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PRINCIPAL CONTENTS

A.A.S.T.A. Technical Committee	85
Shelter	86
This Week's Leading Article	87
Notes and Topics	88
<i>Astragal's notes on current events</i>	
News	90
A.A.S.T.A. Report on Blitz Accommodation and Housing	93
A. The Present Position	94
B. The Main Lines of the Solution	98
Summary of Proposals	107
Law Reports : Meikle and Others v. Maufe and Others.	
Judgment	108

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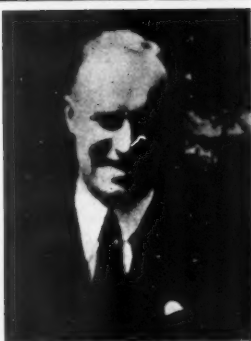
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A.A.S.T.A. TECHNICAL COMMITTEE

Portraits of the leading members of the A.A.S.T.A. Technical Committee. The Committee's Report on Blitz Accommodation and Housing, just issued, is published in full on pages 93 to 107 of this issue. Reading from top to bottom the portraits are: Left, A. W. Wylde-Browne, B.Arch., A.R.I.B.A.; A. S. Mackay, B.Sc. (Eng.), Engineer; Richard W. Toms, Registered Architect; Centre, Miss Justin Blanco-White, A.A. Dip., A.R.I.B.A.; D. O. Jones, Builder's Surveyor and Estimator; E. E. Hollamby, Prob. R.I.B.A.; David Wilson, B.Arch., A.R.I.B.A. Right, P. P. Rosenfeld, B.Sc., Assoc. M.Inst.C.E., Chairman of Technical Committee and Birkin Haward, A.R.I.B.A.

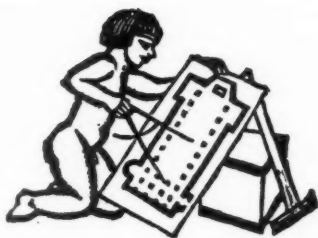




S H E L T E R

A typical scene in a London Underground in War time. This particular section has been converted into a shelter by tearing up tracks and filling spaces between sleepers with tarmac, otherwise little effort has been made to cater for the two or three hundred visitors who sleep here regularly every night. Bunks have probably been added since the photograph was taken, but bunks are not the only things needed by a crowd of tired workers between 6 p.m. and 6 a.m. next day. In spite of all deficiencies, however, the London Underground has proved itself to be a very popular type of shelter. It is popular because it is believed to be absolutely safe: it inspires

confidence. The existence of these safe refuges has undoubtedly had a big effect in stiffening civilian morale and preventing panic; those who can stand the strain no longer in the isolation and insecurity of their own homes find comfort and companionship in these safe and friendly shelters, where the noise of the bombardment scarcely penetrates. Heavily protected over-ground shelters of the kind advocated by the A.A.S.T.A. would be, and would look, equally safe, and they would provide more comfortable conditions. There is, therefore, good reason for supposing that they would be at least equally popular.



PREPARATION FOR THE BLITZ

IF the warnings of Mr. Churchill and of Mr. Morrison are not enough, the sporadic attacks which still take place should convince us that it is as necessary as ever to be ready for heavy or prolonged raids on our cities. Hull is a recent example. How much better off was Hull this time, as a result of its previous full experiences followed by many weeks of excellent weather for building? We may gladly recognize that the success of the Red Army has altered our own circumstances incalculably. It is the first time that a thumbs-up answer to the Nazi army has not been followed almost immediately by either a successful evacuation or a rout. But from this we cannot deduce that the war is over or that air raids are at an end. Perhaps a deadlock in the West of the U.S.S.R. will mean fresh raiding here. Our responsibility is just to prepare.

Actually, our responsibility is more immediate, because the former repeated attacks on the industrial areas showed that many of the precautions which we still lack are of the kind which involve building, and we are in danger of wasting the best time of the year for building. The way in which production is interrupted and morale tested by mass evacuation is well known, and gives both the Government and local authorities a difficult problem. The arrangements for stabilizing the population in the cities, and for preventing mass evacuation from being the only solution—by shelters, rest-centres, and first-aid repairs—have to be co-ordinated with those for taking advantage of evacuation, and organizing it so that production can go on. The technical problems are largely new and of great interest, and the JOURNAL therefore publishes this week a report on the subject by the A.A.S.T.A. This report is the product of about eight weeks' work based on about four weeks spent in collecting evidence, and has been produced at speed in the hope that it may help to form opinion while there is yet time to act.

The A.A.S.T.A. is a professional Trade Union, and

is affiliated to the T.U.C. It feels that the type of activity resulting from this connection is the one most needed at present in the building industry. The scope of its interests in the industry is deliberately not pegged to one profession, so that the A.A.S.T.A. is in fact a practical exemplar of what is advocated by independent writers in the technical press who are impatient of the many architectural, engineering, surveying, and other independent professional organizations. Certainly since most young architects who are not serving in the forces are now "civil engineers," now seems to be the time—and their work places the place—to look into the question of unity.

This attitude has a precedent. There is a similar organization in the United States, the F.A.E.C.T., which includes several types of industrial workers, for example industrial chemists, and claims to have a more practical and effective outlook as a result. American unions have developed an interest in building, and were, for instance, co-operating in 1938 with the United States Housing Authority as building promoters as well as consultants on standards. The professional organization of the building industry is thus both a union and a body with independent status based on its technical work. This arrangement appears to work quite well in America in spite of the fact that some English architects seem to consider it a confusion of function.

Apart from such questions the range of information required for a report such as the one we publish this week makes inter-professional work a necessity. To design a rest-centre giving heavy protection at £13 or so per head involves administrators, architects, engineers, and surveyors. Further, the research work which is revealed as necessary by all such topical inquiries into the technique of building is of use to all these professions alike. We find it of great interest that this attempt to contribute to a current problem should raise the question of professional organization so clearly.



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NOTES & TOPICS

A NATIONAL BUILDING COUNCIL

"THE Ministry of Works, in pursuance of the policy of co-ordinating the wartime building effort of the country, has decided to establish a national building council representative of the principal interests of the industry." The above cryptic announcement was made public on July 31.

★

Enquiries have elicited no further information from the Ministry concerned. The names of the members of the committee have not yet been announced, and no more exact information is forthcoming on the scope of their activities. The general unofficial opinion appears to be that it is another hand-picked committee to advise Lord Reith on current organizational problems as they arise, and that it is not based on existing organizations, although the members individually will represent the viewpoints of different elements in the industry. The R.I.B.A. was consulted.

THE IMPERTURBABLE SWISS

A few weeks ago I received belated Christmas greetings from Kabul on a foreign postcard issued by the Afghanistan G.P.O. The card, which was neatly typed in German ("passed by censor" in India) was from a young Swiss architect whom I have only met twice in my life, and that was several years ago. He has been working in Afghanistan for the past nine months.

★

He said if I was interested he would gladly send me an article on Afghan Village Architecture with any number of detail photographs to illustrate it. So you see there really are people for whom the war just doesn't exist. After the war is over we shall probably discover that thanks to Herr "X" Ankara has been entirely eclipsed by Kabul as a capital exemplar of modern architecture and planning.

ARSON AND OLD LACE

Mildred Godfrey, seventeen year old high-school girl, has been arrested by the New York police on the charge of arson. She is accused of setting fire to the furniture of her parents' home in Flatbush, on the grounds that "it was so perfectly disgusting."

★

Criticism of one's parents' clothes, personal habits, table manners, choice of hats and taste in the matter of wireless programmes is, of course, at its sharpest during the years of adolescence, but youth seldom reveals its irritation with its immediate relatives more actively than by means of black, sullen silences, martyred sighs, permanently-raised eyebrows and a firm resolve never to be seen in public in their company. Mildred, however, is evidently made of sterner stuff.

★

Firemen—alas for Mildred—confined the blaze to the bedroom, but they cannot extinguish the spark of sympathy which must have set many hearts aglow with memories of their own salad days, those years of spots and waisted overcoats, of flashy ties and constantly changing (but temporarily inflexible) opinions.

★

For the aesthetically-minded youth and maiden it is a time of confused and conflicting tastes. Mabel Lucie Attwell and Margaret Tanant have long since passed by. Cecil Alden and Lionel Edwards are losing their grip, and the struggle is on between such figures as Russell Flint and Paul Henry, Van Gogh and Paul Nash. Beneath the benevolent eye of the Medici Galleries, the struggle between these masters in their limed oak frames, sways now this way and now that. Only the sales register can tell whether "Sunflowers" will prevail over "Showery Day in Connemara," whether "Sand Nymphs" will yield in the end to "Autumn Landscape."

★

I remember concocting for my own bedroom a daring scheme in orange and black in an attempt to create a sympathetic background for some aggressively abstract woodcuts by an undergraduate cousin. Even to my enthusiastic eye the result looked more like a tenth-rate tea-room than the sophisticated apartment of an art patron, and it was therefore not long before my wrists were again aching over the distemper brush which, laden with lacquer red was to transform the tea-room into the scarcely less surprising semblance of a fortune-teller's booth—dim, draped and oppressive—a likeness which was sharpened by the odour distilled from an orange stuck with cloves which sat—in obedience to a hint from a novel—upon the mantelpiece.

★

Bereft, apparently, of such fortunate opportunities to work it off with a paint brush, and spared the alternative release of the incendiary bomb, Mildred made her decision to destroy. "Something," said her mother, apologetically, to the Court, "must have snapped in her." It was only patience, Mrs. Godfrey—a commodity which these days is always becoming exhausted.

★

And you who read these lines at breakfast, seated in a Finnish chair and eating with Swedish cutlery off

immaculately designed china, do not think that because of these your belongings will be spared the meditatively malevolent eye of your children. Perhaps even now the Gordon Russell desk is in danger, Mr. Heal's bedroom suite is smouldering, and the Best and Lloyd lamp lies in pieces on the floor. Mildred Godfrey has started something in Flatbush.

PLANNING BEFORE PRINTING

Major Lloyd-George said in the House of Commons on July 23 that the design of next year's ration books was under consideration. He added that every effort would be made to simplify, not the design itself apparently, but the procedure—which those happily unfamiliar with the bad language of the Civil Service might fail to realize means what, where and how the public will have to fill it in in ink.

★

Well, we have heard that sort of promise before, notably about Income Tax forms. Yet these remain an obstinate exemplar of lay-out and printing at their very worst. Why not hand over the job of this design to an architect (no, no, for pity's sake not to an advertising specialist), or anyone else trained to manipulate the ratio of voids to solids, even if he were not allowed to change a word of its fuddled, departmental text? Major Lloyd-George is convinced that "the advisability of still requiring the use of block letters would be appreciated." I, for one, am not—if that requirement is to be as arbitrary in next year's ration books as in next week's.

★

Thus at present the use of block letters is required for the holder's surname only on pages 3, 7, 9, 11, 13, 15, 17, 19, 21 and 23. On page 25 he is suddenly ordered to write his address (for the eleventh time) in Block Letters as well. On page 27 his name and address (four entries) may be written in whatever script he likes. In the "Supplement"—the yellow book in which occur those intriguing pages of cryptical geometric patterns—he has in every case to write both his name and address in Block Letters. On the other hand these are not required for retailers' names and addresses in either book. So a certain amount of simplification and co-ordination would certainly seem to be called for.

GONE WITH THE WIND

Perched insecurely on a variation of a music stool, behind a windscreen 9 in. × 1 ft. 6 in., beside a driver whose teeth were set, whose eyes were front, whose chin strap was fixed securely under his chin, we hurtled through the country in a dun-coloured army vehicle, which, in side elevation, looked about as capable of movement as a clothes line festooned with sacks. It was a blazing day. Clouds of dust from the vehicles we were overtaking made visibility low. Flies in the driver's eyes made it lower. We sped through unknown England, defence areas, road blocks, up hill, down dale, architectural history whizzing past on either hand, wind at tornado strength, cornering on one wheel, looping the loop, dive bombing.

