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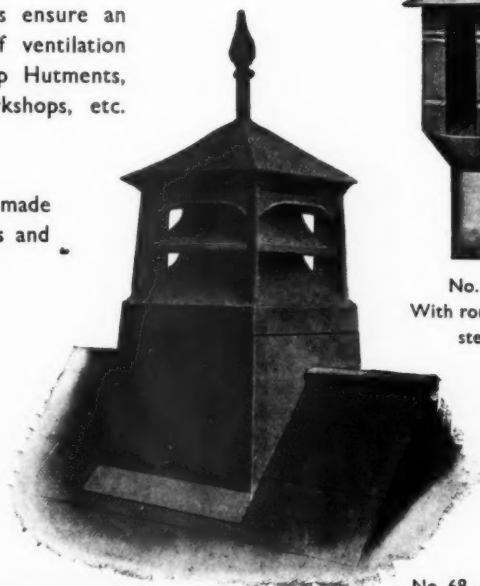
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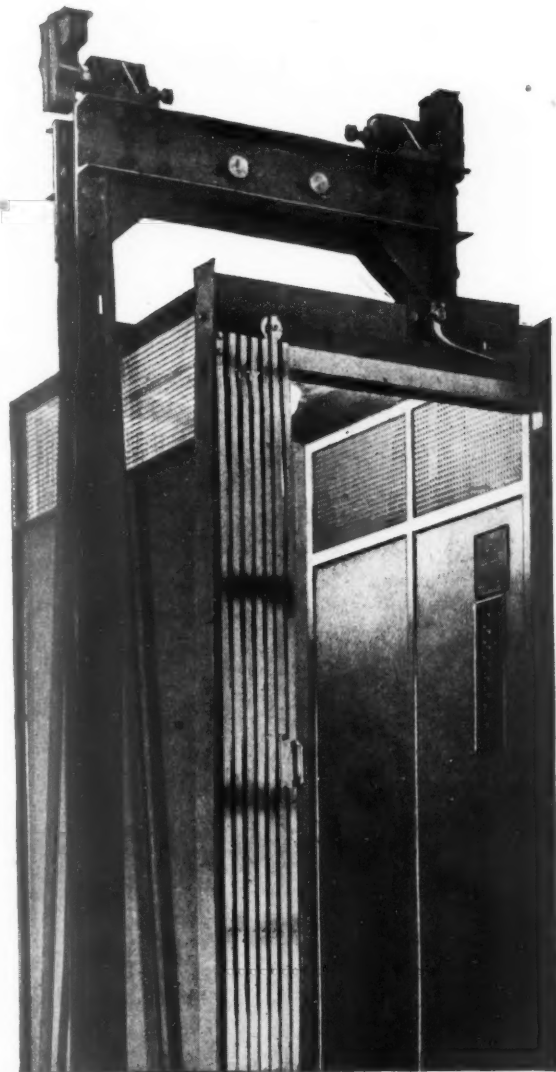
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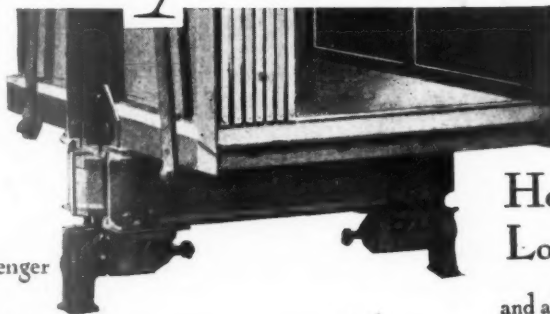
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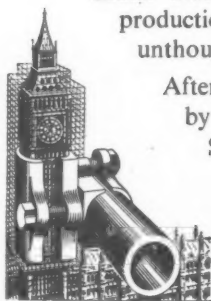
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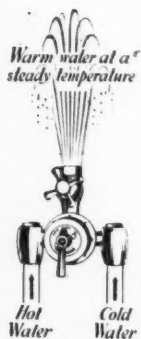
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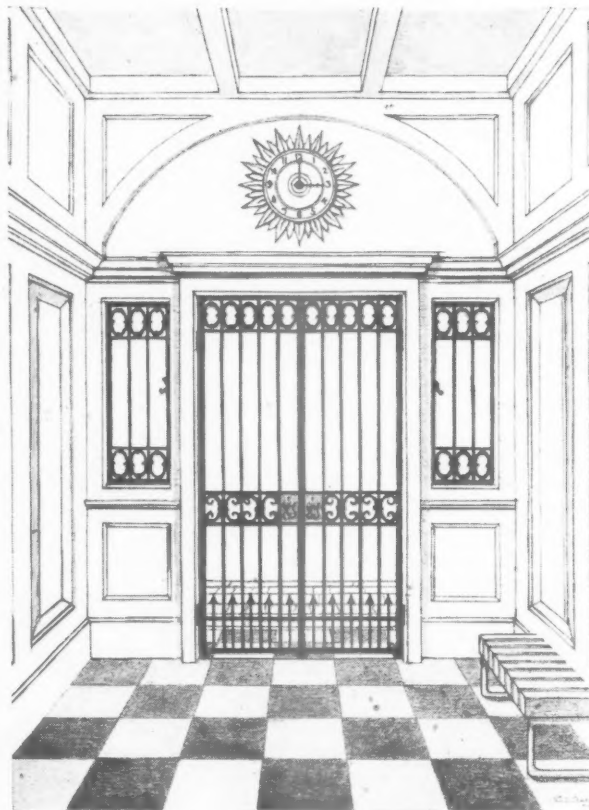


