariman Bejanji (Lahore, India).

As ASSOCIATES (31).—Ahern, Timothy Joseph (Dublin), Arkcoll, Percy Bradwell (Stoke-on-Trent); Chandler, Edwin George (Bedhampton, Hants); Cook, Ellis Jerden (London); Craig, Donald Stirling (Architectural Association) (Barnet, Herts); Crompton, David Henry, Jnr. (Architectural Association) (London); Darley, Edward Armand (Lincoln); Dryburgh, John (York); Eker, Moses, B.A. (ARCH.) (University of London) (Barton Stacey, Hants); Evans, Miss Nesta Lassarre, DIP.ARCH. Cardiff (The Technical College, Cardiff) (Bridgend, Glamorgan); Farmer,

Arthur Henry (Shoreham-by-Sea, Sussex); Gardiner, Mrs. Mary Barbara, B.ARCH. (University of Liverpool) (Nantwich, Cheshire); Garner, William (Hull, Yorkshire); Hall, Thomas Edward (Univeristy of Liverpool) (St. Helens); Hall, Victor (Wakefield, Yorks); Heape, Edwin (Burton-on-Trent, Staffs); Hewison, Ralph Wilbur (Orpington, Kent); Kaufman, Aubrey, B.SC.(ECON.) (Burnemouth); Light, Edward Joseph George (Harrow Weald, Middlesex); Lumsden, Michael (Arbroath, Angus); Norris, Frank Alan (Architectural Association)(Barnet); Oram, William Reginald (Oxford); Plant, James William, DIP.ARCH. (LIV.) (University of Liverpool) (Stoke-on-Trent); Richardson, Albert Edmund (Chadwell Heath, Essex); Robinson, Morris Strachan (Cottingham, E. Yorks); Searles, Donald Frederick (Sidcup, Kent); Turley, Richard (Newcastle-upon-Tyne); Ulrik, Otto (Warlingham, Surrey); Witten, Raymond Charles (Horsham, Sussex); Wolfe, Mrs. Anne Hilda (Leatherhead, Surrey). (*Overseas*).—Orchiston, Bruce Elwyn (University College, Auckland, New Zealand) (Wellington, New Zealand).

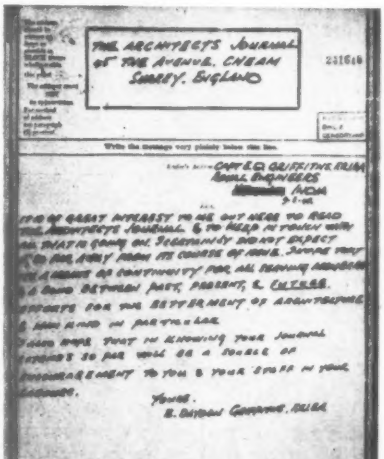
As LICENTIATES (6).—Hinshelwood, John (Stranraer); Humphrey, Laurence Arthur (London); Lee, Walter John, P.A.S.I. (London); Owen, William Douglas (Haverfordwest); Sayers, William Henry (Edinburgh). (*Overseas*).—Alexander, Ludovic John Grant (Asheville, North Carolina, U.S.A.).

WAR DAMAGE

A case has been brought to the notice of the War Damage Commission in which a claimant whose house had been totally destroyed by enemy action was given a loan of £100 from one of the war distress funds on his written undertaking to repay the sum when he receives from the Commission the value payment which would be due to him at some future date—probably at the end of the war.

Although such a condition attached to a loan, not being in law an assignment, does not require approval of the Commission, the Commission considers it right to draw the attention of the organisers of distress funds and others to the provisions of Section 7 (3) (*a*) of the War Damage Act, which empowers the Commission to attach to a value payment conditions the observance of which might in practice prevent the claimant from carrying out his undertaking.

This difficulty does not arise where a loan, to finance repairs to a partially damaged property, is made to a person to whom the cost of such repairs is repayable by the Commission after their completion.



Reproduction of an airgraph just received from Captain E. Daydon Griffiths, R.E. The town in which Captain Griffiths' unit is stationed has been deleted for obvious reasons.

The Old Guard amongst planners think planning for posterity will start when the War is won. There are two grand errors in this attitude.

PLANNING FOR CHANGE

IN the past 200 years the economic history of England has been the history of a series of migrations; the social history has been one of equally rapid change. Tired minds may be tempted to assume that we are nearing a time when everything can be stabilized but there are really no grounds for doing so. It is probably wiser to assume the opposite, for in fact it is the increasing tempo of development, the accelerated rate of change that makes planning so inevitable and so necessary.

Unfortunately, planners in this country are still on the whole conservative. The movement started with the foundation of a Society for the Preservation of Ancient Buildings followed shortly afterwards by the establishment of a Council for the Preservation of Rural England. In 1898 the Garden Cities Association was founded this time to preserve not a particular set of buildings or a particular type of landscape but a traditional way of living—slightly modified perforce to suit modern methods of production but at the same time an unmistakable reaction against them. Walking was to be the principal method of locomotion; vegetable growing the principal recreation; 50,000 the upper limit of population and everybody was to be housed in cottages.* The underlying assumption was that the future could and should be made to fit into moulds that had served well in the past.

While planners in this country have been rationalizing tradition builders have been increasingly concerned with fashion. There was a time when nearly every building was potentially an ancient monument designed as carefully and built as

*When Ebenezer Howard first launched the scheme motor cars, cinemas and a great many other things besides had not yet been invented. The fact that they have since become very popular has not led to any modification being made to his original scheme.

solidly as the craftsman knew how. Early factories for instance in Macclesfield are fine pieces of monumental architecture built to last for ever. In those days permanence was synonymous with excellence but there are signs that the position may soon be reversed; not many people to-day would set out with confidence to build a factory, a house or even a barn for their grandchildren. But though fewer and fewer buildings go up each year that are intended to be permanent (the city of London is said to renew itself every 40 years) the old attitude to temporary construction remains. It is still thought to be slightly disreputable. Our architects like our town planners hanker after the monumental. We are becoming increasingly conscious, it is true, of social problems caused by buildings that have outlasted their original purpose, but in spite of this we seldom set out to build anything designed to be useful for a short time only. We call some buildings temporary but usually this merely means that the quality is inferior; there is no guarantee that they will not last as long or longer.

The same mentality has postponed planning until after the war. One day, thinks the Old Guard, this war will die down and leave us free to tackle the business of designing monuments and planning for posterity. That day will never come. Americans have, in the meantime, reacted differently. They gave up trying to build for posterity some time ago; second hand houses are not popular over there. On the other hand they seem able to plan what's going on around them in spite of the war; in fact, they appear to regard planners as useful people who are able to organize the kind of changes they want to make with the minimum of friction and dislocation. This week's issue of the JOURNAL (page 311) illustrates how America is tackling this problem of planning changes made necessary by the reorganization of industry as and when the need for them arises. It's an extreme case. A town was wanted, probably for a few years only, to house workers for the Glen L. Martin Aircraft factory. The problem was solved by building a city on wheels that can easily be moved away when there is no longer any need for its existence.

The planners of Middle River, Maryland, U.S.A. refused to commit themselves further ahead than they could see. In the meantime however the parking of these American trailers has been more carefully arranged by them than the layout of many permanent buildings erected under similar circumstances in this country. If town planners and architects on this side of the Atlantic could bring themselves to think less of posterity† and to concentrate more on solving present problems in a way that leaves open the possibility of further development and change, business men might grow less suspicious and the general public less bored.

† Plans are now being prepared in various parts of the country which it is proudly stated may take 100 years to complete. It is at least conceivable that by that time we will no longer need to live in towns at all.

The Architects' Journal
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NOTES & TOPICS

FINSBURY IN THE NEWS AGAIN

It was quite like old times, going along to Finsbury to inspect a new work by Mr. Lubetkin. This time it wasn't one of Finsbury Borough Council's enterprising public works, but the monument to Lenin which the Council have put up in Holford Square (where he used to live), and which was unveiled by the Soviet Ambassador on April 22, Lenin's birthday.

★

Unveiling ceremonies are usually tedious affairs, but this was much jollier, possibly on account of its picturesque open-air setting. The platform from which M. Maisky and others spoke was erected on the pavement, and the audience formed an avenue leading to the monument itself, which stands in the centre of the north side of the garden in the middle of the Square.