★

In the Mess. "Good Heavens!" exclaimed the O.C., "We've no current." "Can you manage without slides?" chirped the Second in Command. We crossed to the Lecture Room—a Nissen hut packed with troops.

OUT OF IT

After a few words of explanation. The Second in Command asked "What do you think about the

Architectural Future?" And then half a dozen N.C.O.'s. made unrehearsed speeches they could not have prepared, since the theme was different from the ordered programme. The marked impression they made on me was of the intense conservatism of the English. There was no incitement; it was spontaneous. The Army, grown vocal, desires large gardens, semi-detached houses, tiled roofs, bay windows and roses round the door. It distrusts the flat and the allotment, and is not enthusiastic for cricket, bowls, or any other recreation save DARTS.

★

In the mess the Second in Command sighed for the Georgian Mansion he contemplated building if he could ever afford it. The Padre, who for all his battle dress, might have come out of Chaucer, said "I agree with them. I've just built a house and I insisted that it should be as near Tudor as possible." And I agreed with him.

BOUQUETS TO REITH

Contrary to public belief, new aerodromes are not always sited upon bottomless bogland. On the contrary, so a Whitehall spy informs us, the Air Ministry have been known to show a preference for high, short-turfed country as the background for those elegant and unsuitable Georgian-style aerodromes which you have doubtless seen dotted over the face of England.

★

Nothing, of course, can be built anywhere—especially by a Government department—without arousing the fury of somebody, but archeologists who fear for their fate of the barrows and prehistoric burial places in which the country is so rich, can rest assured, the spy continued lowering his voice slightly, that the Ministry of Works and Buildings is keeping a watchful eye upon all such monuments. It has been known—once at least—for a hangar to be shifted slightly, in order to clear some important prehistoric site, and anyone who has had the smallest experience of the inflexibility of official architecture will realize that this is a very generous concession indeed.

★

Where destruction is unavoidable, the site, I am told, is first excavated by qualified archeologists, the remains (if any) are removed, the walls and chambers are thoroughly surveyed, and the site photographed from the air. An archeologist of my acquaintance has been at work on sites of this kind ever since war broke out, and if it is questioned whether, in these days of acute labour shortage, the time of such a man and his staff can be spared, the answer is YES.

★

MARTYRED MEMORIAL

Nor does the work of good fairy Reith end here. Upon a recent Sunday morning officials of his department were summoned urgently to Kensington Gardens to remove "a domestic utensil" from one of the more inaccessible peaks of the Albert Memorial—the first outbreak, so far as I am aware, of this undergraduate disease which has occurred in the London area for years.

★

The old rules laid down by university experts presumably still hold good—a rook rifle for china, and scaffolding for enamel, but which method was used is not recorded.

ASTRAGAL



A large shelter in South East London where human beings are penned like sheep, without privacy and without amenity. Apart from the additional safety they provide, by shortening spans and localizing the effects of blast, subdivisions are necessary from a social point of view. They make it possible to preserve a feeling of family unity and to enjoy a certain

restricted freedom. Tired workers can turn out the light while others in the next compartment enjoy a game of cards. A few necessary belongings can be kept permanently in the shelter. In spite of regimentation and lack of individuality, shelters of the kind illustrated above are not unpopular. They look safe. Mass inspires confidence as successfully as depth.

NEWS

MEIKLE v. MAUFE RESULT

Mr. Justice Uthwatt has delivered his reserved judgment in the action by Mr. J. A. Meikle and others against Mr. Edward Maufe and others for damages for infringement of copyright in architectural work. The judgment is reported on page 108.

A NATIONAL BUILDING COUNCIL

The Minister of Works, in pursuance of the policy of co-ordinating the war-time building effort of the country, has decided to establish a National Building Council representative of the principal interests of the industry.

The names of the members of the council will be made public shortly. The official

chairman will be Mr. Hugh Beaver, M.Inst.C.E., M.I.Chem.E., Director-General of the Ministry of Works and Buildings. Sir Ernest Simon, now Chief Regional Information Officer for the North West Region, will be deputy chairman.

NEW DIRECTOR OF WORKS

The Minister of Works has appointed Mr. T. P. Bennett, F.R.I.B.A., to be Director of Works in succession to the late Lt.-Col. C. L. Howard Humphreys. Mr. Bennett was formerly Director of Bricks, subsequently Deputy Director of Works. He is the founder of the firm of T. P. Bennett and Son, architects, of London, was at one time the Director of the Northern Polytechnic School of Architecture, and has carried out important work for the Admiralty.

DEFERMENT

The R.I.B.A. have issued the following notice concerning the deferment of military

service of architects and architectural assistants engaged on work of national importance:

It is important that early action should be taken by the employer in submitting an application to the professional institute to which he belongs in connection with the deferment of military service of an assistant engaged on work of national importance. The application should be made as soon as possible after the candidate's registration for military service. There is a tendency for employers to wait until the eleventh hour, when enlistment notices are on the point of issue, before putting their cases forward, and this makes it difficult to ensure that a candidate's calling-up notice is suspended pending consideration of the application for deferment.

ARCHITECTS AND THE WAR

The number of members and students of the R.I.B.A. now serving in various branches of the fighting forces is approximately 2,100.



The A.A.S.T.A. is no longer discussing shelters. That matter has already been dealt with. Post-blitz conditions and the different forms of organization that are necessary to meet the needs of a large number of homeless people form the subject of the present report. Technically this is a different problem. But the human material is the same. The above photograph shows an East End shelter in war time with crowds

sleeping uncomfortably on the floor fully dressed in their working clothes. These people have homes where they can go in the day time to wash, change and eat. The lack of communal washing and cooking facilities and of privacy, though it is uncomfortable for them, is not absolutely disastrous. But where homes are destroyed or rendered uninhabitable, accommodation of this kind ceases to be sufficient.



The subject of this and the preceding photograph is the same—squalid conditions in public air-raid shelters. It is not our fault. The files of the Ministry of Information were ransacked for more relevant and cheerful subjects—well organized rest centres, first-aid posts, and canteens; crowds of grateful

people receiving assistance and advice. The search was fruitless. The few inadequate photographs found are reproduced on later pages, but they were not sufficiently numerous to illustrate even this short report, or to give the slightest idea of the nature and magnitude of the problem.

A.A.S.T.A. REPORT

on blitz accommodation and housing



Where must the survivors go for food? Money? Advice? and to-night's lodging?

CONTENTS

	Page
Introduction	93
A. The Present Position.	
Rest Centres	94
Feeding Arrangements	94
Evacuation, Billeting and Rehousing	94
Flight from the Towns	95
Conditions in Reception Areas	95
Weakness of Evacuation	95
Preparation in Reception Areas	96
Requisitioned Houses—Billeting	96
New Housing	97
Administration	97
B. The Main Lines of a Solution.	
Shelters and Rest Centres	98
Feeding	99
Providing New Living Accommodation	101
I. Those Left in the Towns	101
(a) First Aid Repairs	101
(b) Billeting and Requisitioned Property	103
II. Those Who Leave	104
Additional Facilities	106
Carrying out the Work	106
Administration	107
Summary	107

Introduction

DURING the early part of this year the technique of bombing developed from widespread raiding to the *period blitz*, the concentration of the attack on one area, generally of industrial significance, continuing night after night. This development has added enormously to the terrors of air-raids, and the human suffering that they cause. So widespread is the destruction that life can no longer continue in its old channels and many people fly from the bombed areas to places of greater safety.

This report deals with some of the serious problems that have been brought to light, and suggests how they can be solved. In particular, it deals with the provision of Rest-Centres for those bombed-out, the relation of these centres to shelters, and the provision of fresh accommodation, either in the bombed town for those who must stay there, or in safer areas for those who can move away. Coupled with the provision of shelter is the provision of feeding, not only for the homeless, but for all whose normal facilities break down as the result of the dislocation after

raids. (Problems peculiar to London are not dealt with here as its enormous size and consequent adaptability have greatly reduced the hardships and dislocation.)

It would have been easier to tackle these problems if the official A.R.P. schemes had been more adequate. The corner stone of A.R.P. is shelter. With good shelter, well provided with essential amenities, casualties are few, those who are homeless have a place where they can at least sleep and feed, and the confidence of safety prevents a panic-stricken rush to the surrounding countryside.

Official evacuation originally envisaged taking 3,000,000 people out of dangerous areas. This conception was admirable, but for a variety of reasons (analysed in our Reports—particularly *Evacuation—The Under Fives*), far fewer evacuated, and many who went away have returned home. Thus, in the Borough of Stepney alone, the population which had been 200,000 before the war, dropped to 80,000 in October, 1940. Yet by December, 1940, it had again risen to 110,000; that is, 30,000 people who had left this vulnerable area, returned to it within 3 months. (*Health and The Blitz*, Labour Research Department, May, 1941.) The Ministry

of Health informs us that evacuees now total 1,225,000, of whom over 60 per cent. are from London.

The solution of all these problems on the home front is a vital part of the war effort.

We welcome the fact that the present lull and the attack on the Soviet Union are not leading to complacency and inaction. Nevertheless, we think it well to reiterate Mr. Churchill's warning: "We do not expect to hit without being hit back, and we intend with every week that passes, to hit harder . . . I must ask you to be prepared

for vehement counter-action by the enemy." (July 14th, 1941.)

This means that every possible use must be made of this opportunity to make good our deficiencies. That is why this Report has been produced now—to draw attention to deficiencies and shortcomings, and to suggest solutions immediately, rather than carry out extensive surveys and work out detailed proposals. For this reason, too, we have concentrated on the worst aspects, and not included reports of many of the praiseworthy things that have been done.

A. The present position

IN this section we examine the powers and instructions for dealing with the needs of the people after heavy attacks and their results in practice.

Rest centres

- (a) Local authorities have been instructed to set up rest centres based on a small percentage of the population of the area.
- (b) There should be in each centre accommodation giving lateral protection against blast, and *reasonable* overhead protection from debris *where possible* (our italics). (This is less protection than that provided by official air-raid shelters.) (Ministry of Health Circular, No. 2219, 23rd November, 1940.)
- (c) Centres should also have facilities for cooking and the provision of hot drinks; washing and sanitary facilities; blankets, beds, mattresses, first-aid equipment, nurses, medical inspection, and welfare advisers, as well as arrangements for staffing so that centres can be capable of immediate operation.
- (d) An extension of rest centres is the scheme for sick bays where persons suffering from shock, exhaustion, etc., can be temporarily housed until they are fit to be billeted or rehoused.

In practice the number provided has been found insufficient—the Manchester City Labour Party stated that "a thousand people at a time crowded into rest centres for 200 and 250 persons. They were not even adequately fitted for

the 200 people." Also the low degree of protection means that, apart from the appalling danger to the occupants, the rest centres are likely to be bombed out of existence. The centres are generally in dangerous buildings—schools or church halls, very liable to collapse—with large floor spans and lengths of unstrutted wall, and situated in dangerous parts of the towns. Thus in one town all the rest centres were bombed, and homeless people were able to find some shelter only because the military allowed them to come into their barracks.

The standard of readiness often falls very far short indeed of the arrangements on paper, *e.g.*, in a particularly bad case: "nothing had been prepared in advance. Everything had to be improvised . . . there were no mattresses and the refugees had to sleep on the classroom floors."—(National A.R.P. Coordinating Committee's *Bulletin*.)

Feeding arrangements

Local Authorities have been instructed to set up Emergency Feeding Centres, at which meals may be purchased, to cover 10 per cent. of the population of towns of 50,000 or more inhabitants. Powers have also been given to employ the local catering trade to serve standard meals at a prescribed price.—(Major LLOYD GEORGE, House of Commons, June 10, 1941.)