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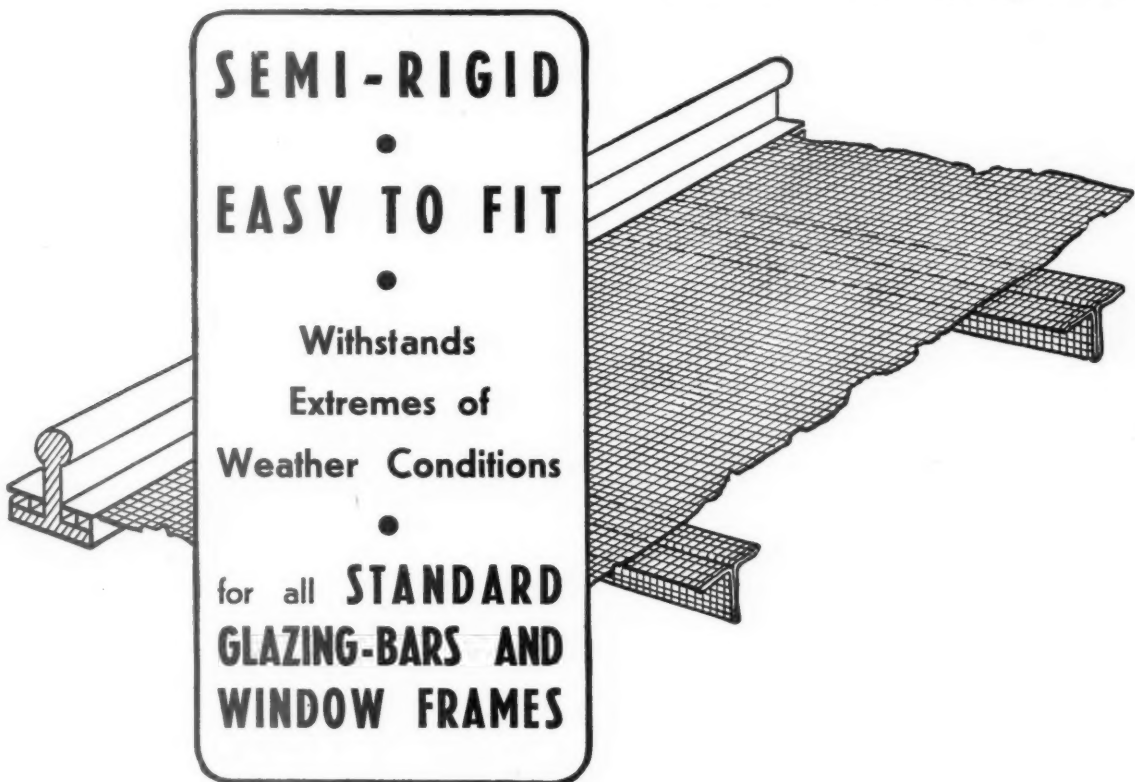
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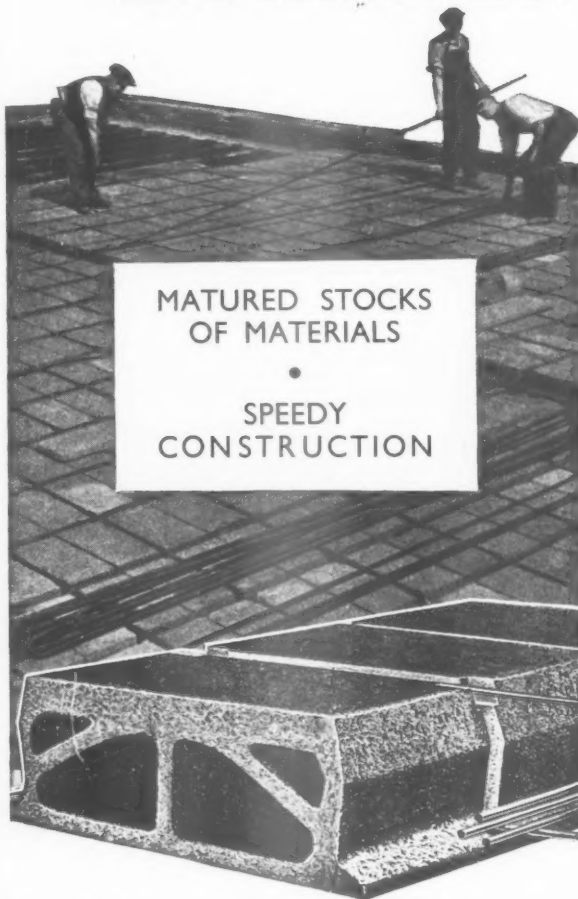
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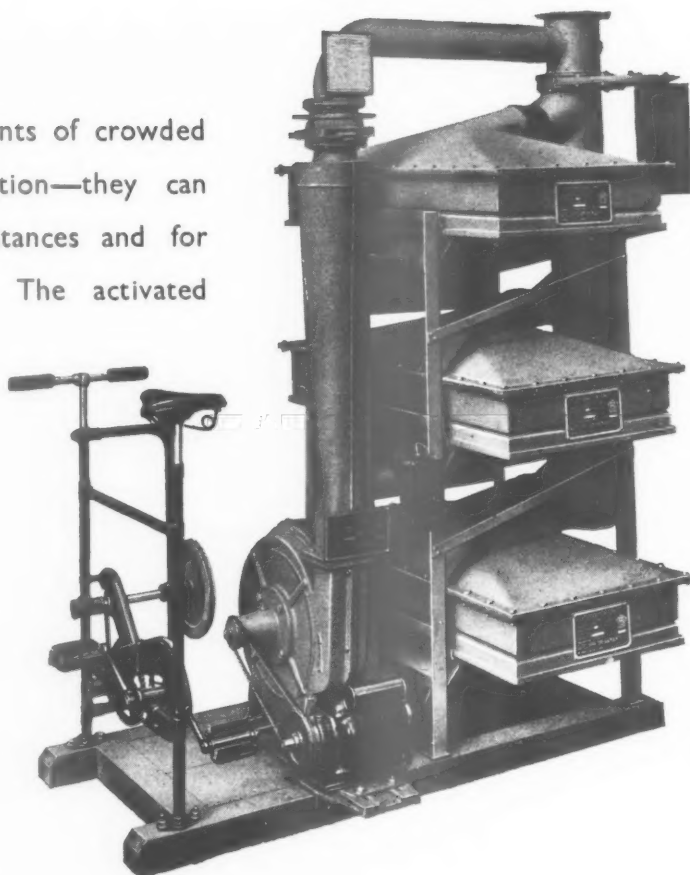