★

The more distant audience got a grandstand view from the much-bombed houses round, filling the gigantic embrasures formed by the demolition of individual houses to first floor level. The dingy house-fronts between were draped with Soviet flags, and a barrage balloon kept popping up and down in the background.

In the front row of the audience, all among the unfamiliar Russian uniforms of the Embassy officials, was to be seen the much more familiar wide-brimmed black hat of Professor Reilly—a reminder both that the Professor keeps as much in the vanguard of architectural events as ever, and that the ceremony had something in common with pre-war Finsbury occasions after all.

★

Mr. Lubetkin's monument is clever without thereby losing dignity. Overcoming the war-time difficulties of material and labour sufficiently to have produced such a well-finished job is itself a remarkable achievement. Coloured marble and white concrete give a pleasant contrast of material. The conventional bust of Lenin is given unconventional emphasis by ingenious top lighting.

★

The only symbolism in a strictly architectural design consists of a broken length of steel chain anchored to the concrete base—and firmly anchored, I may say, presumably to avoid a conflict between the Borough Council and its own salvage-collecting department.

THE LATE T. BUTLER WILSON

The West Yorkshire Society of Architects has lost a leading member by the death of Mr. T. Butler Wilson. Born in Leeds in 1859 he served his articles with the late Charles Bell, of London. His work included Grove House, Selbourne House and Godolphin House, Harrogate ; Wheatfield Lodge and Castle Grove, Leeds, as well as the Manor House, Newbrandenburgh, Germany.

★

He will be remembered best, however, for his devotion to the cause of architectural registration. In 1904 he published at his own expense a " Draft Bill for the Statutory Registration of Architects." All the same, his major interests were in Yorkshire where he played an active part in developing the West Yorkshire Society of Architects of which he was President from 1901-1904. He was Hon. Treasurer at his death. He was largely responsible for the formation of the Leeds School of Architecture in 1902 (and maintained an active and personal interest in the students up to his death).

★

He was, incidentally, one of the Society's best after-dinner speakers and a great raconteur.

ASTRAGAL

M. Maisky, the Russian Ambassador, and Mme. Maisky, after the unveiling of the statue to Lenin in Holford Square, Finsbury.

STEEL SAVED BY VAULTING

This air raid shelter, erected at a private house in Surrey, is interesting because of the new type of roof construction used, opportunity being taken to test, on this small job, the construction for a larger building, designed by F. J. Samuely, Consulting Engineer.

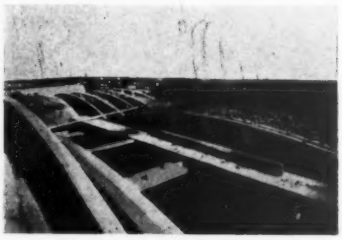
The roof is of *in-situ* concrete but no timber shuttering, as usually understood, was employed and a minimum of steel for reinforcement was used as the design practically eliminated tension stresses in the concrete. Both of these results were achieved by using as permanent shuttering ½ in. Tentest sheets laid over curved, temporary supports. The curving of the Tentest enables it to support a considerable load and to dispense with the normal close-boarded shuttering ; the resultant arching of the concrete means that all concrete is in compression except the haunches of the arches which form beams calling for a minimum of reinforcing steel.

The only suitable site for the shelter was alongside the house in the space provided for a future garage ; it was decided to construct the end wall as a panel, built after the construction of the roof, so that it can subsequently be removed and replaced by garage doors. The dimensions of the building were governed largely by the desire to test the construction of the specific spans designed for the larger building.

The main shelter is 23 ft. by 9 ft. with entrance direct from the house and an emergency exit opening into the garden, protected by a screen wall as shown.

on the plan. The walls are the usual 13½ in. brickwork in cement mortar, but the roof is thicker than the normal 4 in., passive defence standard, in order to provide a margin of safety in the event of the collapse of the house or chimney stack. This also gave a more severe constructional test, and the cost of the extra thickness of roof was very small, due in part to the peculiar construction.

The main room is covered by two Tentest-lined concrete arches each of 12 ft. span and 13 in. rise



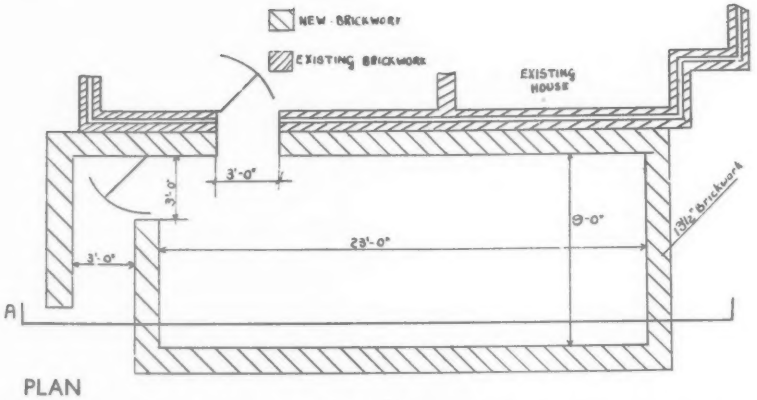
and the exit passage by an arch of 3 ft. span and 13 in. rise, as shown in the section. It will be seen that the roof embodies the following : At *A*, a solid abutment on an external wall with the external 4½ in. of brickwork carried up to form shuttering ; *B*, a solid abutment on an internal wall ; *C*, a beam formed by the haunches of two arches ; *D*, a lintol forming the termination of an arch.

It was, therefore, possible in the small building to investigate a large number of problems which might be met with in the construction of the larger building for which this was a test.

The reinforcement used was as follows :

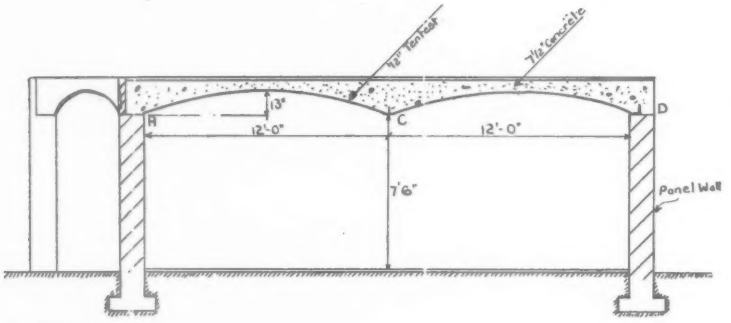
At *A and B*. None.
C. One 2½ in. by 2½ in. steel T, inverted.
D. One 2½ in. by 2 in. steel angle.

Owing to the arch effect no further reinforcement was necessary, but a light mesh was embedded at the top of the slab to prevent shrinkage cracks. (With larger spans reinforcement might have been required at *A* to take