Apart from these emergency arrangements, the Ministry of Food has adopted

the policy of Communal Feeding Centres (now called British Restaurants) also to be set up by Local Authorities. These are intended, presumably, to cater for the greater proportion of the population under normal circumstances, although no objective has been announced. On July 2 in the House of Commons, Major Lloyd George announced that there were 760 Communal Feeding Centres of all kinds (including meal centres for evacuees, and centres operated by voluntary organisations), and that there were plans for further British Restaurants in the areas of 373 Local Authorities. Even when all these are completed they will not be able to feed as many as half a million persons, and not all of these are in dangerous areas. The population in those towns alone which have suffered period blitzes must be something like 8 millions. Many of the centres are makeshift affairs, of different sizes and uneconomical to operate.

The Emergency Feeding Centres are generally in a similar type of building to the Rest Centres and therefore the same objections apply.

The Queen's Messengers, which will consist of 18 units, each of eight vehicles, are a valuable contribution, as has been shown on Merseyside and elsewhere. Local Authorities are also empowered to purchase their own mobile kitchens.

Evacuation, billeting and rehousing

The official evacuation schemes divide the country into evacuation areas, neutral areas and reception areas. The following classes may be taken from evacuation areas—unaccompanied school-children, a proportion of unaccompanied children under 5, unaccompanied children of expectant mothers, mothers with children of all ages, expectant mothers, aged, infirm, blind and invalid. In addition, ailing children can be compulsorily evacuated (S.R. & O., 1941, No. 17.)

FIRST AID POSTS

Accommodation can be found either by billeting on householders or placing evacuees in requisitioned premises. A few thousand children have been accommodated in specially erected camps. Powers are given for compulsory billeting, but the Ministry of Health laid down last October "the widest possible use should be made of empty houses in order to reduce to a minimum the calls upon individual householders in the district and to provide a form of accommodation in which evacuated mothers can be made responsible for the management of their households and families."—(Circular 2178/1940.)

Before evacuees are billeted, they are supposed to be provided with temporary accommodation in halls, etc., taken over for the purpose by the Public Assistance Authority in the reception area.

Those who have lost their homes through bombing are supposed to be found fresh accommodation either in billets or in houses specially requisitioned for this purpose. Surveys are supposed to have been made so that up-to-date lists of billets can be kept and houses suitable for requisition earmarked. These latter are to be put into habitable condition and furniture can also be requisitioned from depositories.

Flight from the towns

These two questions (evacuation and rehousing), are considered together. From every large town that has suffered from period blitzes, the population has streamed out, night after night, to the surrounding countryside, and taken every bit of accommodation that could be found. Bus companies have run buses into the country and allowed people to spend the night. From all parts of the country we have had reports of people sleeping under the hedges.

Conditions in reception areas

Before this great demand on the reception areas, conditions in some of them had been very bad. The official report of the Committee appointed by the Ministry of Health stated of a particularly bad Reception Centre: "All the families were living in overcrowded and insanitary conditions. Hogarth would have revelled in this scene. Instead of the shelter being used for emergency purposes to house families before they could be billeted, it had degenerated into a permanent billet of a most undesirable character."

Weakness of evacuation

We have already pointed out how large numbers of evacuees have returned to such dangerous areas as the East End of



Top: Most of the ailments these nurses have to deal with are due to the very conditions in which they are treated: dirt, discomfort and overcrowding. Cures cannot be expected, or the spread of illness be prevented, unless separate first-aid posts and sick bays are set up where minimum standards of hygiene and comfort can be maintained. Above: First-aid post in the nave of John Keble Church, London, where homeless and orphaned are cared for till a new home is found for them.

RAIDS MAKE TRANSPORT DIFFICULT



Streets are blocked and even pedestrians have trouble in picking their way through the debris. It is absolutely essential to clear the roads as quickly as possible and get the transport

system working smoothly again. This is the sort of problem that the new mobile army of 100,000 building operatives should be able to deal with.

London, but evacuation of some classes of evacuees has never existed as a reality; e.g., at the beginning of March, 1941, 500 under fives were on the waiting list for evacuation. In another case, where a child of 3½ was in hospital with measles, after just having been cured of scarlet fever, application was made for his evacuation. The reply was that although the scheme was compulsory it was impossible to operate, as accommodation was not available.

Preparation in reception areas

With such conditions prevailing, it can be imagined what sort of situations arise after raids. People going to towns not already crowded with evacuees, may find very sketchy preparations—we quote the following from the *Southport Guardian* of May 10, 1941: "There were no mattresses available, but they were bedded down on blankets and cushions, or used chairs. . . . People

coming into the town during the nights found every public convenience locked up, even our communal cooking place, with its paid staff, was closed."

Apart from the evacuation, there is a huge number of persons who want new houses near the bombed town. Thus in a certain area it was estimated that 20 per cent. of the houses were demolished, and all the remainder damaged or liable to damage before the winter.—(Information given by Mr. LOFTUS in the House of Commons, May 29, 1941.)

Requisitioned houses—billeting

How are the authorities dealing with this situation?

The Minister of Health announced that in the *whole of the country*—27,402 houses (mostly large) have been requisitioned (2,906 for London mothers and children; 21,726 for the homeless; 233 for unorganised refugees; 344 for

difficult children; 132 as educational hostels for school-children; 166 for maternity houses; 207 for sick bays and infectious hospitals.)—(House of Commons, May 29, 1941.)

Yet many cases come to hand of suitable houses, with very few occupants, which are not made use of. This often occurs because the billeting officer is appointed by the Local Council and is naturally chary of giving offence to the influential occupiers of the large houses.

The following report illustrates this point:—

"A large number of people had descended on a certain north-west town on Sunday night. All working-class houses had been filled. The billeting officer, who had found billets for only 48 people in two days, was at his wits end. However, some enterprising volunteers took matters in hand. They started off by settling 40 persons on a big contractor who was at the time giving a dinner party to an important client.

10 persons were placed in another large house. 18 persons were found accommodation at yet a third house of 40 rooms, occupied by a rich spinster. Within two hours 89 persons had been accommodated in large houses."—(Information supplied by National A.R.P. Co-ordinating Committee.)

Near other towns there are camps, quite suitable as emergency accommodation—which are occupied by the military. It is also well known that there is a large amount of property that has been requisitioned by Government Departments and is standing empty. Thus Sir William Davison, in the House of Commons on June 19: "A constituent . . . was ordered to vacate premises as long ago as November last. . . . The premises are still standing empty. . . ." Such instances are frequent, and the use of such property could alleviate the position in the reception areas very considerably.

New housing

Finally, it is clear that the Government is envisaging a considerable amount of new housing—although this has not reached any advanced stage:—

"We have arranged for four hostel camps, north, south, east and west of the Clyde basin, for temporarily housing 500 persons each. . . ."—(THE SECRETARY OF STATE FOR SCOTLAND, House of Commons May 29, 1941.)

"Work on new hutment camps is expected to begin shortly . . . Homeless people will live in them until their homes have been repaired or they can go to relatives or friends or be billeted. . . . They will be needed in only a small number of target areas. In other districts, *when the need arises* (our italics), more rest centres will be provided."—(Evening Standard, June 13, 1941, reporting Mr. Ernest Brown).

A very important scheme for Glasgow has been announced which is mentioned later in the Report. It has also been announced that up to 1,500 bungalows for bombed out people are to be erected in the Liverpool area. But the ambitious housing schemes commenced by Coventry, needed by workers before there were blitz homeless, have come to a complete standstill.

There are, too, a number of large hostels being constructed in connection with new factories.

Administration

We can sum up the situation by saying that to deal with these enormous problems, powers do exist on paper—but in practice the measures taken are not by any means adequate.

To quote Mr. Willink, the Special Commissioner for these problems in the London Region: "A homeless person needs the service of six, or eight, and possibly ten, Government Departments." Each of these departments produces

instructions and orders which together form a hotchpotch to be administered by the Local Authority—which even then cannot move a step without the prior consent of either the Regional Commissioner or one of the Ministries. Thus Dr. R. A. Lyster, of Bournemouth, in a letter to the *News Chronicle* (May 27, 1941): "An unusually able food control officer, after trying to do things in a businesslike way and after struggling in vain to get the Ministry to reply promptly and adequately . . . resigned . . . We are ready and willing to start communal feeding on a scale which will give a

lead to other towns. We have been struggling for months and seem to be no nearer the opening of the centres than we were three months ago."

Local Authorities are by no means blameless, but it is not surprising that they are sometimes discouraged. In London things are better, partly owing to the special nature of London, and possibly to the fact that a Special Commissioner has been appointed to press forward with the work. But he was forced to state that, despite the earlier experience of London "nobody in my office, or myself, has ever been asked for

MOBILE CANTEEN



The Queen's messengers, which will consist of 18 units each containing 8 vehicles, have already saved many situations and done valuable work on the Merseyside and elsewhere. They are excellent but there are not yet enough of them.

any general information on the way London attempted to deal with this problem by any Local Authority in England, Scotland or Ireland." No single central authority has a controlling responsibility; Local Authorities cannot

cope with the problems by themselves, because they do not cover both the bombed areas and the reception areas to which refugees go—the net result is that serious measures have usually not been taken until after heavy raiding.

B. The main lines of the solution

Shelters and rest centres

The first need of those who have been bombed out is for somewhere safe to go until the next day. They may need minor medical attention, they certainly need rest, and will also need washing facilities. People who have lost their homes will undoubtedly feel happier if they can keep together as families—rest

centres should have cubicles which can take one or two families, affording a degree of comfort and privacy. On the next day, before they can find fresh living accommodation, they will need to eat, and mothers with young children will want to give attention to them—wash out babies' nappies, prepare special feeds and so on. There will be some who cannot go direct to fresh accommodation—for example, those who have unexploded bombs near their homes. So

rest centres must have sufficient accommodation to carry on the essentials of normal life for a few days.

It is clear that most of these requirements are very similar to those for shelters. If there were many properly equipped safe shelters, there would be little need for rest centres. This is a policy which we, in common with many others, have continually pressed. Our last report, *Safe Shelters—Now!* shows many different types suitable for dangerous areas, including bombproof shelters and two-stage shelters, the latter being strengthened in the second stage to resist direct hits.

It is vital, however, that the shelter programme must be carried out in the light of the new and urgent problems. The first ones must be distributed where they are most needed as rest centres. In the heart of the dangerous area where people continue to live, they will be bombproof, and on the outskirts, they will give a standard of protection equivalent to that of the first stage of the two-stage shelter. The scheme will then be developed to give protection to all who remain in the towns at the same time as safe living accommodation is being provided for those who can leave.

Some provision for rest centres can be made at once, by using existing buildings which give a high degree of protection—steel framed and re-inforced concrete structures. There are a number of such buildings in most industrial areas, offices, departmental stores, or blocks of flats used by Government Departments as offices.

Where there are no buildings of this type, temporary rest centres must be set up in the safest available buildings. The present ones selected cannot be considered safe. A better type of building than those at present used, is the two-storey terrace house, with its frequent crosswalls, which partly localise the effect of bombs, and little masonry overhead to collapse as debris, and which can be made just as safe as existing shelters. Fig. 1 shows a scheme for the adaptation of a row of terrace houses as a rest centre. This must not be allowed to be more than a temporary expedient until well protected ones have been constructed.

Fig. 2 illustrates a heavily protected rest centre. This is provided with a reception room; restaurant; family cubicles furnished with bunks, tables and drawers; lavatory and washing accommodation; with special facilities for children and provided with all the necessary services including ventilation plant. The feeding room is planned to be used for recreation when not in use for meals. The upper floors are planned as shelter accommodation, and the whole is designed to resist direct hits from $\frac{1}{2}$ ton bombs. The cost of this centre is about £13 per head. It can be constructed by 70 men in 6 months. It uses about $\frac{1}{2}$ cwt. of steel and 2 tons of cement per person.