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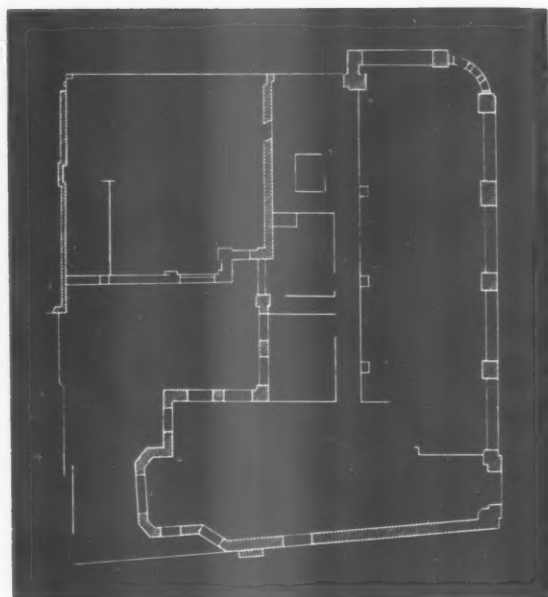
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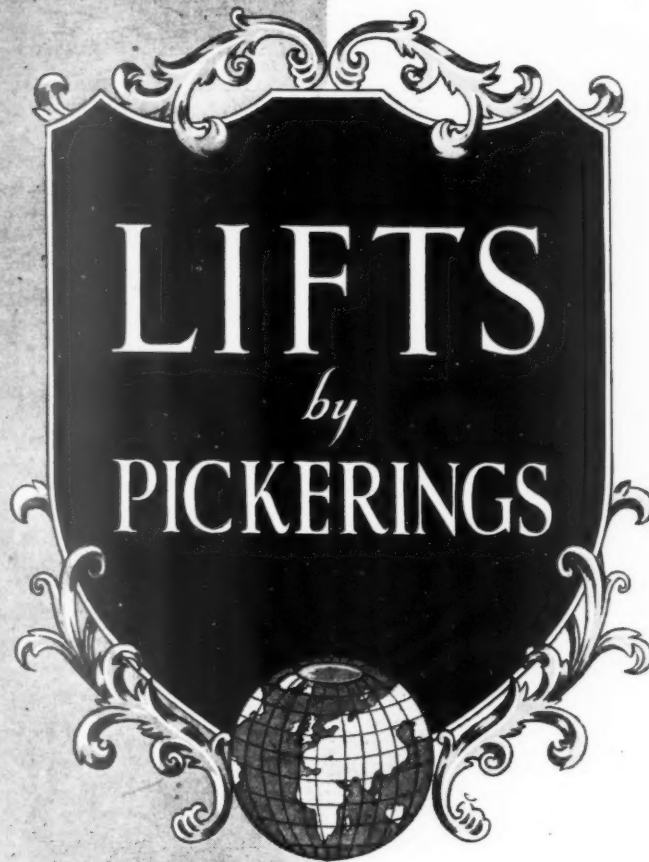
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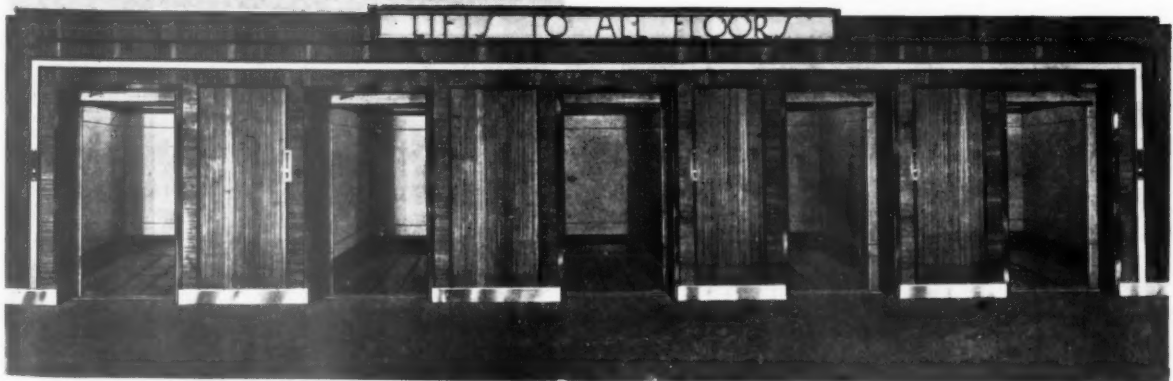
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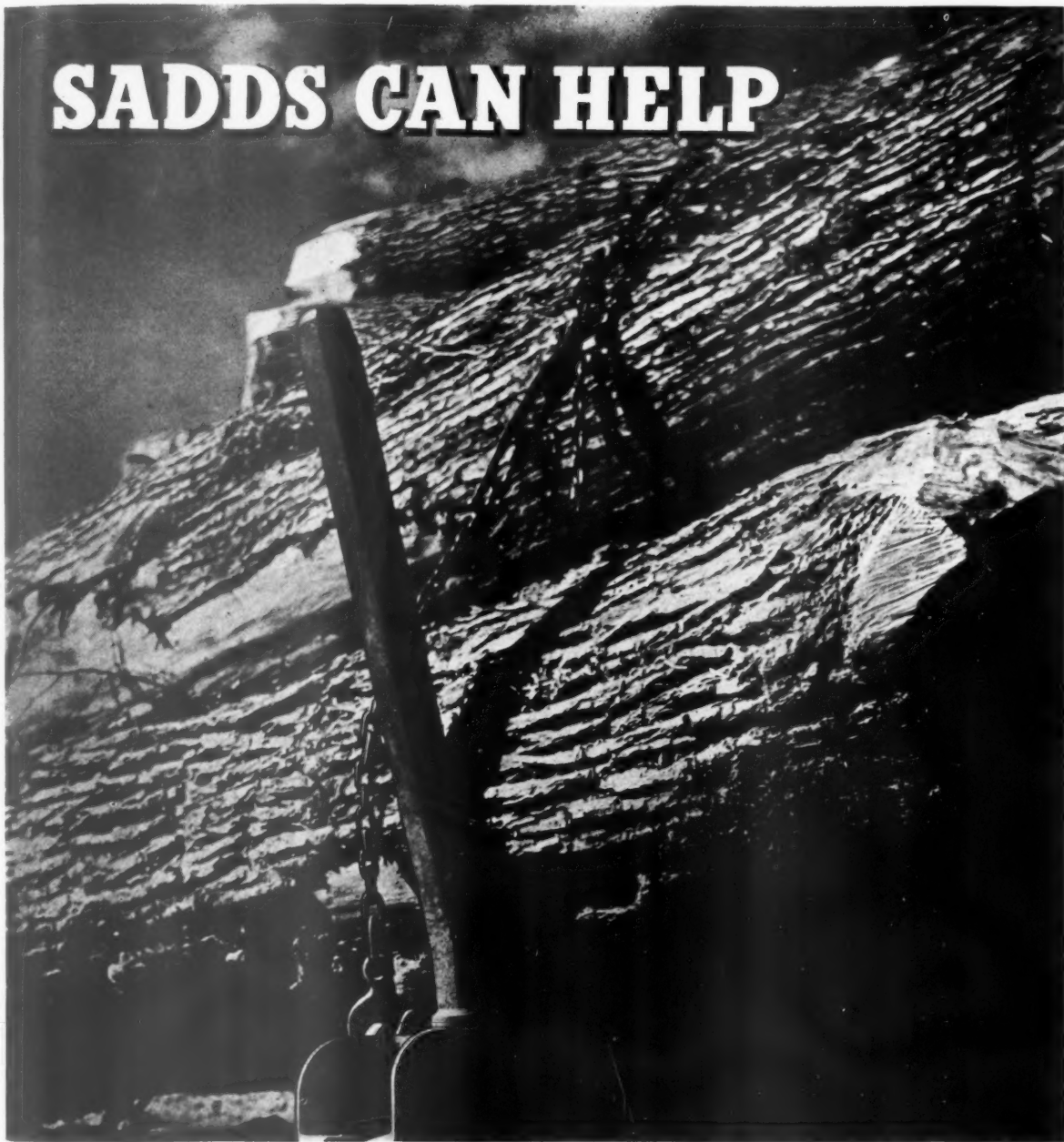