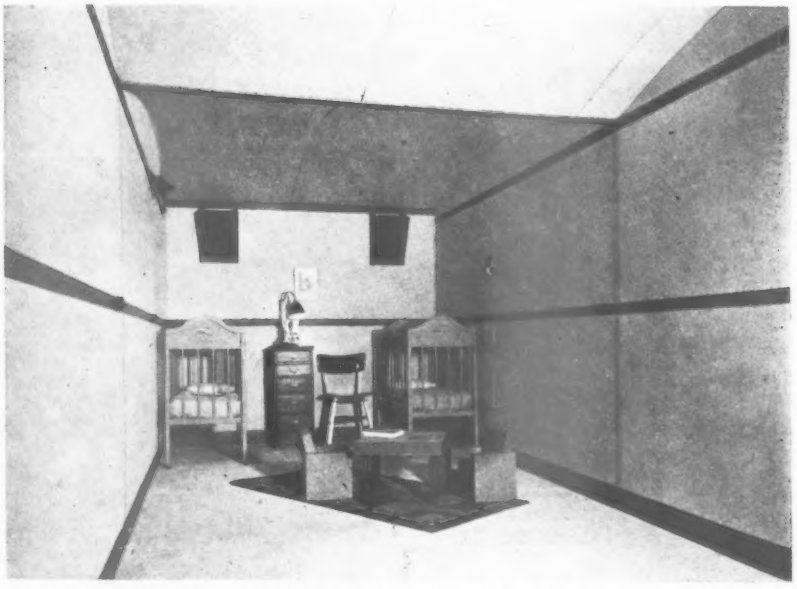


PLAN

If section A–A were taken through both baffle walls, this point becomes point B

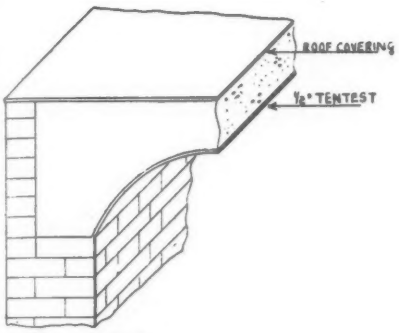


SECTION

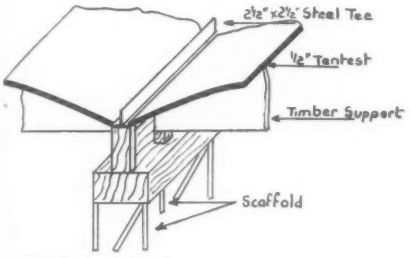


The main room. It is 23 ft. long by 9 ft. wide and has an entrance direct from the house, and an emergency exit opening into the garden.

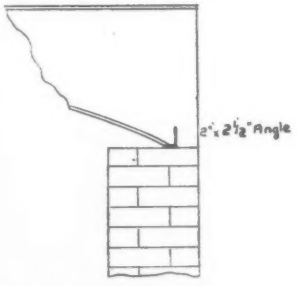
STEEL SAVED BY VAULTING FOR



DETAIL AT **A.**



DETAIL AT **C.**



DETAIL AT **D.**

tension resulting from the thrust of the arches.)

After erection of the walls curved temporary supports were erected and supported in turn by a scaffold. These curved supports were placed at varying centres up to 16 in. to investigate the behaviour of the ½ in. fibre insulation board, which was then laid on the curved supports to act as shuttering. When the fibre boards were in place the backs were wetted, brushed up and slurried in the usual way and the concrete, mixed fairly dry, deposited and consolidated. Owing to the stiffness imparted by the curvature the Tentest could easily carry the weight of the liquid concrete and the temporary supports were removed without difficulty after two days, quite unharmed as they had not been in contact with the concrete, and available for re-use almost indefinitely. Rapid hardening cement was used. With ordinary Portland cement the temporary supports would have been left a little longer.

The sheeting was, of course, left in place where it formed a lining and acted as heat insulation.

The lightness of the reinforcement required is due to the depth of the haunches of the arches, the full depth of which is effective. Had the reinforcing members been of greater section the temporary curved supports could have been carried on them instead of on a scaffold. Had a scaffold not been practicable, the same amount of steel could have been incorporated in precast concrete tees, the flanges being made wide enough to carry the ends of the curved supports.

It is claimed that this construction shows a saving in steel, timber, labour, i.e. those commodities which are scarce at the moment and likely to be scarce in greater or less degree after the war.

The factors leading to the economy in steel have already been mentioned. As regards timber, there is no timber shuttering in the normal sense, and the temporary curved supports, not being in contact with the concrete are not damaged during striking and can be used an indefinite number of times without cleaning off or special treatment between uses. This gives the method preference, particularly for large floor areas, where repeated use of the curved supports fosters greatest economy. Of course, these temporary supports need not be of timber at all, but of any suitable material available.

The complete absence of cross reinforcement makes the concrete more like mass concrete. Larger aggregate can be used and unskilled labour largely employed for the production and placing, with resultant economy in skilled man-power.

That the use of curved or vaulted ceilings is not æsthetically unpleasant will be seen by examining the photographs of the interior of the shelter, to which the arched ceiling gives a reassuring feeling of strength. (Patent for this construction has been applied for.)

SHELTER, HOUSE IN SURREY

LETTERS

Mrs. E. V. PENN
Acting Secretary A.A.S.T.A.

J. ALAN SLATER, F.R.I.B.A.

Women Surveyors

Sir,—The A.A.S.T.A. employment register has lately had a number of requests from builders' and contractors' offices for assistants to be trained as surveyors. Amongst the candidates were a number of women, but the employers refused to consider their applications.

May we, through your JOURNAL, express our regret at this tendency, and invite your agreement and that of your readers, to the view that full use should be made of our woman-power.

It seems to us that such discrimination against women, undesirable in peacetime, is quite unjustifiable now, when the national need for man-power makes it imperative to replace men with women wherever possible, and to train women to do men's work. We submit that technical building work, including surveying, is work which women are well fitted to do, and that every encouragement ought to be given them to do it. Every new woman building technician can mean one more man for the armed forces.

E. V. PENN,
Acting Secretary A.A.S.T.A.

R.I.B.A. Elections

Sir,—I regret to say that I consider that the letter from the Secretary of the R.I.B.A. in your last issue is (no doubt unintentionally) misleading.

I suggest that if the first paragraph of that letter had read "the annual election of the Council of the R.I.B.A. *may at the discretion of the existing Council* be suspended for the duration of the war," the actual situation would have been more accurately stated.*

Similarly in the last sentence of the second paragraph the insertion of the word "consequently" is also misleading. In fact, it is again only the existing Council who are capable of changing at their discretion the *ex officio* members of that Council.

Mr. Colin Penn's letter states very clearly the opinion not only of the writer but of many of the younger architects of this country.

The letter from the Secretary of the R.I.B.A. suggests that changes in the Council do actually take place even without an election. It omits to state that these changes are solely within the discretion of the existing Council. This is not denied by those members who advocate the holding of the elections during wartime. They call for elections in order to attempt to effect changes, not so much in the names

of those serving on the Council, but in the spirit which animates the Council and controls the policy whereby its business is conducted. Without an election there is obviously no opportunity for the ordinary member to exercise his democratic rights in order to effect that change.

J. ALAN SLATER.

* *This is the letter referred to.*

SIR,—Under the provisions of an Act of Parliament passed at the beginning of the war the Annual Election of the Council of the R.I.B.A. is suspended for the duration of the war.

It may be pointed out to members that, in spite of this suspension, the personnel of the Council does, in fact, change to a substantial extent every year. Nearly half the members of the Council are representatives of the Allied Societies and these only hold office for one or two years. The *ex officio* members of the Council are not subject to the annual election and their personnel has consequently changed since the last election in 1939.

IAN MACALISTER,
Secretary, R.I.B.A.

London.

The ninth of the Royal Society of Arts series of twelve lectures on "The Post-War Home—its Interior and Equipment" was given recently by Mr. GEORGE HICKS, M.P., *Parliamentary Secretary, MOWP. The title of the lecture, points from which are printed below, was*

THE OCCUPIER

In the discussions on housing after the war we have heard a great deal about the point of view of the various people who produce the houses: the architects, the makers of furniture, of pottery, of fabrics, of light fittings, and so on. But apart from some of the things which Miss Elizabeth Denby brought up in her paper in this series on "Using Space to Advantage," very little has been heard about the most important person of the lot—that is, the occupier for whom the house is designed and built.

This society has always shown especial awareness of the needs of the citizen as a consumer and householder. Just under 100 years ago the chairman of the Society's Council declared that:

> "The union of the artist with the workman, the improvement of the general taste of our artificers, and of the workmen in general—this is a task worthy of the Society of Arts and directly in the path of its duty."

This motive lay behind the reading of a paper on such subjects as a new "Cottager's Stove," described in a paper read by a Mr. Grant in 1851, which was said to be capable of "roasting, baking, boiling and steaming 200 lb. of meat and 100 lb. of potatoes with 15 lb. of coal—at a cost of 2d."

One of your most distinguished members—the Prince Consort—was particularly interested in housing. The experts of the period spoke very highly of the cottages on the royal estates, which were probably many years ahead of the housing elsewhere in the country. In a letter written in September, 1849, the Prince refers to the importance of improving the condition of the people, and mentions four ways in which this can be achieved:

1. Education of the children with industrial training.
2. Improvement of their dwellings.
3. Grant of allotments with the cottages.
4. Savings banks and benefit societies (if possible managed by themselves).