TERRACE HOUSING

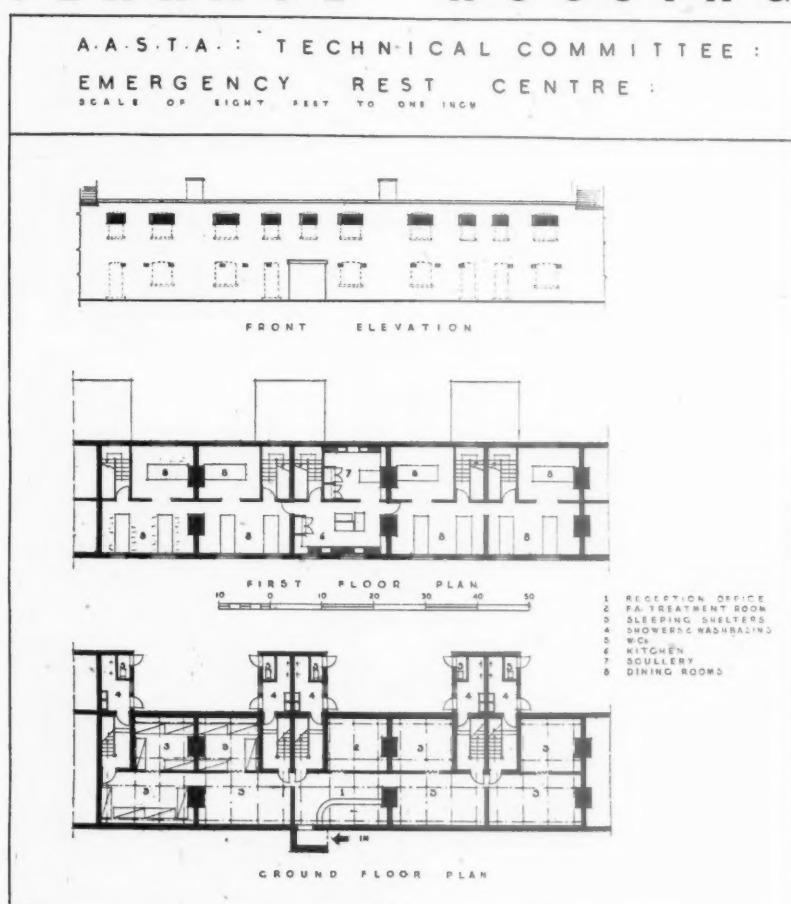


Fig. 1. Terrace housing adapted as temporary rest centre. Windows have been filled in and walls thickened by $4\frac{1}{2}$ in. reinforced skin externally. Ground floor rooms have been strengthened with independent braced strutting. Slate roof has been removed and replaced with flat as in Fig. 4.

The number of rest centres depends on the area. In smaller towns a very high percentage of the houses may be made uninhabitable, in a period of three days. So, if all homeless persons passed through rest centres at a uniform rate, and were evacuated within 24 hours, as much as 27 per cent. of the population might have to be covered. In practice, about half of these people may evacuate themselves without using rest centres. Those who do use them may remain longer than 24 hours. So that something like 25 per cent. of the population should be accommodated at one time. In larger towns this might drop to as little as 5 per cent., as the whole town is unlikely to suffer at once.

Feeding

Apart from those who lose their homes, there is a far larger number who, because of the damage to water and gas mains and electric cables, have no cooking facilities. This has sometimes affected the whole population of bombed towns and meant very severe hardship. Rest centres will be able to feed their occupants, but this is only a small proportion of the population.

It does not seem possible to make any real division between communal feeding and emergency feeding. Indeed, there are very strong reasons that there should be no distinction. If large numbers of people become accustomed to using communal feeding centres that are also emergency feeding centres, this getting food after blitzes presents no problem to them. It is also most desirable that feeding centres should be associated with rest centres, for then those needing rest centres will, in all likelihood, be able to go to a place already familiar to them.

It is also most essential that feeding centres should be places likely to survive blitzing.

We propose that there shall be an immediate drive for large scale provision of communal feeding, in framed and other strong buildings.

The organisation must be based on standardised kitchen equipment units, including large ranges and boilers, heated by solid fuel (to prepare for blitzing of gas and electricity) with other necessary kitchen equipment. As it takes time to gather together the extensive equipment required, the buildings should be earmarked, and the purchase of equipment commenced so that the centres can be sufficiently provided to be used for emergency feeding, which can be of a lower standard than communal feeding. At the same time pools of portable cookers and boilers and other equipment should be formed in each area, to be rushed to a bombed town and used in conjunction with any available accommodation. Meanwhile it will also be necessary to construct new buildings for communal

REST CENTRE AND SHELTER

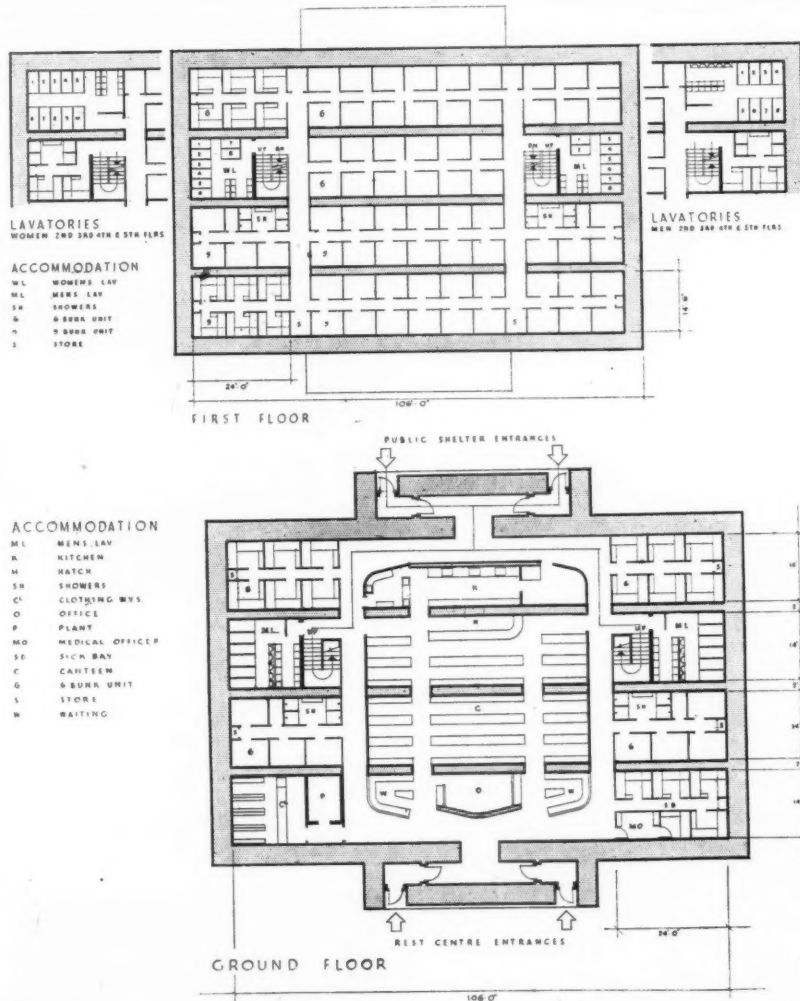
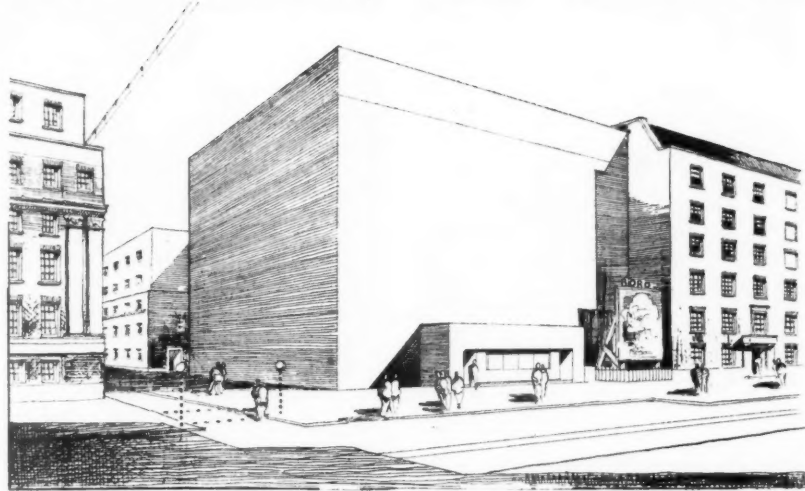


Fig. 2. Heavily protected rest centre and shelter. Built with 4 ft. 6 in. mass concrete outside walls and 10 in. concrete roof with reinforcement near the underside. There is also a thick base. There are six storeys, making the fullest use of the heavy protection. The two lower floors are used as a rest centre, the other four as shelters with separate canteens.

HOMELESS PEOPLE MUST BE FED



Food is always important, but particularly so in a crisis. If people can't eat in comfort they must manage whatever way they can, and make shift with buns and cups of tea, health can't be maintained for long on this kind of food, or shattered nerves restored.

The man in the top right-hand corner looks as if he was suffering from too many snack suppers.



Top left is a cheerful canteen in the sub-basement shelter of a West End London store, where employees of the store serve food and drink to shelterers. The photograph bottom left shows a properly arranged children's dining room in the rest centre that has been organized in John Keble Church, London.

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feeding, as there are not enough suitable ones in many towns.

We are not in possession of sufficient figures to calculate accurately the extent of the arrangements, but the following gives an indication of the scale of feeding provision required. Under present rationing, every family feels the need for obtaining a number of its meals away from home. A considerable number, which may amount to 30 per cent. of those in industrial areas, obtain meals at works canteens and school-children should be provided with a midday meal at their school canteen. Communal feeding should be available for most of the remainder—thus in many areas 90 per cent. should be provided with at least one communal meal a day. The very big demand for communal feeding centres wherever they have been opened is sufficient to justify their organisation on the scale suggested.

Corresponding arrangements must be made in reception areas. We have indicated above the scale of evacuation, and communal feeding arrangements must be capable of expansion to include every evacuee. This can be done only on the basis of organised planned evacuation. There seems no reason why people

who happen to live in small towns and villages should be deprived of the advantages of communal feeding and the same arrangements should apply everywhere, except that in these places a low standard of protection is permissible.

Providing new living accommodation

We have shown that, apart from the terrors of raids and the disorganisation that follows, the greatest need is for somewhere for the homeless to make new homes—this is coupled with the necessity of finding accommodation outside the dangerous areas for the large numbers who want to leave them.

i. Those left in the town

(a) First-Aid Repairs.

Much of the property is severely damaged, but capable of being repaired. Thus in the town mentioned above, where so many houses were destroyed and damaged, it was estimated that between 30 per cent. and 50 per cent.

may have been capable of repair. Under the present system of first-aid repairs, houses may go for weeks or months, without being made weathertight—not only is the accommodation idle, but houses and their contents are further damaged by weather. Much accommodation could be made available by speeding up the first-aid repairs, and labour and material requirements reduced by carrying them out in such a way that subsequent raids do far less damage. It has been estimated by one of our members engaged on this work that in one of the less heavily raided areas 70 per cent. of houses repaired were repaired more than once.

At present considerable delays ensue while surveys are made, estimates prepared and arrangements made for checking the work done by contractors. Delay also occurs while contractors attempt to find new men, as they cannot afford to keep men standing idle between periods of raids. Fig. 3 shows the organisation involved by present methods in one of the most progressive cases.