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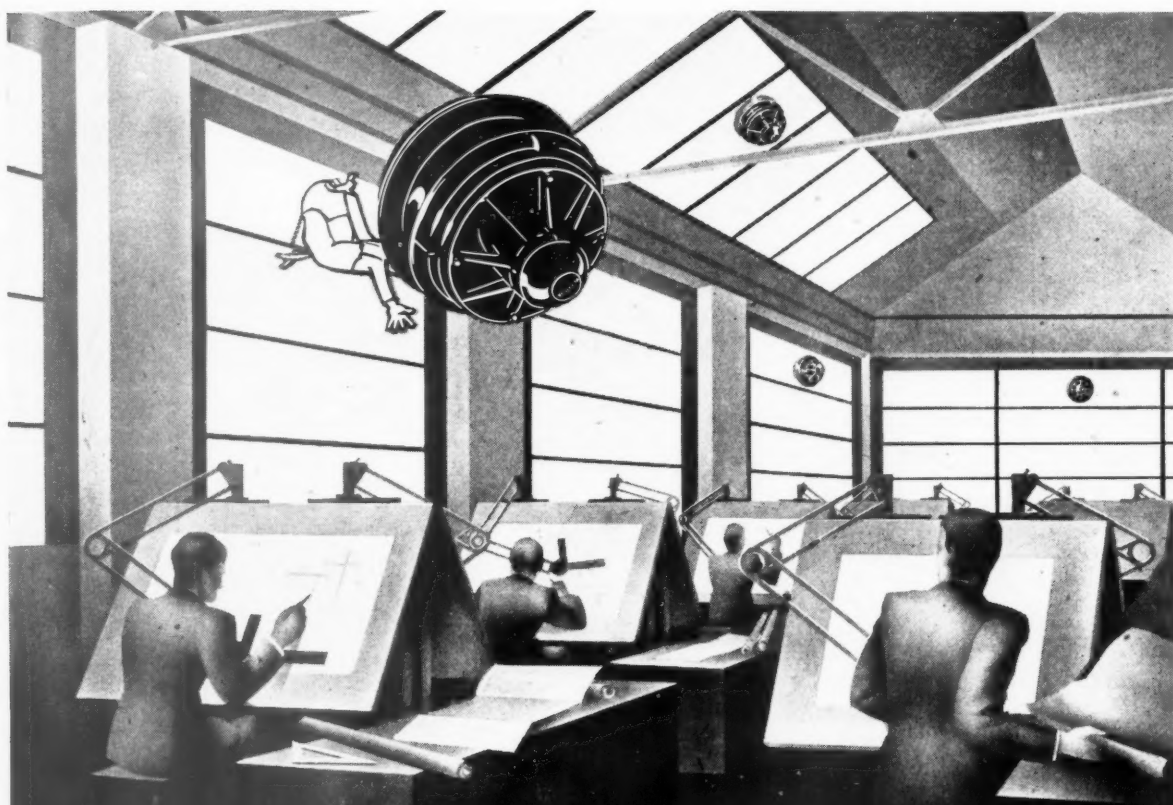
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country and abroad with a view to publication.
Though every care will be taken, the Editor cannot
hold himself responsible for material sent him.