He adds: "I shall never cease to promote these four objects wherever and whenever I can."

It will be seen from the third of these points—the grant of allotments with cottages—that the Prince did not envisage housing in large blocks of flats with a window-box as the occupier's only garden. We, too, must respect the individuality of the working-man. To-day working-men and women are on active service and in most cases every month of their lives in camp, barracks, hostel or front line adds to their appreciation of the home they have left. They have been regimented and standardized; after the war they want to regain their sense of individuality. If fittings and manufactured parts generally have to be standardized, let there be some scope for personal differences in colour or arrangement. People will want a little peace and privacy again. If they have to be housed close together, we must see that there is proper insulation against noise. These men and women will return with critical standards: they will have become acquainted for the first time with some of the amenities every modern home should have—clean surfaces everywhere, efficient heating, hot water (available at short notice), up-to-date lighting and ventilation. They will demand these amenities in their homes.

Another process that the war will hasten in some quarters is the disintegration of the large miscellaneous family unit; even before the war relative abundance of money in certain classes had produced a higher standard of living, which showed itself in the exodus from large households of odd relatives and in-laws. Since the war in some cases has taught independence to people who were previously stay-at-home by nature, this demand for smaller dwelling units will continue among those who, having found independence, will not readily give it up.

Post-war housing will, in fact, demand a far more synpathetic and realistic study than, with certain notable exceptions, it has received to date. Astonishingly little has been done to find out the real needs, difficulties, preferences, etc., of the workman and his wife and children. With the best will in the world, officials who work in local government offices cannot learn very much; it is not part of their duties to spend their time mixing with all types of householders and studying their point of view. A certain amount has been achieved by the Ministry of Food in its own sphere; the Building Research Station, which is conducting an investigation on heating for P.W.B. is having a survey of popular requirements carried out by the Ministry of Information. But the amount of useful knowledge so far available is small.

One difficulty about the study of the tenant's point of view is that it varies in different parts of the country. People in the north live differently from people in the south; they cook different meals at different times, and they use their ovens for other practices like bread-baking which, in the south, is carried out largely by firms of bakers.

But there is one main problem common to all parts of the country, and that is the problem of bringing up children. We are beginning to realize that much more must be done to adapt housing adequately to the requirements of family life. The working-man and his wife have to be severe realists in the matter of the family budget, and they know that children need food and clothing more than they need a sufficiency of room space. Not only in this country, but all over the world, we find that among the lower income-earning families, when the needs for food and clothing have been satisfied, there does not remain sufficient money to buy or rent reasonable standards of accommodation. The result is that an enormous number of families with several children live in the smallest and cheapest dwellings suitable for childless couples, while childless families with more money to spend on rent occupy the larger dwellings designed to meet the needs of families with children.

Whatever else is done about housing after the war, whatever improvements are made in convenience and comfort, will be largely wasted unless this problem of providing for the country's children is properly solved. And children want more than just places in which to sleep without overcrowding. They want to play, and they do not want to play alone. Even workers' children may own quite big toys for which a place has to be found. Again, children sometimes get their clothes and boots wet, and these things must be dried somehow. When children are too small to walk, and they have to be carried, it is not a pleasant business carrying a child up four flights of concrete stairs. It is not even certain that it is good for a child to have to run up four flights of stairs to fetch a ball. Again, children are very fond of running about in the open air, and it is a habit which perhaps ought not to be discouraged. It is extraordinary that with all his ingenuity, the man of science seems unable to provide a kind of grass strong enough to play on, nor, in the absence of grass, has he discovered anything better than soot-coloured asphalt paving for a children's playground.

To sum up—statisticians tell us we are going to become gradually an older nation; that is, every year there will be more elderly people in the country and fewer young people. But whatever happens to the various age groups, the children will always be there. I suggest that among the various kinds of occupier whose needs we have to study after the war, the child and its mother come easily first.

RESOLUTION

Following resolution was passed by the Architectural Commission of the 1942 Congress of the National Union of Students in Birmingham:—

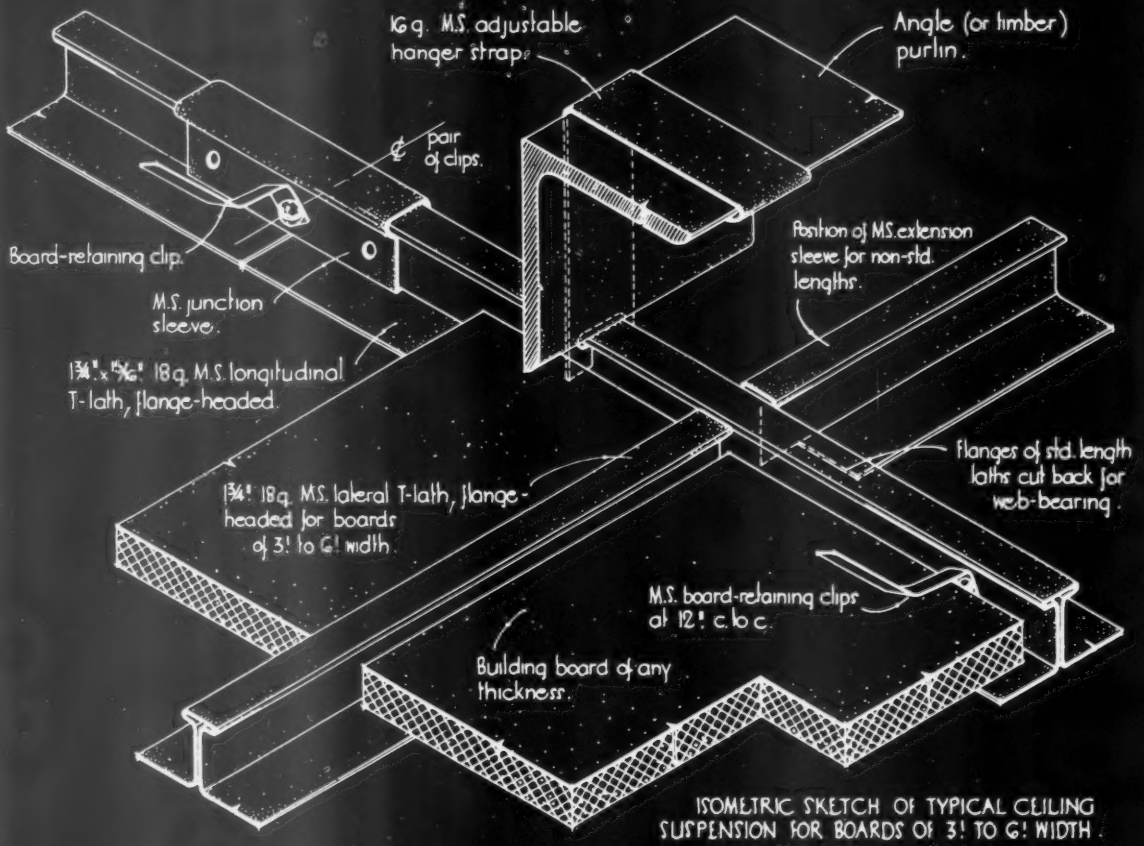
"We, the Architectural Commission of the N.U.S. Congress, consider that the building industry, in order to carry out its essential tasks in the fight against Fascism, should be organized to its maximum efficiency, and that the following steps are necessary to this end:

1. Building control by one ministry, to the exclusion of vested interests;
2. Control of technical matters by the technician;
3. Co-operation between the technician and the operative;
4. The fight against Fascism to be carried on in the schools through the student organizations."

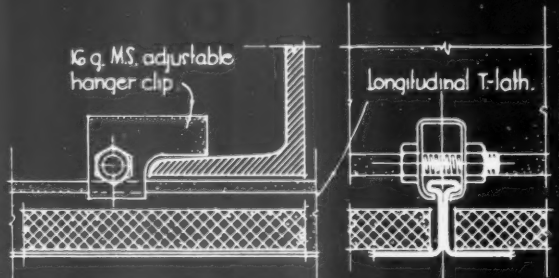
Architectural students and representatives of other faculties formed the Commission, which, in its meetings, has discussed the use to which architecture and planning is put by Fascism; the immediate answer to Fascism through the war effort; and the long-term answer through a truly democratic system in the sphere of planning and reconstruction.

THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

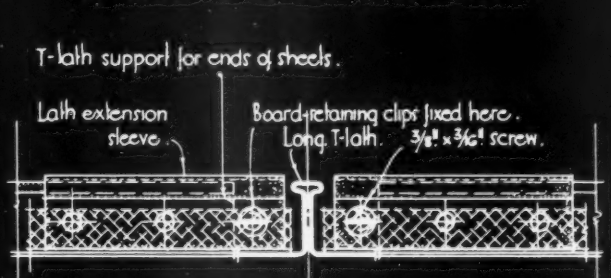
·PIMCO· SYSTEMS : T-SECTION SUSPENSION FOR WALL AND CEILING LININGS :



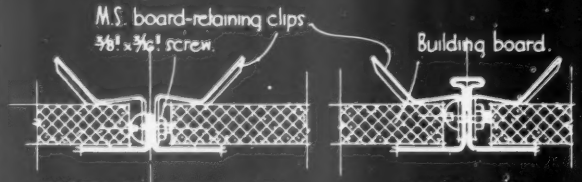
ISOMETRIC SKETCH OF TYPICAL CEILING SUSPENSION FOR BOARDS OF 3' TO 6' WIDTH.



METHOD OF SUSPENSION FROM R.S.J.'S, CHANNELS, ETC.

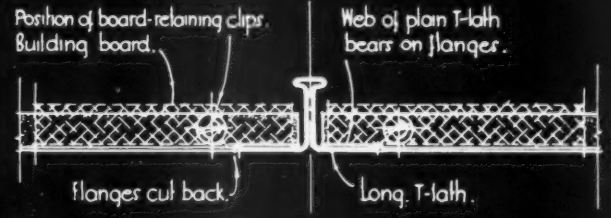


JUNCTION OF NON-STANDARD LENGTH LATERAL LATHS (over 3 ft.).



SECTION OF LATERAL LATH for end support of boards of 2 ft. to 3 ft. width.

LATERAL LATH for end support of boards of 3 ft. to 6 ft. width.



JUNCTION OF LONG. & LATERAL LATHS FOR BOARDS 2' to 3' WIDE.

Issued by P.I.M. Board Co. Ltd. & T.T. Trading Co. Ltd.

INFORMATION SHEET : WALL AND CEILING LININGS

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WALL & CEILING LININGS

Product : Pimco Systems Adjustable T Suspension and Oblique Clip Fixing (Patent No. 533541 and Patent Applied For).

Description :

An all-metal assemblage for speedy attachment of any type or thickness of building board to structural members of steel or timber, or lining to soffits of concrete floors and roofs.

Hangers are of two types—16 gauge M.S. slotted strap for hooking over angle or screwing to timber purlins, 16 gauge M.S. slotted clip for attachment to lower flange of ceiling angles, R.S.J.'s, T's, or channels.

Longitudinal laths are of 18 gauge M.S. flange-headed T section, 1¾ in. base by $\frac{11}{16}$ in. or 1 $\frac{5}{16}$ in. high. Lateral laths are similar for reinforced boards 3 ft. to 6 ft. wide.*. Plain T section 1¾ in. base and ½ in. high is used for boards 2 ft. to 3 ft. wide. Where 3 ft. widths are used without reinforcement, the length should not exceed the width, i.e., 3 ft. by 3 ft. squares.

* A method of board reinforcement will be described in a later Sheet.

M.S. sleeves embrace web and flanged head of T lath at end-to-end junctions. Normally, lateral laths have flanges cut back for web bearing only, but where flanged-head laths have to be cut to length on site, M.S. sleeves may be used as extensions in lieu of web bearing.

M.S. clips, fixed to lath web, hold boards firmly in position on flange.

All materials are sherardized.

Erection :

(*a*) *Assembly* : Hangers slide along laths to desired position, thus obviating punching of holes in lath web. Pairs of board-retaining clips are fixed to laths at 12 in. c. to c. by $\frac{3}{8}$ in. by $\frac{3}{16}$ in. screws and are adjusted to correct height with thickness gauge. The entire operation of fixing and adjusting clips is carried out on the bench—no further adjustment being necessary. Oblique shape of clip facilitates access to screws while overhang beyond edge of flange locates boards at correct height before pushing laterally into final position.

(*b*) *Last Board* : Usually narrow strip, edge first positioned under clip projections and remaining edge swung upwards against wall or truss, board thereby being forced into position between clips and lath flange. If obstructions occur or if it is desired to use wide board instead of narrow strip, special adjustable clip may be used, details of which will be published in a later Sheet.

Issued by : P.I.M. Board Co., Ltd., Sunbury-on-Thames, and T.T. Trading Co., Ltd.

Address : Aldwych House, London, W.C.2.

Telephone : Chancery 8150 and 8159.

Telegrams : Sprufibre, Estrand, London.

CARAVAN CITY

Boom towns that spring up over night to be deserted again in a year or so are no new feature of American life ; but here is a new way of handling the problem. Instead of a badly built mining camp hastily nailed together in ramshackle confusion and afterwards left to decay, we have a city consciously and carefully designed to serve its temporary inhabitants well, and when the tide of prosperity recedes to move with it. (City may sound a trifle grandiose for a collection of caravan trailers, but in fact the population is already about as large as a mature garden city and will ultimately be more than double that size.) Before the building of the Glen L. Martin Aircraft Factory, Middle River, Maryland, U.S.A., was a quiet cross-roads community—two or three little shops and a scattering of homes lying a short distance beyond the outer edge of Baltimore's suburban zone. When the plant is completed Middle River will be housing 42,000 workers and their families. The job was handed to U.S. Farm Security Administration. Accommodation throughout has been designed by them to be moved when the emergency is ended, and to be used elsewhere as need directs. Dormitories have been built for 605 single men and contracts let for 1,200 portable houses*. Other families are housed like this one in 1,200 family trailers ; the parking of these is better planned than much of our permanent housing. They are arranged in well articulated groups, centred round communal utility buildings which contain sanitary facilities and rooms for washing.

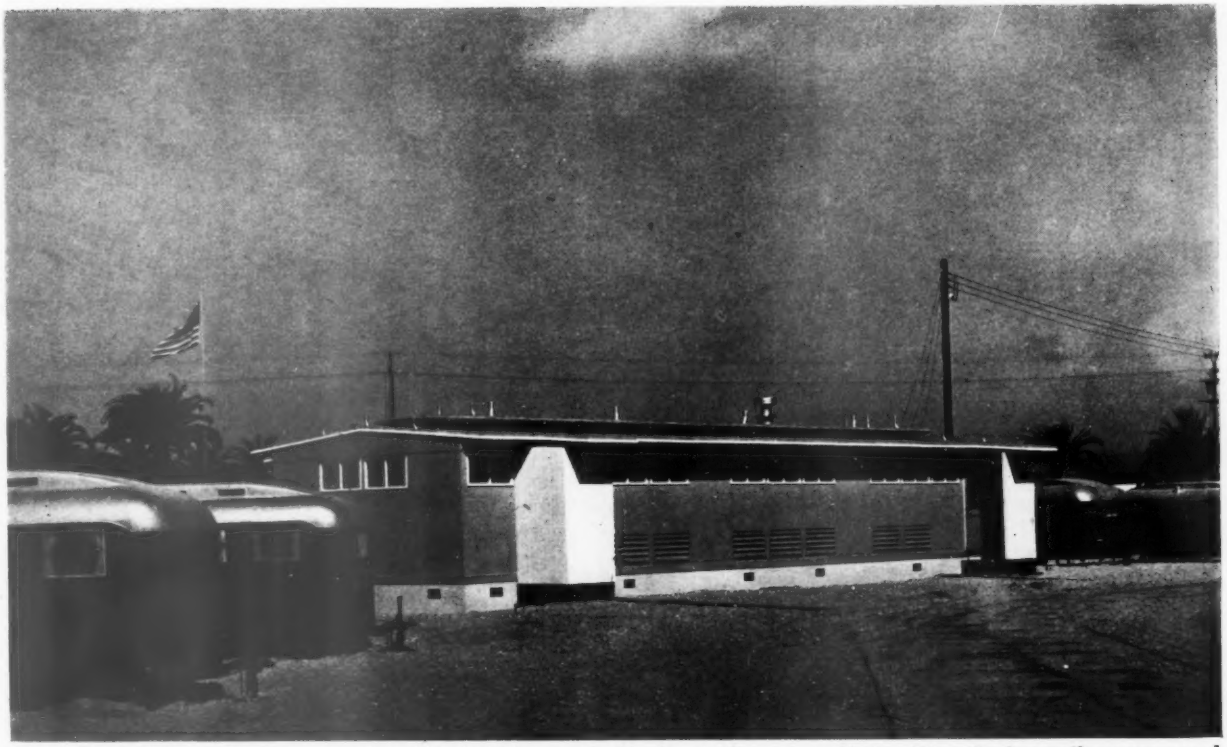
★ *Illustrated in* THE ARCHITECTS' JOURNAL *for February 19 last. This type of house was chosen by Jan Porel, after studying the possibilities of 30 different types, for housing the workers of Glen Martins bomber factory. Prefabricated parts are fitted together, at rate of six houses a day by crew of 150. Completed houses cost about £500 each. Real claim of the house is that exterior walls, which even in most prefabricated houses are traditionally built up of from seven to twelve layers of wood plaster, etc., are composed of a single building material. Features of the plan : Well-equipped kitchen, built-in cupboards, open plan, large living room, flanked by movable screen casements. Rest of the work done by sub-contracting prefabricators who need never see a house. Trimming floor boards is only job for which a saw is used.*