It is important, therefore, to revise the organisation. By employing men directly under the Local Authority as soon as surveyors have ascertained which build-

ORGANIZATION OF FIRST AID REPAIRS

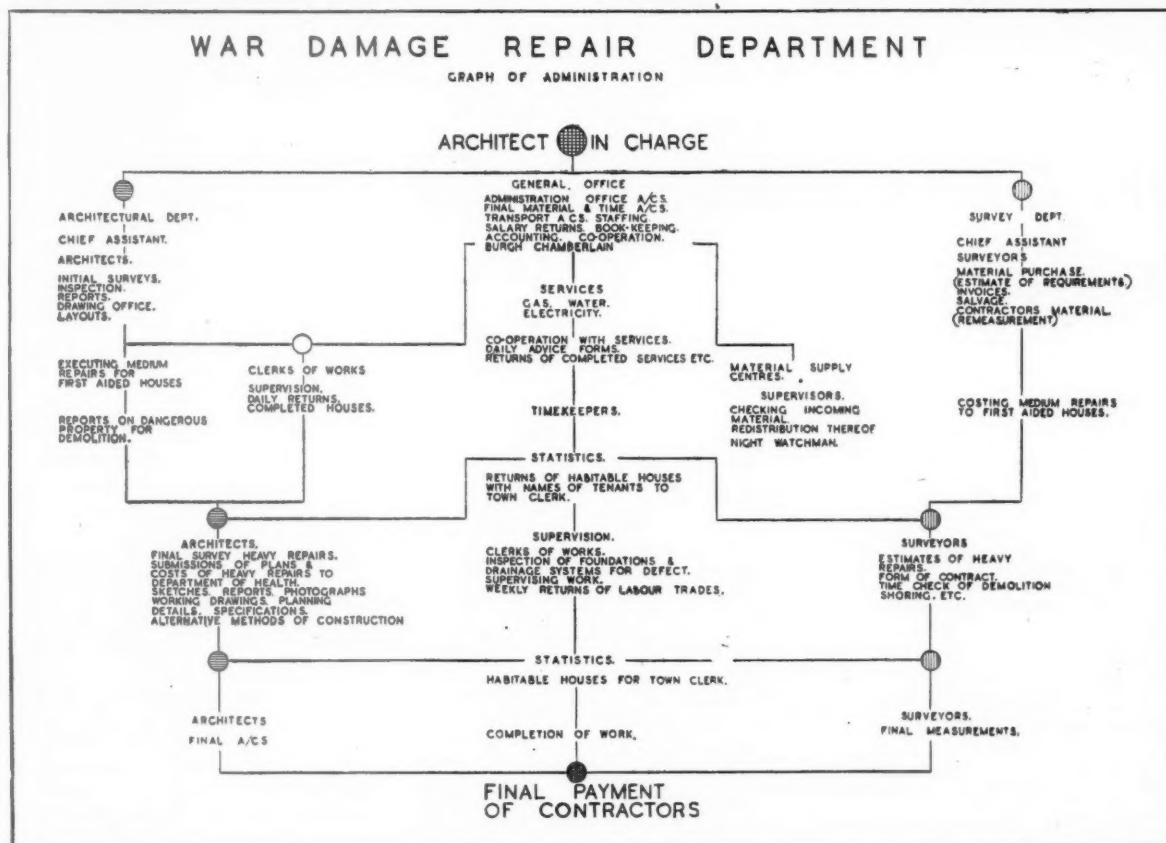


Fig. 3. Diagram showing the organization of first-aid repairs prepared by Mr. Sam Bunton. This is one of the best ways of organizing contractor labour.

REPLACEMENT OF ROOF

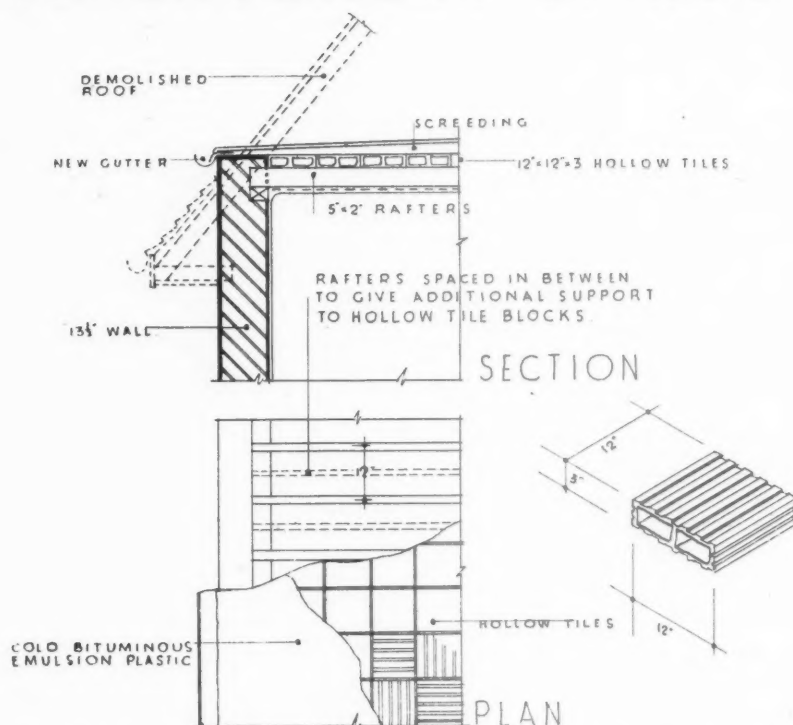


Fig. 4. Replacement of roof with flat hollow tile construction. This reduces the number of roof repairs and increases resistance to incendiary bombs.

LIGHT REPLACEABLE WINDOW

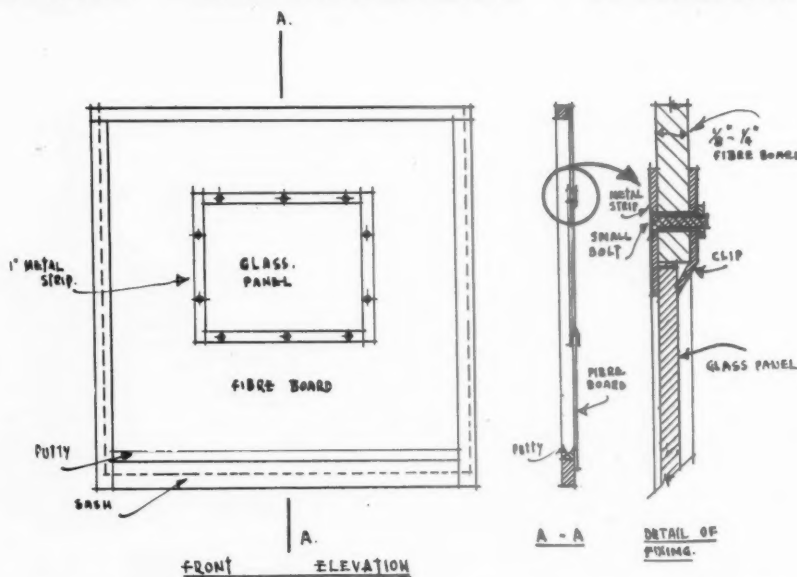


Fig. 5. Light replaceable window panel. This consists of a fibre or plywood panel with a glass inset. The panel is fixed to the inside of the window frame with light panel pins, so that if blown out by blast it is easily replaced.

ings require repairs, and which are beyond repair, squads can be sent direct to the houses to proceed with the work, obviating the need for detailed surveys, estimates and detailed checking (other than technical supervision) of the work.

Further, such squads can be used to rush assistance to other authorities, in heavily raided areas. In addition, local workers temporarily unemployed, who would be only too willing to help, can be used for this work. (Reports show that there are usually many persons unemployed locally after raids.)

It is absolutely vital, if the full co-operation of the workers is to be obtained, that both building workers in mobile squads, and local unemployed, be offered proper Trade Union rates, conditions and allowances and transport to accommodation be arranged where they are working far from home.

In regard to methods of first-aid and other repairs, we make some suggestions which are not claimed to be comprehensive or sufficient, but indicate lines on which repairs must be developed.

Repairs should be carried out in two stages:—

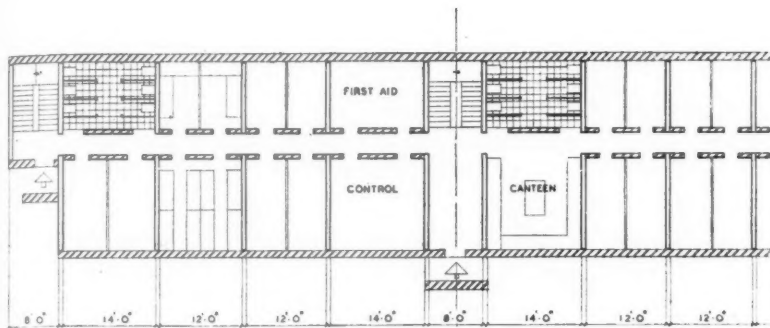
1. *First-aid repairs to keep out weather*, being very simple and mainly covering holes in roofs and window openings. A method of doing these repairs to roofs might be to have standardised rolls of felt cut to slate widths, placed over and under slates and tacked down to existing woodwork; or tarpaulins may suffice for a short period.

2. *Permanent repairs to make houses habitable and less liable to subsequent damage.* Experience shows that a low standard of internal finish (e.g., no repairs to ceilings, partitions, or doors), is extremely unpopular. Doors must be replaced. Ceilings should be repaired, in cases of slight damage by patching plaster-work; in more severe cases by replacing with wallboard. The same applies to partitions. They will thus be less likely to be shaken down subsequently. Although materials are scarce this will actually reduce the demand by reducing repetition of repairs. Supplies of materials can often be expedited by using fittings from unrepairable houses nearby (those nearest the bomb crater) which will usually be of the same design.

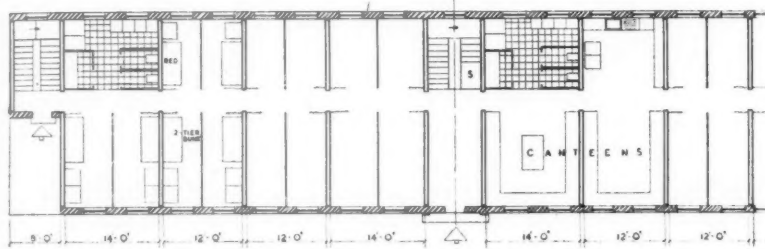
Roofs and windows are the most liable to repeated damage. Methods of repairing roofs should be investigated. One which suggests itself particularly for newer suburban housing, is to torch slates when replacing them, and render over the whole roof area. This should be experimented with to determine whether it can be made resistant to penetration by incendiary bombs. (It will not be applicable where there is considerable damage to the roof, especially the rafters, or where the roof and walls are not in good enough condition to carry the additional weight.)

Another method (shown in Fig. 4), particularly applicable where roofs are

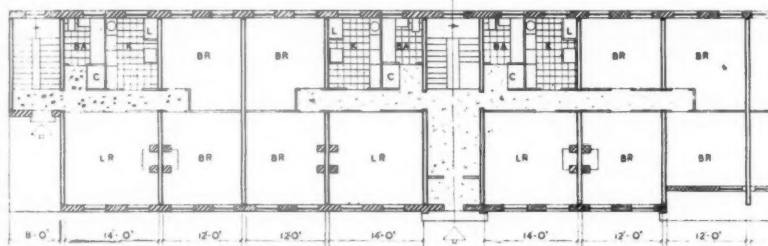
SHELTER HOUSING AT CLYDESIDE



Stage 1. Planned as air raid shelter for immediate use.



Stage 2. Adopted as hostel for period of transition.



Stage 3. Converted into individual homes for use in peace time

Fig. 6. Mr. Sam Bunton's proposals for shelter housing on Clydeside.

extensively damaged, and in areas likely to be subject to frequent attack, would be to strip the existing roof, taking down the rafters, replacing it with a flat roof of the hollow tile type. This could be done directly over the top floor ceiling, which, together with timber from the rafters, would act as shuttering. The roof would have to be covered with waterproofing which would not be damaged by slight movements due to settlement, *e.g.*, bitumen emulsion. Such a roof would not only be more resistant to blast, but considerable overhead protection is given. Care must be taken that the new roof is sufficiently supported not to constitute a danger by reason of its weight.