THURSDAY, AUGUST 6, 1942.

NUMBER 2480: VOLUME 96

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

Owing to the paper shortage the JOURNAL, in common with all
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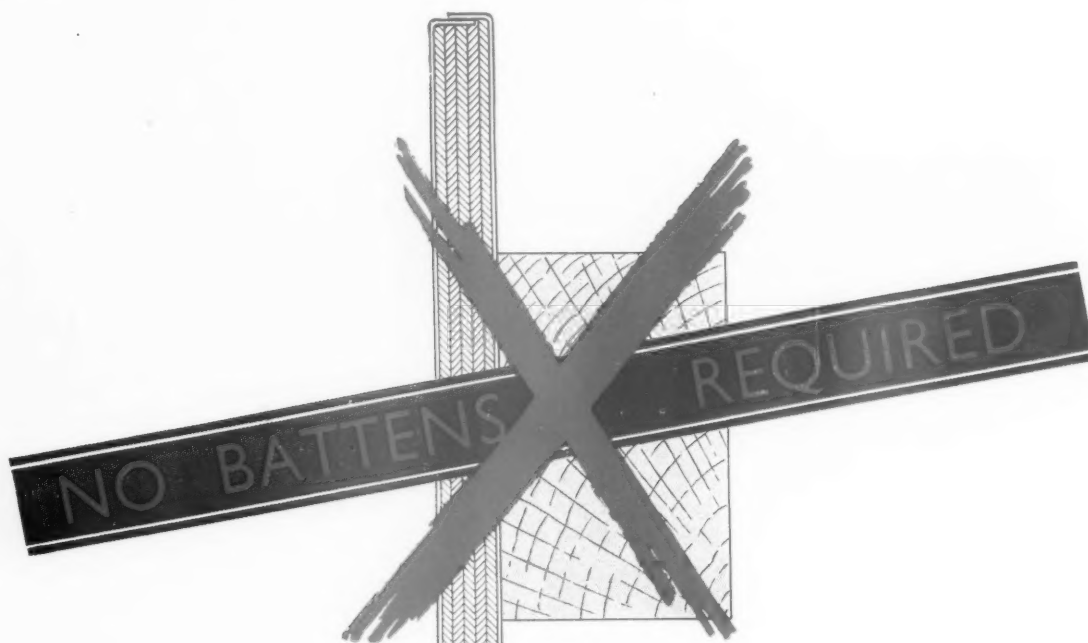
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important that the utmost economy of paper should be practised, and unless a reader is a subscriber he cannot be sure of getting a copy of the JOURNAL. We are sorry for this but it is a necessity imposed by the war on all newspapers. The subscription is £1 3s. 10d. per annum.

from AN ARCHITECT'S Commonplace Book

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"Yes," the boy replies.

"You would," growls the plumber.

Short Story.

NEWS

★ Twenty-seven members of the R.I.B.A. were gazetted last week 2/Lts. in the Royal Engineers page 81

★ Job committees exist on about 20 per cent. of sites actually under the supervision of MOWP. page 84

PAYMENT BY RESULTS

Bonuses are now being paid to building and civil engineering operatives whose output is higher than "basic" for all the main building and civil engineering operations on over 2,000 Government sites which are scheduled under the Essential Work Order.

Since the publication of the Memorandum *Payment by Results* by H.M. Stationery Office in March this year, a number of additional trade schedules have been approved by MOWP, fixing bonuses for the following operations:—slating and tiling; hutting; hollow tile floor and roof construction; track laying; prefabricated formwork; hollow pre-cast concrete floor and roof construction; carpentry and joinery (additional items); staining—varnishing.

It has been laid down (in Schedule 22) that the bonus of boys working in gangs is to be computed in the same ratio as the boys' rates to the craftsmen's rate.

MOWP has also issued *P.R. Notes No. 2*, a leaflet which answers many of the questions asked by contractors who are responsible for applying the system.

Copies of the additional trade schedules and *P.R. Notes No. 2* may be obtained on request from the Ministry of Works and Planning (A.S. 64), Lambeth Bridge House, London, S.E.1.

CIVIL BUILDING

MOWP announces that owners of foundries, bakeries, coke ovens, blast furnaces, etc., are not required to apply for a building licence under Regulation 56A (S.R. & O. 1941, 1596) for the erection, repair, relining, and maintenance of blast furnaces, coke ovens, brick and lime kilns, bakers' ovens and other "process structures."

ARCHITECT R.E.'S

Twenty-seven members of the R.I.B.A. were gazetted last week 2nd Lieutenants in the Royal Engineers. They are:—

Fellows: E. P. Lavender and T. W. Snailum. *Associates:* A. V. Banks, J. Catchpole, S. A. Comben, H. W. Cortis, E. J. Cundliffe, J. E. W. Dallachy, E. J. Edwards, J. Forbes, A. E. Gerrard, F. Greenwood, G. H. Hopkinson, F. W. Honeywell, J. L. Hope, H. Jackson, A. H. Jones, J. Lewis, K. L. Maggs, A. J. Morrison, T. Rothwell, K. A. Stevens, A. M. Stewart, R. T. Tatchell, G. J. Timmis. *Licentiates:* C. E. Buhl and T. G. Birchall Scott.

F.G.L.M.B.