1 *Five of the trailers occupied by childless couples. There are two types of trailers—one for childless couples and the other for families of four—two adults and two children.*

2 *Each group of ten trailers has a service unit (water tap, slop sink and garbage pail). In the above photograph one of the occupants of the trailers is seen drawing water.*

3 *General view, showing family trailers. The washing block can be seen on the right of the illustration.*

4 *One of the maintenance staff pauses in his work to talk with a little boy who lives in a trailer. The trailers shown above are occupied by parents with two children. The central chimney and part of the factory can be seen in the background.*



5 *Utility buildings with sanitary and washing facilities were built ; here is the sanitary block. Since the first trailers were moved to the site it has been found necessary, owing to the increase in the number of trailers, to construct more buildings of this type.*

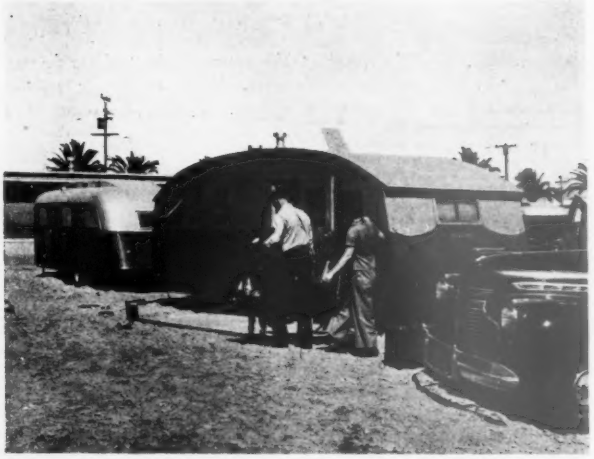
6 *Provision is made for tenants to do their washing in the open-air. Here is a tenant using the wringer on the verandah of the washing block. Poles have been erected for the drying of clothes.*

7 *Space at the rear of the trailers is used as a playground for children ; various types of apparatus have been installed.*

8 *In addition to the washing block, provision has been made for anoutside service. Here the laundry van is seen outside a trailer.*

9 *Grocery truck making delivery to trailer. There are no stores or shops within walking distance of the city ; all food and other commodities are brought in trucks.*

10 *Wife and child of a defence worker. The cradle is fitted with special arms, attached to the handles of the table drawers, to prevent it falling over in one of the family trailers. One of the chief difficulties experienced by the U.S. Farm Security Administration was the provision of suitable accommodation for married couples with children. The family trailers prove the solution to the problem.*



11 *Family moving into trailer. Before moving into the city, this man had driven 53 miles each way daily to his work in the car shown on right. This type of temporary housing provides a great saving in petrol.*

12 *Another family moving into a trailer which has accommodation for a married couple and two children. The trailers are not standardized in design. Two different types are shown above and in Figure* 11.

13 *Trailer tenanted by two women workers in the factory; the personnel includes a large number of women. The tenancy of the trailers is not limited to married couples; women workers at the factory are able to rent them. The single men are housed in dormitories, with maid and janitor service. Here are the tenants of one of the trailers with accommodation for two, entertaining a couple of boy friends from the factory.*

14 *Family of four in the living-space at the back of the trailer; note bed in foreground. Each trailer has a large amount of cupboard space; some of this can be seen at the back of the seat on the right.*

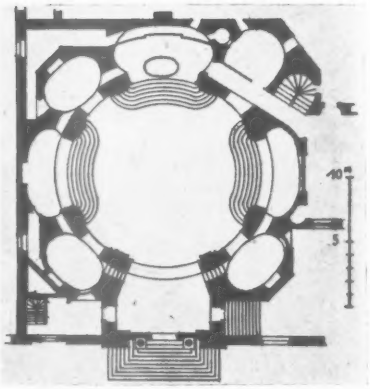
15 *Family of four at dinner. Cooking facilities are shown on right and left of photograph. The design of the furniture has not been standardized. Compare the table shown above with that in Figure 14.*

16 *The washing and cooking space. In the foreground (right) is the cooking range. Each trailer has every convenience. In addition to the cooking apparatus there are several cupboards. The title of the book below the occupant's left elbow is* Aunt Jenny's Favourite Recipe.

17 *The services include the daily delivery of milk. Here is a tenant receiving her daily quota. This caravan city has been carefully planned. Topographical surveys of the area are now being made so that it will be a simple matter for further expansion. A well-known U.S.A. town planning expert has been appointed to carry out this scheme ; and steps have been taken to provide* 1,000 *more family trailers and dormitories for* 300 *more men. Contracts have been let for* 1,200 *portable houses. These will be built in panel sections ; they can be dismantled and the parts moved to another site for re-erection when the emergency housing in this district is no longer needed.*

CARAVAN CITY

MIDDLE RIVER, MARYLAND, U.S.A.



Plan of the church of St. Marie de la Visitation in the rue St. Antoine in Paris, designed by Mansart and begun in 1632.

LITERATURE

MANSART

[*BY ERNÖ GOLDFINGER*]

Francois Mansart. By Anthony Blunt. London. Warburg Institute. Price 15/-.

IT was during the 17th century that France threw off the last vestiges of medieval feudalism to become an absolute monarchy. In the economic field the tight organization of the guilds gave way to the manufacturers of the early "entrepreneurs" and those organized by the State such as the Gobelins tapestry works and the Sevres porcelain works. Politically the power of the great feudal lords was broken to be taken up by royalty and its own deputies. Architecture, as always, was a clear mirror of those events. The first step was taken when the battlements of the feudal castles were pulled down and these strongholds were replaced by chateaux like those of the Loire Valley. This was the full bloom of the French Renaissance: structure still remained traditional, hardly distinguishable from Flamboyant Gothic, but the details and mouldings reflected the distant echo of the happenings on the other side of the Alps, experienced during the Italian campaigns. Then, towards the second half of the century, the whole scene of European drama shifted from the Mediterranean to the Atlantic, and France became the nodal point of European politics and consequently of Art.

Francois Mansart was ten years old when Henri IV, King of France and Navarre, died; he was in his mid twenties when Cardinal Richelieu started to direct the destinies of the kingdom, and in his mid-forties when the other great cardinal, Mazarin, took the reins of government in his hands. In all fields the change was accomplished and the way was open to carry out the implications of the events. Mansart was significant as an architect who

" The château of Maisons, or Maisons-Lafitte as it is now called, gives perhaps a more complete picture of Mansart as an architect than any other of his works. Like all of them it has suffered many alterations since his day, but these principally affect the surrounding buildings and gardens, and the château itself has not been seriously altered, at any rate externally. It was built between 1642-1650 for René de Longneil, an important magistrate of the Parlement de Paris and a financier who made too much money in too short a time for his transactions to have been altogether honourable. . . . Mansart had a really free hand and was able to carry to completion a design with which he was really satisfied. Compared with Blois the most conspicuous feature of Maisons from the outside is the complexity of its design. . . . We may almost say that Mansart has treated the free-standing block of the château as a sculptor would treat a block of marble, carving it with a chisel."—From Francois Mansart.