Similarly, window openings need special treatment. One method where frames are blown out, might be to brick up the opening to leave an aperture in which a standard window unit could be placed. These units could be mass produced in large numbers. They should be glazed,

as it is generally agreed that natural light is essential, and present glass substitutes are translucent and not durable. If glazing is centre-hung, it may have considerable resistance to blast—revolving instead of blowing out. If frames are blown out of such openings, they can rapidly be replaced with other standard units.

Another suggestion is shown in the illustration (Fig. 5). Window openings are covered with fibre board or three-ply in which is a glass inset. The whole is attached to the frame by light panel pins, so that if blown out it can be replaced. This method might be used for the immediate repairs, as prepared panels would only need trimming to window openings.

Other necessary repairs are those to chimney stacks—these are much easier if the stack can be trimmed down to just above the new flat roof level and left at that. Drains, and all services including electricity, gas and water,

should also be repaired by direct labour squads sent to the sites without delay—in co-operation with the first survey which decides whether houses are worthy of repairs.

(b) *Billeting and Requisitioned Property.*

But there will still be a large number of persons requiring new accommodation. Some of this will have to be found by taking over houses on the outskirts of towns. Usually these are fairly large, and a considerable proportion is standing empty, as many of the former occupiers have evacuated. There are, similarly, many houses only partially occupied, which can be used for billeting homeless persons. It is essential that immediate and thorough surveys be carried out of both classes of accommodation as promised by the Minister of Health (House of Commons, May 29, 1941.) Generally, those whose furniture has been salvaged will want to be rehoused, but many of those who have lost everything will prefer to be billeted.

ii. Those who leave

Similarly, surveys must be undertaken in areas adjacent to the large urban centres, taking in the immediate countryside, and towns and villages within a radius of about 20 miles. Experience of billeting of evacuees shows that great difficulties arise when a housewife has to take other persons into a house already insufficient in many respects for her own needs. Undoubtedly the most satisfactory arrangement is the use of hostels. Clearly the best buildings for the purpose are large country houses, and other buildings, such as golf clubs, holiday camps, road houses, country clubs, sports clubs, and we have already seen how this accommodation is not being fully used. If the pressure on accommodation is very great, such buildings can temporarily be permitted to be overcrowded—in a manner impossible in working class billets.

Even with the adoption of these proposals, it is clear that there are not sufficient buildings in the places from which transport to work is feasible to meet the demand created by large evacuations, without a very considerable amount of overcrowding. Therefore some form of new housing is essential.

We have considered the provision of some form of temporary housing that could be made in sections easily transported to where they are needed, and there rapidly erected. We have, however, realised that for several reasons this is unfeasible. So many areas already require large amounts of new housing that there can be no question of only preparing structures to be sent round after blitzes. As steel and timber are not available in large quantities, lighter forms of construction taking into consideration the time it takes to set up plant for manufacture, the time for manufacture, transport and erection on a large scale, would probably take nearly as long to erect as the permanent housing described below. There must also be considered the very low standard of protection from bombing given by any type of temporary structure. It has been pointed out, also, that the relative cost of temporary types of housing would not be so much less than that of permanent housing. Costs of structures might be lower, but, with one storey huts, surfaces to be insulated and waterproofed are greater, runs of services increased, length of road, drains and other services greater, and additional air-raid shelters necessary. (Safe Housing in Wartime. O. N. Arup. D. Gestetner Ltd. 5s. 6d.)

Further, there is the fact that temporary structures would unavoidably continue to be occupied as dwelling houses during the inevitable post-war housing shortage.

The case for constructing permanent housing is therefore very strong.

The credit for devising a simple and sensible type of housing which is blast and splinter proof, goes to Mr. O. N. Arup, in the scheme prepared for Clydeside. Fig. 6.

ARUP'S SAFE HOUSING

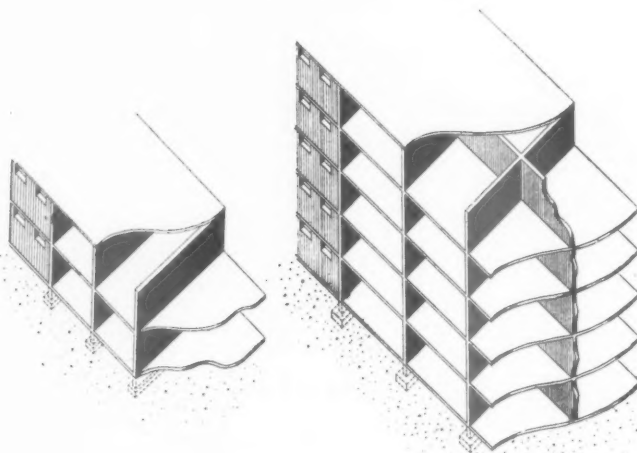


Fig. 7. Constructional principle of Mr. Arup's safe housing. Concrete crosswalls and floors form a bomb-resisting box construction. The outside walls are of reinforced brick. There may be 2 to 5 storeys.

He suggests using a box construction of reinforced concrete, in which the floors rest on frequent cross walls. Fig. 7. These walls would give shelter against the results of a direct hit on an adjacent part of the building, and would also themselves resist collapse, so that the structure is certainly safer than most present types of shelter. It can have up to 5 storeys, and it seems that with 4 storeys it would be about twice as safe as with 2. Mr. Arup also shows how the same building can be used as a shelter, as a wartime hostel, or as peacetime housing. This is of the utmost importance, for it means that while only a few such buildings exist, they can provide shelters for many people until more have been completed, when they can be used for housing.

Some excellent plans by Mr. Sjöström prove that very satisfactory houses could be built in this way. The outside walls are of reinforced brickwork in wartime, with small, high windows which can be enlarged later.

But for people who have been bombed out, we must stress the importance of giving family, as distinct from hostel, accommodation, even if it is of minimum standard. It is most undesirable that these families should permanently lose a home through having been bombed out. The new housing should be provided with communal feeding centres, and centralised recreational and laundry facilities, so that the families will not need in their dwellings the standard of accommodation hoped for in peacetime. Yet they must each have some privacy, and washing and some cooking facilities. A reasonable present standard, which can be raised to a proper peacetime

standard almost without any builder's work, could be obtained by building two-storey dwellings and using them at first as two separate flats (Figs. 8 and 9). The cost per family at the first stage—of the flats—would be half that for the whole house, and such houses in brick construction with concrete floors now cost some £600—£800, or £75—£80 per head in the first stage. According to Mr. Arup's figures, the stronger concrete construction might increase this cost by some £30 per head, but against this must be set the cost of a separate equipped shelter, say £10 per head. In the four-storey block, the saving of services, roads, etc., would also lower the cost.

The place for such housing is just outside the large industrial areas—starting with the blitzed towns, but including those few industrial areas which have not yet suffered and are already overcrowded. Thus the Secretary of State for Scotland admitted that “there are towns in Scotland where overcrowding existed in pre-war times to the extent of 45 per cent. of the people.”

In order to provide a basis for sewers, water, etc., it is desirable to plan new groups around existing housing, near to villages or large houses and estates where present facilities can be used or extended. There is already a certain amount of hostel construction going on in connection with large new factories. But these are isolated from existing towns, and with little consideration of any post-war use. These may give rise to serious problems because of their isolation from towns with their social life, shopping centres, entertainments and so on. They are not even being designed for later adaptation to family use.

AND PEACE-TIME USES FOR IT

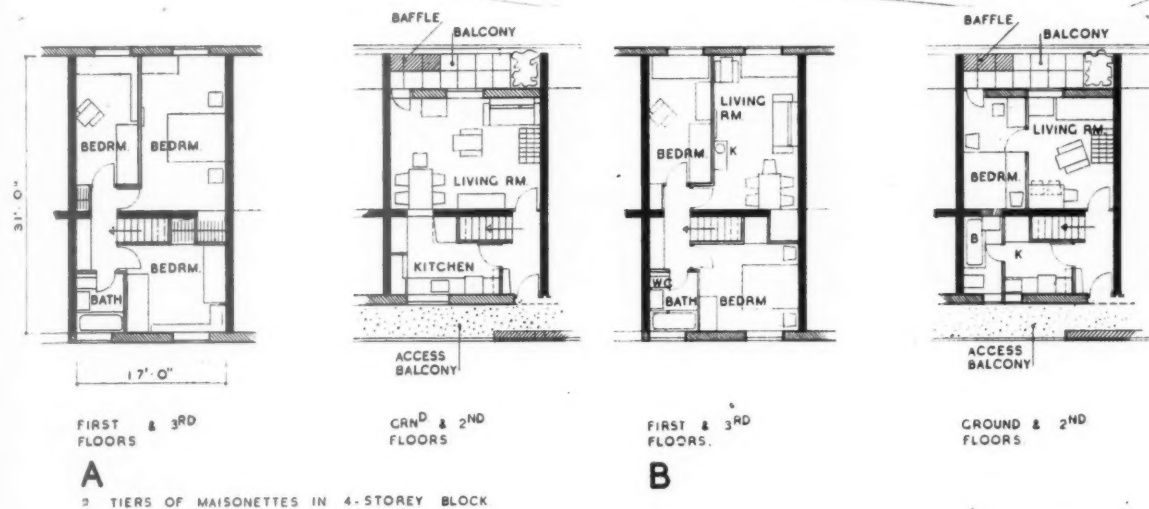
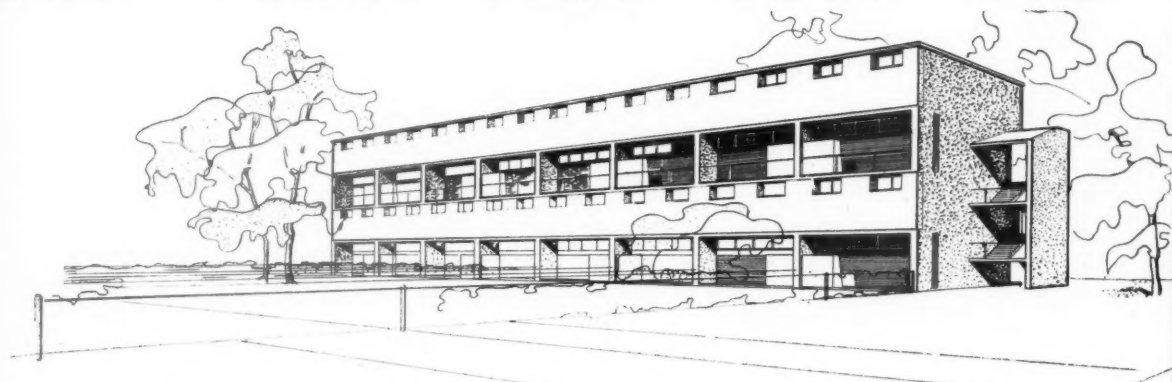
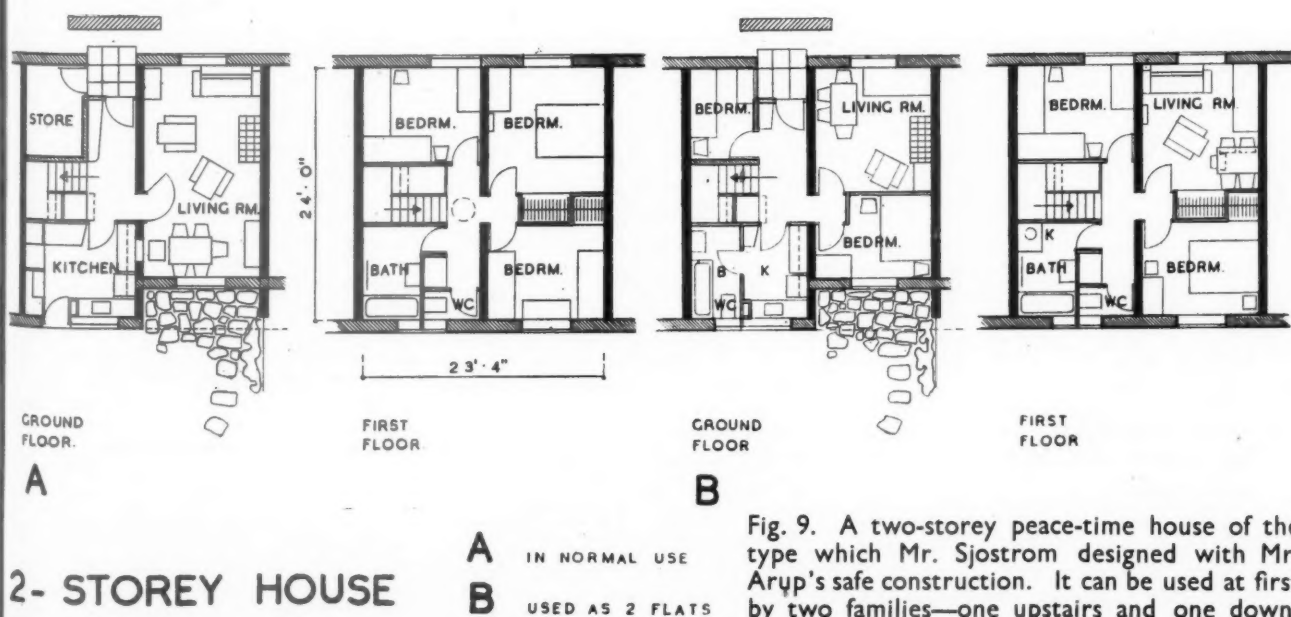