The Federation of Greater London Master Builders held an informal luncheon, followed by the first annual meeting, at the Connaught Rooms, W.C. last week. Lord Portal was the guest of honour and Mr. A. N. Dove (President) occupied the chair. Mr. Dove said:

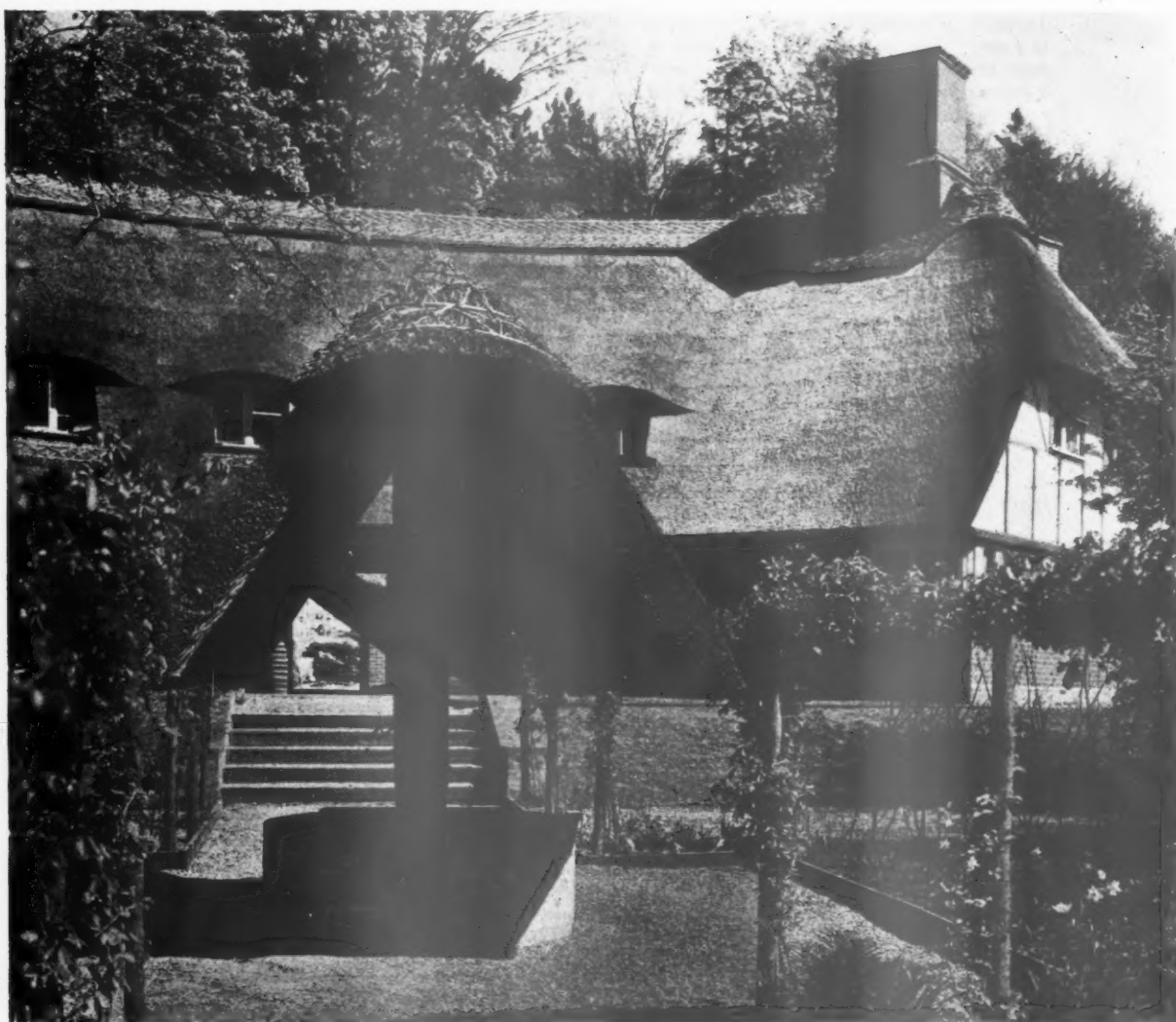
This is the first anniversary of the Federation's inception. Our inception is due to the foresight of a small number of builders in North London who, as a result of difficulties encountered in carrying on their everyday business, referred the matter to their Chamber of Commerce. On their behalf an investigation was carried out as to the representation of medium and smaller builders in the industry and it was found that the vast majority in London had no representation whatsoever. Consequently there came into being in January, 1941, an Association called the North London Master Builders Association, which was formed as a trade branch of the Chamber of Commerce previously mentioned, and admitted to membership those who carried on a genuine master builders business in Greater London North of the Thames.

From the very inception the Association flourished in every respect, and even those who were responsible for its creation were surprised at the work the Association was called upon to undertake. Towards the middle of last year owing to the rapid growth in Membership it became apparent to the parent body, the Chamber of Commerce, that it was impossible to continue the Association on its present basis, as it was obvious that the trade branch would outnumber in numerical strength the parent body in the immediate future. Consequently, the Association had to devise means for seeking its own entity. On July 29, 1941, the Federation of Greater London Master Builders came into being and on that date took over the old Association. To date the Council is representative of builders from the North, South, East and West of the area known as the London Civil Defence Region. Under the constitution, the Federation took powers not only to admit to membership Master Builders in North London, but the whole of London, and, if needs be, the whole country.

The annual meeting was addressed by Lord Portal. He said:

The Ministry of Works and Planning is striving to get one co-ordinated body, representing all sides of the building industry, to advise it during the rest of the war. If we are successful, such a body might form a council of the various elements of the industry after the war. There is a very large building programme in contemplation—during the next six months there will, no doubt, be a great deal of work to do—and it will be the Ministry's duty to see that as far as possible the various sections of the building trade will be recognised for that work. The question uppermost in the minds of those connected with building is that of the future of the industry. As I have said on more than one occasion, after the war the labour employed in the industry will no longer be looked upon as casual labour. In building, as in other great industries, like mining, there has in the past been men working from day to day. You can take it from me that when the war is over, men in the building industry will have to be given full-time work. Such a policy will not only be beneficial to the men but will give much better results from the building point of view. After the war builders will not want a fictitious boom but a level and balanced programme on which they can work for ten, twelve or fifteen years, or whatever the period may be. There is so enormous an amount of work ahead that everybody will realise that for some time after the war there must necessarily be a system of priorities. In one way the building industry will be fortunate; with the exception of timber all the materials it needs are to be found in our own country.