Right (top), Maisons, west front, from an engraving by Rigaud (1785); and the east front.

fully comprehended the problems of his time and solved intricate problems of detail in plan and elevation alike. Others created the prototypes from which the Château of Versailles and the great urban arrangements, like the Place Vendome, originated; but, as the author of this remarkable monography writes, " these are not architects over whose buildings one can linger with such loving analysis of detail as with Mansart." . . . " With loving analysis " indeed has Mr. Blunt treated his subject, with painstaking solicitude every aspect and every detail of the building is unravelled.

The subject is grouped under three headings: I Ecclesiastical Architecture. II Domestic Architecture in Paris. III Chateaux: Balleroy, Maisons, Blois. " . . . starting from the early days when he practised the Mannerism of the generation from whom he learned the principles of his art, leading to a steady development towards classicism, under the influence partly of High Renaissance models, and ending in the curious phase of almost private experiment, in which on the one hand he explores entirely unexpected territory, and on the other hints at discoveries which were to be taken up by the more Baroque among his successors."

With untiring energy Mansart pursues his search for perfection. " . . . he was difficult and intransigent . . . he refused ever to be bound by the ordinary conventions . . . reserving the right to alter any scheme at any stage . . . a characteristic which accounts for the fact that so few of his designs were carried out entirely to his plans." But this same characteristic no doubt accounts for the excellence of his work.

The special interest of Francois Mansart is that he lived in a period which had not yet found completely its expression, either in the political or in the artisic field, and that he contributed to a large extent in the formulation of the methods and ideals of the architecture of his time.

As for the book, it has made all this clear, and the only grievance I have with this most scholarly biography concerns the editing. The continual reference which has to be made to the illustrations is rather irksome as they are at the end of the book; there are, however, thirty-four of them and most of them are excellent. One or two of the sketches in the text—there are five of them—are rather clumsy. The footnotes, too, make reading difficult, but apart from these minor shortcomings it is a most commendable work.

B. S. I.

British Standard Specification for War Emergency Bib, Pillar and Globe Taps. (B.S. No. 1010-1942).

The above War Emergency British Standard Specification has been issued under the authority of the Ministry of Works and Planning, having first been approved by the Standardisation Committee of the Ministry. This Standard is based on the Model Specification for Water Pipes and Fittings issued by the Ministry of Health and has been prepared in collaboration with the British Waterworks Association. Owing to the shortage of materials arising from the war certain modifications to the Ministry of Health Model Specification were recommended in the Schedule of War-time Building Supplies. These modifications are included in the War Emergency Standard as footnotes and relate essentially to the following points:—(*a*) Quality of Material. (*b*) Economy in Metal.

Copies may be obtained from the British Standards Institution, 28, Victoria Street, London, S.W.1, price 2s. 3d. post free.

★ *MAY we have a complete list of reference letters of all forms that might have to be filled in under the War Damage Act?* - - - - - - Q 897

★ *I SHOULD be grateful if you would give me some particulars about the MARS Group?* - Q 899

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

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

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

Questions should be sent to—
THE ARCHITECTS' JOURNAL
45 THE AVENUE,
CHEAM, SURREY.
Telephone: VIGILANT 0087

Q 897

ARCHITECTS, BERKSHIRE. — *May we have a complete list of reference letters of all forms that might have to be filled in under the WAR DAMAGE ACT, and where may we obtain blank copies of these forms?*

We cannot let you have a complete list of all the forms used in connection with the War Damage Act, which are very numerous and which are not all made available to the general public. If you write to the War Damage Commission, Headquarters Office, Devonshire House, Mayfair Place, Piccadilly, London, W.1, they will probably let you have specimen copies of the principal forms C.1-12.

The form used for notification of damage is the C.1 form, which replaces the old V.O.W.1 form. On receipt of this the War Damage Commission will in due course send you a further form to be filled in; this is normally a C.2 form, where it appears that there will be a cost of works payment, or a C.3 form, where it appears that there will be a value payment. For special buildings you will get other forms instead of the C.2 or C.3, e.g. factories C.6 or C.7, land C.8 or C.9, ecclesiastical and charitable buildings C.11 or C.12. C.15 for value payments for mortgagees.

Generally you will find that all forms sent to you after the original notification of damage are very similar. If the reference number is followed by the letter "V" it merely means that the original notification was on a V.O.W.1 form.

We should add that there are two rather different forms: Form C.1/A which gives a short explanation of the War Damage Act, and Form C.2/A, which is the form on which the builder or architect certifies the cost of work done.

Q 898

ARCHITECT, YORKS. — *I have just completed a church and during the twelve months that the OAK WOOD BLOCK FLOORING has been laid the contractors have had to return three times to relay a portion of the blocks and now I find that they are lifting again.*

The floor, which is of 3½ in. reinforced concrete, was originally intended to be 6 ft. above ground level, which is of a dry rocky nature, but was dropped 3 ft. after lengthy consideration, and the airgrates, which were to ventilate the sub-floor, are now above, therefore there is no ventilation under the floor.

I have closely examined the 18 in. walls at immediately above and below damp course level only to find them quite dry, and as the concrete floor is of a particularly dense nature and the wood blocks are bedded in bitumen, I can hardly imagine dampness penetrating here.

The heat has been on in the church throughout last winter, and I may add that at the east and west ends of the church the heating pipes drop into the area beneath the floor and should, therefore, keep it dry.

I shall be very pleased if you can tell me why the blocks are lifting and the method to prevent them from doing so.

There is no obvious reason for the trouble, and we approached the Timber Development Association, who confirmed that the lifting must be due to moisture, reaching the blocks from above or below, which is causing them to swell.

You have only indicated two unusual features (1) lack of ventilation below the floor, and (2) excessive ventilation immediately above the floor. The first of these is less likely to cause dampness in view of the bedding of bitumen, and we should advise you to attend to the second.

If heating is not continuous during the winter there will be periods when there are cross currents of damp air immediately above the floor and even when the heating is on, lack of radiators in front of the exceptionally low vents will mean that these currents are still present to some extent.

We suggest that you block up the airbricks and take any other precaution possible to avoid moist air passing immediately over the floor. Secondly, you could cover the floor with a good thick layer of wax, if this has not already been done, which will tend to protect the floor from the atmosphere, although such a covering cannot be impenetrable, particularly at the joints if the flooring is uneven.

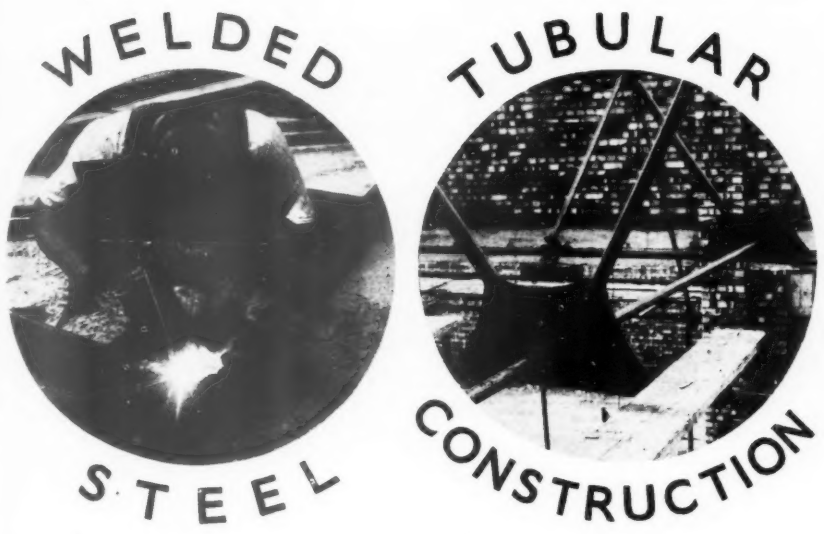
If, after you have taken every precaution to prevent moist air reaching the surface of the floor, you still have trouble, you should turn your attention to the underside. You could probably gauge to some extent the moisture content of the air after knocking a hole in the wall, and if there is any evidence of dampness it would be advisable to provide airbricks as originally intended.