Fig. 8. A four-storey building, using the spine type of safe construction. The building consists of two tiers of maisonnettes which, to begin with, would provide four storeys of flats. The small windows necessary in war time are compensated by cross ventilation and covered balconies.

2-STOREY MAISONNETTES

- A** IN NORMAL USE
B 2 MAISONNETTES USED AS 4 FLATS



2-STOREY HOUSE

- A** IN NORMAL USE
B USED AS 2 FLATS

Fig. 9. A two-storey peace-time house of the type which Mr. Sjostrom designed with Mr. Arup's safe construction. It can be used at first by two families—one upstairs and one down.

A CASE FOR THE REST CENTRE



The siting and planning must be carried out with an eye to post-war as well as war-time conditions. The former includes consideration of transport facilities, especially railways, as there is much more scope for transporting large numbers by rail. The latter includes the considerations described in War-time Building Bulletin No. 15. (Research and Experiments Department, Ministry of Home Security) where it is shown that a good camouflage can be obtained by irregular layouts adapted to such natural features as woods, hedges, streams, hills. It also includes a low density of building to obviate the danger of groups of buildings forming targets. The sort of density envisaged initially is about 15 four-room dwellings to the acre, each accommodating about 10 persons (*i.e.*, 150 persons per acre). On this basis, if we take the case of a hypothetical town of 200,000 persons, and build dwellings in groups to hold 1,000 persons, each group would cover an area of about 180 yds. sq. If, for example, the town is a circle of 4 miles diameter, all new housing is in a mile-wide band two miles from the boundary, and 10 per cent. of the population is to be accommodated in this new housing, there could still be over a mile between each group of houses.

We have mentioned transport above—we do not intend to discuss this in detail, but we must point out that it is of very great importance—that not only does it affect the siting and planning of new housing, but it is of vital importance in getting people away from towns after blitzes, and plans for dealing with these must include the mobilisation

Several people were trapped whilst taking refuge in a shelter beneath a school, when the building was hit by a bomb. Some wonderful rescue work was done by an A.R.P. squad after many hours of forcing their way through the wreckage. The picture shows the rescue of Miss Betty Warboy (whose first request on being rescued was for a cigarette), a case for the rest centre. It won't do her any good to go round her friends and relations hunting for a shake down, or to go wandering aimlessly out into the country in search of rest and safety.

of all trains, buses, and private cars as well as lorries and A.R.P. transport.

Additional facilities

In villages planned as reception areas, in the outskirts of towns where rehousing is to take place, and in the groups of new housing, certain additional amenities are needed. First are reception centres, to which people are sent from the bombed areas, so that they can be medically examined, be fed and rested, and clean themselves before passing on to their new accommodation. Normally they will be sent straight to the latter, but in exceptional cases they may need to remain in the centres overnight, and limited accommodation for this must be provided.

It is also very desirable in such areas to set up new communal feeding centres, as well as clinics and hospitals, and other services necessary for the increased population. In the outskirts of towns and in villages, there may be existing halls or other buildings which can be taken over and adapted. But generally, both here and in the new housing groups, it will be necessary to set up new buildings. It is not essential that these should be of a bomb-resisting or permanent type, and there will be advantages in using temporary types of structures—chiefly because by varying the type it will be easier to get rapid production, than if further buildings are used similar to those employed for new housing; and because where longer spans are needed these can only be built cheaply in a light construction.

Carrying out the work

We have shown in *Safe Shelters—Now!* that 400,000 men could provide shelter for 20,000,000 persons within the space of a year. We consider that these proposals need modifying in the light of the needs of housing and rest centres. The essential thing is to do the maximum amount of work possible before heavy raiding starts. We have made proposals for using strong buildings and converting terrace houses for immediate use as rest centres. In addition, a number of bomb-resisting rest centres should be constructed at points distributed throughout dangerous areas, for between one-fifth and one-tenth of their population. Starting with the latter figure, say 2,000,000 persons, the centres could be constructed in 6 months by a labour force of 60,000 men. Shelter, consisting of the first stage of two-stage shelters should also be constructed—we showed that one shelter for 588 persons could be completed in about 12 weeks by about 200 men, but the same number of men could complete 6 shelters in 19 weeks. So 200,000 men could provide shelters in 6 months for another 3,000,000 persons.

If we aim also at about 1,000,000 persons being given new housing, this could be done within one year by 100,000 men (basing our estimate on figures given by Mr. Arup). With the first stage of accommodation, the first 100,000 people would be accommodated within two months.

All these proposals would involve a total labour force of 360,000 men. It is to be noted that a mobile labour force of 100,000 men is already in an advanced stage of being organised by the Government, and could form part of this.

There is also the question of materials. If the programmes were executed on the above scale, something like 350,000 tons of steel and 5,000,000 tons of cement would be needed.

We have put forward these figures only to indicate the scale on which a programme should be conceived—not as a hard and fast schedule. The amount needed depends on how much use of, and improvement to, existing facilities can be made. But we believe the following details indicate the practicability of the proposals.

According to the *Economist* of July 5, 1941, there are now 750,000 out of a peace-time 1,350,000 operatives working in the building trade. Of these 250,000 are already working for Local Authorities in one way or another. There are still 20,000 unemployed.

Cement consumption in the past year has actually been nearly 3,000,000 tons less than the productive capacity of the plant operating under peace-time conditions.* The National A.R.P.

*Report of the Committee on Cement Production, May, 1941.

Co-ordinating Committee has shown how 6,000,000 tons of cement, additional to peace-time output, could be made available annually by the use of blast furnace cement. (Evidence submitted to Lord Reith's Committee on Cement Production.)

In regard to steel the amount needed is something like $1\frac{1}{2}$ per cent. of the annual output in peace-time. (The amount per head is less than that used in the Morrison table shelter.)

Bricks are also required, but we are not aware of any obstacle to obtaining these.

These comments show that the labour and materials necessary can be found in the country—maybe certain modifications in the figures would be necessary—but the governing factor is the question of policy—the efficient planning of all available resources in the National Building Programme in which these buildings should be given their correct priority.

Administration

We have already indicated that difficulties in carrying out schemes arise from :—

- (1) The multiplicity of Ministries and Government Departments concerned.
- (2) Difficulties of Local Authorities, etc., in obtaining approval for their schemes.
- (3) Restricted area covered by Local Authorities.
- (4) Regional Commissioners not directly responsible to those living in the Region.

It is clear that what is needed is some focal point at which all the Local Authorities, and all the Government Departments can come together, an idea welcomed by the Minister of Health in a recent debate on civil defence. We suggest that this can be found in a Regional Council (with power to initiate and execute schemes, through Local Authorities), on which all Local Authorities in the Region shall be represented, together with such bodies as Federations of Trades Councils which can represent the needs of the workers. The Regional Council should also have on it representatives of the various Government Departments who should be mandated to give approval to schemes coming before the Council.

Such a Council could not, of course, meet and deliberate in emergency, but should have an Executive, or officers who would be empowered to act, but would have to account to the Council for their actions.

These Councils would organise and control Regional stocks of materials, pools of heavy plant and squads of labour in their areas. They would put these at the disposal of the Local Authorities who would carry out the work.

SUMMARY OF PROPOSALS

i. In the towns

(a) Rest Centres and Shelters

Immediate elimination of all dangerous Rest Centres.

Immediate adaptation of strong buildings as rest centres.

Construction of a nucleus of heavily protected rest centres and shelters in the centre of towns.

Planning of Rest Centres for 5 per cent. to 25 per cent. of the total population.

Construction of first stage shelters on outskirts of towns.

(b) Feeding Centres

Setting up of communal feeding centres in safe buildings (or new buildings where these are not available), capable of use in an emergency before being completely equipped for communal feeding. Forming of pools of mobile equipment.

(c) Living Accommodation

Complete reorganisation of first-aid repairs to ensure house being habitable as soon as possible. Organisation of direct labour squads which can be used in shock brigades. Standardisation of repairs. Commandeering of large houses on outskirts of towns and scheduling of billeting accommodation.

ii. Outside the towns

(a) Living Accommodation

Commandeering of large houses (with necessary arrangements where owners still in occupation). Scheduling of billeting accommodation.

Construction of new housing of a permanent nature, grouped round existing towns, designed to give a high degree of protection, standardised to ensure speed of erection and utilise unskilled labour and capable of being later adapted as family homes, and finally as post-war housing after the war.

(b) Reception and Feeding Centres

Setting up of communal feeding centres in existing halls, etc., to be enlarged in an emergency to deal with influx of refugees coupled with centres for reception and care (redirection) of refugees.

iii. Labour and materials

Making available necessary labour as a necessary part of protection of civil population and war effort.

Increase in production of materials, particularly cement, by utilising blast furnace cement.

iv. Administration

Setting up of Regional Councils representing Local Authorities, Trades' Councils and Government Departments with full powers to execute schemes and to organise pools of labour and materials on regional basis. Councils to have executive officers with powers to act in emergency.

THE END

LAW REPORTS

MEIKLE AND OTHERS *v.* MAUFE AND OTHERS: JUDGMENT

In the Chancery Division on Thursday, July 31, Mr. Justice Uthwatt delivered his reserved judgment in the action by Mr. Joseph A. Meikle, F.R.I.B.A., Mrs. Clara Ellen Smith, a widow, and Mr. Frank W. Chaplin, against Mr. Edward Maufe, A.R.A., F.R.I.B.A., Buxted, Sussex, and Heal and Son, Ltd., house furnishers of Tottenham Court Road, London, for damages for infringement of copyright in architectural work.

Mr. Meikle's claim was in his personal capacity, and the plaintiffs, Mrs. Smith and Mr. Chaplin's claim were in the alternative as executors of Arnold W. Smith, deceased, for damages for infringement of copyright in architectural drawings and plans made by Cecil C. Brewer and Smith for the building occupied by Heal and Son, Ltd., in the Tottenham Court Road, and in the building as an architectural work.

The case for plaintiffs was that the plans and drawings of the northern part of the building were the work of Smith and Brewer, and that they had a beneficial interest in the copyright. Later Heal and Son, Ltd., decided to extend their building by an addition on the south of the existing building, and they decided to have Mr. Maufe as their architect. Plaintiffs' complaint was that Mr. Maufe had carried out the extension by copying plaintiff's work.