What I intend to do, and what I have done, as Minister, is to take the advice of people who know more about the Ministry than I do. I believe in the policy of the "open door," which enables members of the various sections of the building industry to come and tell me what is wrong and how they think it should be remedied. I suggest that the industry should seriously consider how best the master builders of the country can be organised.



Designed for Lord Portal

The work in this issue is interesting because it shows a building scheme actually carried out for Lord Portal himself. A number of cottages on his estate between Laverstoke and Whitchurch, though picturesque, lacked the amenities he considered necessary, so he had them pulled down and a completely new set put up—all, we are glad to say, in one block. The illustration above

shows part of the south front and one of the wells, the roofs of which have been thatched to harmonize with the cottages. Further illustrations of the scheme appear on pages 89-94 of this issue. The architect was Major Arthur E. T. Mori and the photographs were specially taken by J. Dixon-Scott.

The Federation has organised itself into areas and districts, finding that that is the best way in which it can carry out its work in these difficult times. Something of the kind will have to be thought out for the future. The industry cannot have people throwing stones at it on such questions as high prices and untrammelled rivalry between builders. It must be organised in an orderly and proper way at the top.

One side of the Ministry's work is planning, the other building. An enormous number of houses will have to be built after the war, and I cannot help feeling that some builders must hate many of the houses they have put up in the past and which do no credit to the value of building. Often it is not the builders' fault that such houses have been erected. After the war we must ensure that there is a proper definition of design in the building industry—this country possesses some of the greatest architects in the world and their help should be recruited—and a form of specification which will prevent the erection of unworthy buildings.

PRESERVING THE SMALL BUILDER

The Minister of Works and Planning received a deputation from the London Master Builders' Association last Thursday to point out the necessity of preserving the medium-sized and small builders.

This was announced in the Association's half-

yearly report which was presented to a meeting of the Association in the Aeolian Hall, New Bond Street, London, last Friday. The report records that since the beginning of the year 171 new members have been elected to the Association, which now numbers 943.

Since early in the year the Association has urged that careful consideration be given to a more even distribution of Government work so as to provide employment to as many building contractors as possible, and to this end made the following recommendations:—

- (i) that the overloading of any one firm with work should cease;
- (ii) that building and civil engineering work should be let as separate contracts;
- (iii) that every large contract should be sub-divided so that at least 25 per cent. of the work be let to separate building contractors.

Information has now been received by the Association that an obligation is placed upon the main contractor in Ministry of Works

contracts to sub-let at least 20 per cent. of the contract to local building firms, and it is understood that the Ministry has recommended other departments to put the sub-contracting schemes into effect.

Although this may be regarded as a step in the right direction, says the report, it would be unwise to lose sight of the fact that each Government Department maintains its right to its own contracts and can still refuse or accept instructions to make contracts with contractors of whom it does not approve.

The scheme for holidays with pay throughout the building and civil engineering industries, which has been the subject of discussion between the National Federation of Building Trades Employers, the Federation of Civil Engineering Contractors, the National Federation of Building Trades Operatives and the Civil Engineering Operatives Panel, has now been approved and initialled by both sides, and awaits only formal drafting. A date for the starting of the scheme is dependent now only on the establishment of the machinery necessary for its operation.

EXHIBITION

An exhibition of hatted day nurseries was opened last week by Lady Allen of Hurtwood, at the Cement and Concrete Association's Offices, Victoria. It will remain open until August 7. Lady Allen said:—

Vast sums of money have been spent and will be spent in building nurseries where thousands of children are destined to spend the major portion of their early years. No one can question the great importance of making these nurseries as beautiful, as suitable and as technically excellent as the present emergency will allow. Some local authorities have built well, others have built badly. It is a highly technical business to design a suitable nursery and yet many local authorities have to start almost from scratch. Basic plans are provided but these do not embody the skill and knowledge that are available. Young children need sun, light and air in overflowing measure if they are to be kept healthy and happy. They need windows that let in sufficient sunlight and allow the children to look out; they need fittings adapted to their years; doors they can open; easy access to shelves; pegs and basins easily within their reach, but above all they need some measure of beauty. As this exhibition shows, it is possible with the funds and materials that are available to design and build nurseries that not only solve the immediate problem in a satisfactory manner, but, because they are well considered, will be of value after the war.

Experience has shown that wherever possible it is important to site these nurseries close to existing educational establishments. By so doing older children can bring their younger brothers and sisters to nursery and very often the school canteen can provide the necessary meals and so eliminate the necessity of building kitchens and providing extra staff for cooking. Most important of all, if these new buildings are built as part of the educational block, they will be useful after the war as nursery schools, additional classrooms or clinics. Economy in materials and money is essential to-day but there must not be any economy in using the best brains in the land to ensure that the money and material available are used wisely on behalf of the children. It is greatly to be hoped that the basic plans issued by the Ministry of Health for the guidance of local authorities will incorporate many of the excellent ideas shown in this exhibition. The Ministry plans should be the finest the country can produce and in advance of all others.

IN PARLIAMENT

Builders' Emergency Organisations.—Mr. Perkins asked the Secretary of State for Air whether he was aware that in the West of England builders' emergency organisations were formed at the express wish of the Government; whether he had placed any contracts with the organisations; and whether he proposed to place any in the near future?

Sir A. Sinclair said that the answer to the first part of the question was in the affirmative. As for the second and third parts, there was no question of placing contracts with these organisations as their function was purely advisory.

Building Industry (Smaller Businesses).—Major Profumo asked the Parliamentary Secretary to MOWP whether, instead of drafting employees from small building firms to large contractors which resulted in the redundancy of the small builder, leaving a considerable amount of plant and machinery idle, a system of co-operative concentration would be applied in respect of small firms so that they could be employed as firms on local contracts?