Q 899

ENQUIRER, MIDDLE EAST FORCES.— *I should be very grateful if you would give me some particulars about the MARS GROUP, whose initials stand for Modern Architectural Research Group. The only facts I know about it are that it was founded in 1931 by some leading architects, who were the pioneers of modern architecture in England. I should like to know if it is still active, if so, where? and what are its objects.*

The MARS Group is still active and for full particulars you should apply to the Secretary, Mr. Ralph Tubbs, F.R.I.B.A., of 17, Clarges Street, London, W.1.

The Group consists at present of about 90 members—architects, engineers and allied technicians. New



THAT tubular scaffolding superseded the older traditional methods was in large measure due to the ingenious coupling devices incorporated ; rigidity of structure was effected by the turn of a single set-screw, whereas with the older method rope lashing demanded much skill on the part of the scaffolder and the slipping, slackening, fraying or cutting of the rope was an ever-present danger. In scaffolding practice it was frequently necessary to sheet the structure in order to render it wind and weatherproof either temporarily or permanently and to do this effectively was not a simple operation owing to the projections that occurred at the angles where the tubes were connected together. This disability was not insuperable; indeed where tarpaulins were employed for the sheeting, as was quite often the case, the structure was satisfactorily enclosed without very much difficulty. Nevertheless, it was a "snag," a disadvantage to be overcome if possible, and alternative methods of connecting and jointing the tubes were experimented with. After long experience by trial and error electric welding proved to be the ideal solution to the problem ; it eliminated all projections so that the whole scaffolding framework could be simply sheathed even with such rigid sheeting materials as corrugated iron or asbestos, and resulted in a structure of exceptional strength and rigidity.

The electric welding of tubular scaffolding sections led to further experiment and development. Welded tubular steel roof trusses were designed and tested, and standard trusses, ranging from 15 ft. up to 60 ft. spans, are now being fabricated and employed ; sectional wall frames, door frames, standard sections for domestic or hip roof assembly and a useful range of prefabricated standard tubular sections for such a variety of structures as bridges, pylons, gantrys and water towers have been made, submitted to all necessary tests, and are now being used by architects, engineers and building contractors in many parts of the country.

Welded tubular steel construction has these advantages : (1) Speed in erection. (2) Economy in steel—the hollow circle is a most economical section using the least material for the greatest resistance to stress. (3) Lightness of structure but great strength ; it is notable that the joints, usually the weakest parts in a structure, are the strongest parts. (4) Complete factory prefabrication or site welding—an alternative choice of importance and great convenience. (5) The circular section and welded joints are most simply protected against corrosion.

Thus, we have summarised briefly the principles of welded tubular construction. In following issues of "The Architects' Journal" the system will be described and analysed in a series of informative data sheets which have been planned as follows :

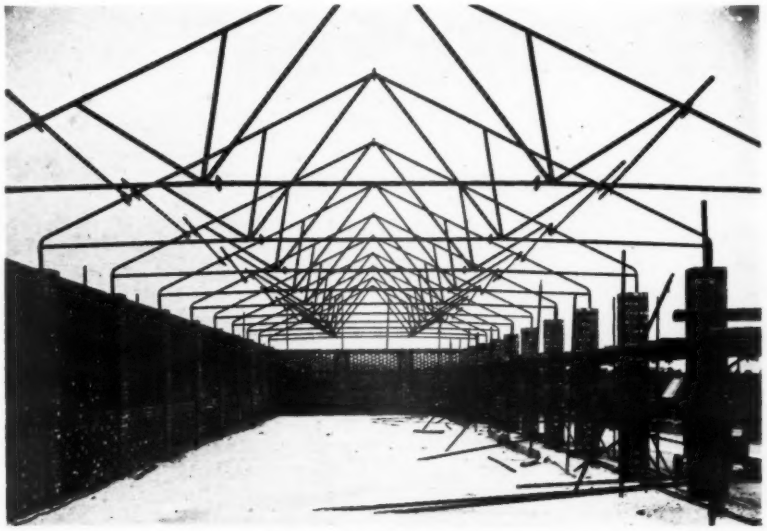
(1) An analysis of the various sections that comprise the system, with detail drawings of some of the principal sections.

(2) War-time construction—showing how the system meets to-day's demands and restrictions, with photographs and typical details of light frame construction roofed and walled with such materials as asbestos, plasterboard, insulating boards, etc.

(3) Factory fabrication and/or site welding—showing the importance and convenience of this alternative and what it might mean in economy of time, labour and cost.

(4) Permanent and post-war construction—being a series of typical details showing how the system is used with brick construction and with concrete construction.

As the completion of this series will be spread over a period of approximately twelve months, readers of the JOURNAL who might like to have the complete set of informative data sheets in advance of their publication are asked to send to us, on their business notepaper, requests to this effect. Scaffolding (Great Britain) Limited, 77, Easton Street, High Wycombe, Buckinghamshire.



Timber drying sheds in course of construction. 30 ft. span welded tubular roof trusses are being used. Architects : B. W. Turnbull and Fraser.

members must be proposed and seconded by members of the Group and elected in the ordinary way.

The Group has been working to further an architecture which can best serve the needs of society; although primarily a research group, it has formed a meeting ground for those interested in a constructive policy in architecture.

Another activity is to form a liaison between English, American and European architects. It has co-operated with similar national groups in almost every country in Europe who are associated with the International Congresses for Modern Architecture. In the past, congresses have been held in different centres, and for each a definite subject has been selected and the representatives of the groups concerned have brought the results of the research work in their own countries.

Independent programmes of research have been undertaken in this country including a careful analysis of the town planning problems of London.

Since the war the research activities have had to be reduced but research still continues on town planning questions, etc., and several discussion meetings have been held. The Executive Committee continues to meet regularly.

Q 900

ARCHITECTS, YORKSHIRE.—*In 1934, we installed some 4 in. cast iron DRAIN PIPES underneath a dairy building to take the effluent and waste from various machines and also that resulting from the washing down or cleansing of the premises. The water used for this job is a mixture of hot softened water and cold hard water, which latter is of extreme hardness, and we believe that certain of the 4 in. pipes are now becoming excessively furred up owing to the action of the salts, etc., in the hard water. It has occurred to us that we might apply a dilute solution of hydrochloric acid to the furred pipes in question, allowing it to stand a certain length of time which should effect the dissolving of the salts concerned, and therefore free the passage of the bore. We have no experience of carrying out work of this character, and shall be obliged generally if you would advise us if you think there is any danger in this action or alternatively if you can suggest any better course.*

We do not recommend the use of hydrochloric acid, as, after it had been allowed to drain away, sufficient might remain to attack the pipes, joints, etc. We recommend "Clensol," made by Clensol, Ltd., 6, Glasshill Street, Blackfriars, London, S.E.1, which should be effective if used in accordance with the manufacturers' instructions. It is regularly used by a large number of big dairies, such as the United Dairies.

PUTTY

Information is now being circulated by the National Association of Putty Manufacturers regarding the use of the "Nap" Certification Mark which has been registered for the purpose of identifying linseed oil putty made to the approved specification.

It is realized that during war-time there is little need or opportunity for trade propaganda, but as the shortage of raw materials increases, the members of the association regard it as of great importance that buyers should be able to assure themselves that they are using putty made only from linseed oil and whiting and that there should be no confusion in the minds of buyers between putty made from linseed oil and any substitutes which may be available under war conditions.

The quality of putty is not always obvious by a simple examination of the material, and it might happen that material in use during war-time gave an inferior performance which only became obvious when the exceptional circumstances in which the substitute materials had been used had been forgotten. Users of putty can, therefore, now satisfy themselves that they are handling, even under war-time conditions, genuine linseed oil putty.

The use of the mark is not confined to members of the Association. A list of manufacturers at present entitled to use the mark has been prepared and will be sent to any enquirer on application to the Secretary, National Association of Putty Manufacturers, Cotswold, Pixham Lane, Dorking, Surrey.