Mr. Maufe denied infringement of plaintiff's copyright, and pleaded that the façade had to be the same in order to have uniformity in the extension of the building. The details, however, were entirely different. It was also pleaded in regard to the façade that there was an implication for the continuity of the building in keeping with the part already erected.

Mr. C. Harman, K.C., and Mr. J. Mould appeared for the plaintiffs, and Mr. Shelley, K.C. and Mr. Guy Aldous represented the defendants.

The hearing of the case occupied the Court for nine days, and there were over one thousand exhibits in the case, including plans, drawings and photographs.

JUDGMENT

His lordship, in giving judgment, said the case was one in which he had to deal with the facts of the case and the law with regard to copyright in architectural designs. As to the nature of the alleged infringements he would have to deal with them in some detail. Mr. Shelley, for the defendants, had said that the case

depended upon details, and those details had been gone into very carefully. The firm of Smith and Brewer were originally engaged by Messrs. Heal and Son to act as architects in connection with the building they proposed to erect in the Tottenham Court Road. No special terms were arranged between the parties. They were appointed architects by Heal and Son, and the matter was left at that. The defendants had admitted that Smith and Brewer designed the northern part of the building. With regard to those plans his lordship found that they were the joint work of Smith and Brewer, made in the ordinary course of their partnership business. It was the original work of the partners working together. Subject to the point of law raised, the copyright was in their name, they having collaborated in the work, and they were well fitted for the combination. The result of their work was a novel building of an artistic character being erected in the Tottenham Court Road. The design was one which could be copied and reproduced in any extension of the building. In his lordship's view Smith and Brewer were alone responsible for the work. It was not disputed that if a copyright existed, some benefit in that copyright was vested in the plaintiff, he owning a legal and equitable interest in the copyright.

When Messrs. Heal decided to extend their building they engaged Mr. Maufe to carry out the extension, and he made a continuity with minor differences. His object was to make the new addition look like the old and he succeeded. The result was the present new portion. There were certain changes in the design.

With regard to the interior his lordship could not go into all the details, but there was a reproduction here and there which was a breach of the copyright.

The defendants had sought to justify their action on the ground that it was agreed between Smith and Brewer, or impliedly agreed that the building could be reproduced in a manner to constitute one architectural building. He accepted the evidence of Sir Ambrose Heal that before the new building was erected he discussed the question of the extension with Mr. Meikle. There had been a breach here by the defendants, and the question was now one of damages for general infringement of plaintiff's copyright. He assessed the sum at £150.

Mr. Shelley said his clients had paid into Court a sum in excess of the £150 his lordship had awarded plaintiff.

Mr. Mould said the question of costs would have to be argued.

His lordship under the Copyright Act should have complete discretion as to costs.

After discussion his lordship adjourned the question of costs for legal argument at a date in October next.

A verbatim report of the judgment will appear in our next issue.

FORTHCOMING R.I.B.A. EXAMINATIONS

Intermediate Examination.

November 14, 15, 17, 18, and 20, 1941. (Last day for receiving applications: October 1, 1941).

May 15, 16, 18, 19 and 21, 1942. (Last day for receiving applications: April 1, 1942).

November 13, 14, 16, 17 and 19, 1942. (Last day for receiving applications: October 1, 1942).

Final Examination.

December 10, 11, 12, 13, 15, 16 and 18, 1941. (Last day for receiving applications: November 3, 1941).

July 1, 2, 3, 4, 6, 7 and 9, 1942. (Last day for receiving applications: May 27, 1942).

December 9, 10, 11, 12, 14, 15 and 17, 1942. (Last day for receiving applications: November 2, 1942).

Special Final Examination.

December 10, 11, 12, 13, 15, 16 and 17, 1941. (Last day for receiving applications: November 3, 1941).

July 1, 2, 3, 4, 6, 7 and 8, 1942. (Last day for receiving applications: May 27, 1942).

December 9, 10, 11, 12, 14, 15 and 16, 1942. (Last day for receiving applications: November 2, 1942).

Examination for Building Surveyors.

October 8, 9 and 10, 1941. (Last day for receiving applications: September 1, 1941).

May 6, 7 and 8, 1942. (Last day for receiving applications: March 24, 1942).

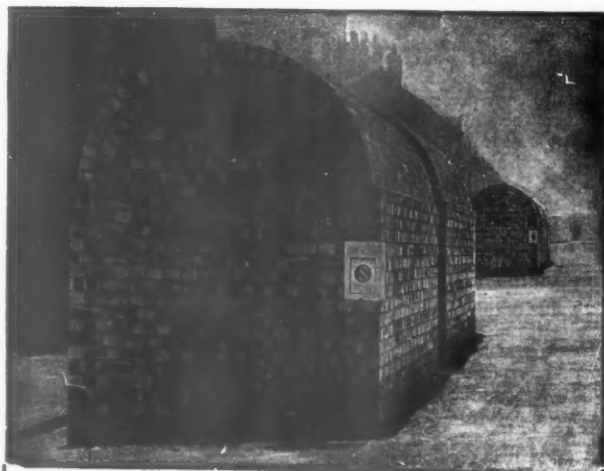
October 7, 8 and 9, 1942. (Last day for receiving applications: August 26, 1942).

REBUILDING THE CITY

At a luncheon of the Improvements and Town Planning Committee of the City of London a presentation was made to the late chairman, Mr. Richard Meldrum.

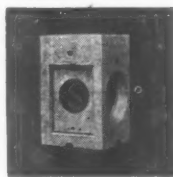
Mr. Claud W. Dennis, who presided, said that many people would like to know something about the plans for rebuilding the City. He would like to tell property owners and every one interested that the Improvements Committee would hear every suggestion anyone cared to bring. A report would be made to the Common Council in September.

The Lord Mayor said that it was in their power to secure that great good should arise from the devastation. Once before much of the City was destroyed. The opportunity then created was not grasped in the way in which we might hope for to-day. We must be ready with plans outlining the broad principles upon which reconstruction must be based, having a certain elasticity dependent on circumstances. Those ideas must be practical, based upon the national capacity for individual enterprise and tempered by the planning necessary to ensure the common good—a planning in accord with modern principles, yet maintaining the traditions of the ancient City.



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During the spring and summer months building activities throughout the country will of necessity be greatly accelerated.

War Office contracts, factory construction and extensions, rehousing, reconstruction and "first aid" to damaged buildings . . . all such work will keep architects, builders and local authorities busily engaged.

THE PROBLEM OF MATERIALS

The control and conservation of building materials is, in total war, essential to ordered progress. No one will dispute the wisdom of planned control, though many may regret its embarrassments.

THE USE OF TEAK

For many constructional and other purposes BURMA TEAK (*Tectona Grandis*) is the ideal wood. Because of its exceptional stability, great durability and unusual weather-resisting qualities, it is frequently, and would with advantage be more frequently, **specified** for internal and external work where reliability is demanded. (Used externally it requires no protective covering of paint; it weathers to a pleasant grey tone which is superficial only, or its original colour may be retained by a coat of clear varnish. For interior use it responds well to wax polish.)

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THE RELEASE OF TEAK

TEAK is officially recognised as an essential war-time import. Adequate supplies are available and the price remains moderate. Stocks are held by timber merchants in all important centres throughout the country.

As with all other woods, and most other basic building materials, control of release is exercised, but for work that has received official sanction, and where Teak has been particularly **specified**, it is available and will be released.

SPECIFY BURMA TEAK

There is only one true Teak—*Tectona Grandis*—the British Standard Institution's "Nomenclature of Hardwoods" (December 1939) is emphatic on this point. Timbers of other botanical species may masquerade as "Teak," but they cannot be relied upon to behave as the genuine TEAK behaves.

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THE NATIONAL TRUST AND POST-WAR BRITAIN

A National Authority Needed

Lord Zetland, presiding at the annual meeting of the National Trust held at the R.I.B.A., expressed the view that the Government would have done well to go farther towards the establishment of a national planning authority on the lines suggested in the Uthwatt Report.

The Government as a first step, he said, had delegated to a council of three Ministers, which body Lord Reith regarded as the embryo of a future national planning authority, certain preliminary tasks. The Trust would have been glad if the Government had found it possible to go a little farther along the road, for the sooner an effective national planning authority was brought into being the better, for more reasons than one.

With regard to the effect of the war on the Trust's properties, Lord Zetland said that they were largely excluded from the provisions of the War Damage Act, and the Trust must therefore bear its own risks. Up to now it had been comparatively fortunate. A good many of its properties had suffered from bombs, but, so far, only one irreparably—namely, Old Devonshire House, given to the Trust not long ago by Major Benton Fletcher, which unfortunately had been completely destroyed. By good fortune a considerable part of the valuable collections given by Major Fletcher with the house were at the time in a less

vulnerable area. The Trust had now to consider how best Parliament could be asked to give it power to dispose of the site, which was at present inalienable, so that it might be able to acquire and preserve some other building where the collection could be housed and the musical study formerly carried on at Devonshire House renewed.

Lord Zetland said that since the annual report went to press it had been found possible to proceed with the carrying out of the Eskdale scheme, for which so large a sum was raised before the war. As to the Penfold Fund, the exact value of this legacy could not yet be ascertained, but it would certainly provide not less than £10,000.

Lord Esher, chairman of the finance committee, said that while it was still true that the Trust could not afford properties which were liabilities, it was getting stronger as it got larger and was growing as its reserves accumulated. The war had meant a temporary loss of the beauty of their woodlands by the sad necessity of realizing timber, but the Trust would be in a better position after the war to bring the woods back into a satisfactory condition because it had set aside for this purpose almost the whole of the receipts from these sales.

With the heavy burden of taxation falling on landowners it was difficult to see how large estates were to survive. Country houses had played a great part in our English way of life, and they remained as evidence of our spacious and commodious past. It was our custom in this country not to destroy such things, nor let them fall into

decay, but rather to adapt them to new uses. He hoped an effort would be made to fit these fine houses, occupied and untouched, into the new world. The Trust had a carefully thought out scheme by which a family could continue to live in their ancestral home in practical ownership but free of taxation.

WAR DAMAGE ESTIMATES

Inquiries reaching the War Damage Commission indicate that there is some misunderstanding about the exact meaning of a question on the forms C.2 and C.2/V., on which claims for war damage to land and houses are made, which reads: "What is the estimated approximate cost, at present-day prices, of reinstating the damaged property in the form in which it was immediately before the damage?"

The Commission desires to make it clear that the phrase "estimated approximate cost" does not mean an estimate as a surveyor or architect would understand it, but merely an indication which would enable the Commission to form a preliminary opinion of the extent of the damage. The Commission expects that when temporary repairs are executed any builder who does them will be able and willing to indicate to the claimant, without special examination or additional expense, a round figure sum. This is all the Commission requires, and it has no power to pay any cost incurred for obtaining assistance in the preparation of a claim.

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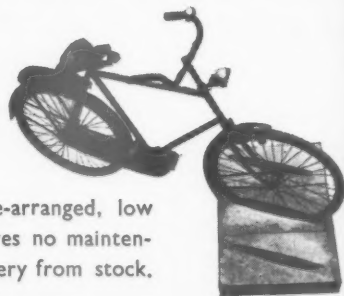
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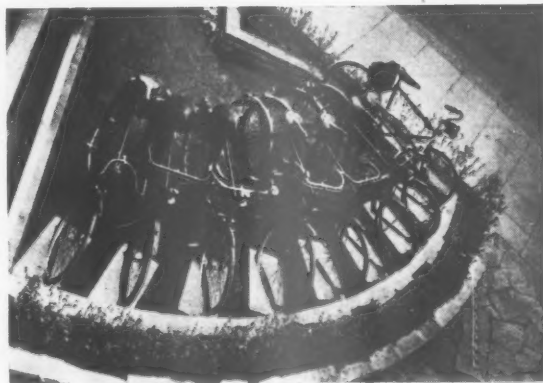
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