Mr. Hicks, Joint Parliamentary Secretary, MOWP, replying to the question, said that if the Government's building programme was to be completed to time, it was inevitable that there must be a considerable transfer of labour at present employed on maintenance and less essential work; and it would not, in Lord Portal's opinion, be practicable to effect the concentration of the small firms in the building industry in sufficient time to meet the immediate needs. As a general policy, however, Lord Portal was in favour of the maximum use of the smaller builders and was in continuous consultation with the employers' organisations on the question. The present arrangements allowed for the smaller contracts to be undertaken by local firms and for a substantial amount of sub-contracting in which the smaller firms would participate. Also, his Ministry was prepared to consider tenders for building works from building organisations that had grouped themselves for the purpose of carrying out war building work subject to the conditions set out in the reply which he gave on June 25, 1942, to the hon. Member for Maryhill, Glasgow (Mr. Davidson).



R.I.B.A. ELECTIONS

THE letter which appeared in last week's JOURNAL signed by 90 architects working for MOWP and the L.C.C. is the last of a series urging the need for an R.I.B.A. Council election to be held this year. As the correspondence has been spread over several months it is perhaps useful to summarise it.

The first letter¹ signed Gordon Stevenson and F. R. S. Yorke, after referring to the excellent interim reports issued by the R.I.B.A. Reconstruction Committee, said "In order to allow the membership to show their approval of this work, and to strengthen the Council, which must be finally responsible for the policy of the institute, we suggest that it is very necessary for the Council election to be held this year." This letter was followed² by one signed Colin Penn, pleading for an election on slightly different grounds. "Conditions," he said, "are now completely different from those existing at the time of the last election, and to enable the R.I.B.A. to perform the great tasks of education, co-ordination and inspiration with which it is faced, it is essential that there should be an opportunity of bringing into the leadership of the Institute those who have, since war began, proved their ability." Mr. Colin Penn wants the R.I.B.A. invigorated to deal not with post-war but with current problems. These two letters elicited a reply³ from Sir Ian MacAlister stating that the annual election of the R.I.B.A. Council is suspended for the duration under the provisions of an Act of Parliament. This wording was challenged by Mr. J. Allen Slater⁴ and the dispute continued for some weeks, interrupted by (i) an aside⁵ signed by seven F.R.I.B.A.'s, eleven A.R.I.B.A.'s and four L.R.I.B.A.'s serving in H.M. Forces saying that architects now in the army deserved to have the biggest say in reconstruction policy anyhow, and felt it was unfair for far-reaching decisions to be made on this subject in their absence. Mr. Basil M. Sullivan⁶ (Chairman R.I.B.A. Recon-

¹ March 19.

² April 23.

³ April 23.

⁴ April 30, May 14, June 4, June 11.

⁵ May 7.

⁶ May 28.

struction Committee) replied to this: "Of course everyone hopes and expects that the new Council will contain a large number of ex-service men." In the meantime the R.I.B.A. will continue to discuss reconstruction. (ii) A letter from Mr. Bernard Le Marc⁷ (Head of Hull School of Architecture) supporting the appeal for an election in 1942 on the grounds that by remaining too long in office the Council might "cause a rift between older and younger architects" and (iii) a letter from Mr. D. E. Morrison⁸ reiterating that the role of the profession in 1942 is substantially different from what it was in 1939.

Preceding arguments were summarized in last week's letter as follows. "Building is now on a national basis and as a consequence there has been a large increase in the size of public offices. There are many problems arising from these changes which have yet to be solved and can only be solved by professional co-operation . . . The last elections took place over a year ago, since when the isolation between the membership of the Institute and its Council has steadily increased. We have no doubt that this is largely due to the absence of annual elections and meetings which has prevented members from undertaking their share of responsibility for the policy and activity of Institute. The demand for elections is not necessarily an attack on members of the present council—they just as much as membership are prevented by the absence of elections from fulfilling their function efficiently—but we do feel that the reasons advanced for the suspension of elections is inadequate."

The reasons given have been noted above. The Act referred to in Sir Ian MacAlister's letter is the Chartered and Other Bodies (Temporary Provisions) Act, 1939. The intention of this Act appears to be to help chartered institutes to survive wartime difficulties by making it possible for them to retain their charters even if circumstances connected with the war should make it impossible for them to adhere to their written constitutions (normally a chartered body which violates its constitution automatically loses its Charter). To avoid this danger the Act allows application to be made to the Privy Council for *special permission* to suspend all or part of the constitution in the interests of *economy and efficiency*. The R.I.B.A. anticipating perhaps a greater falling off of revenues than has actually occurred, applied for permission to (i) suspend elections for the duration† (ii) reduce the frequency of Council Meetings†† (iii) delegate the powers of the Council to a War Executive Committee (iv) cease holding the Annual General Meeting. This permission was granted. The initiative lay and still lies with the R.I.B.A. Council.

⁷ May 14.

⁸ June 4.

† An election, if the traditional procedure is followed, uses vast quantities of paper and involves a corresponding amount of office work.

†† Council meetings involve travelling from all parts of the country, and it is customary for the R.I.B.A. to pay councillor's expenses.



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NOTES & TOPICS

MOWP AND JOB COMMITTEES

MOWP encourages job committees.* It seems that they exist on about 20 per cent. of sites actually under the supervision of the Ministry. But the majority of people are not very clear exactly what job committees are, what is being done to encourage them, or what they do.

★
Job committees, it seems, can be almost anything. They can, to begin with, be called variously job committees, works committees, or site committees, though the latter usually means something slightly different. Their hall mark is that they are composed of elected representatives of the operatives, to whom representatives of builders, architects, etc., may or may not be added.

★
Steps taken by MOWP to encourage the formation of job committees include (1) recommendation that absenteeism should be dealt with by committees composed of three people representing operatives, three representing workmen and an independent chairman; (ii) a circular saying that operatives must be consulted about bonusing; (iii) a regulation that all jobs costing more than £100,000 must pay a levy of .01 per cent. of the cost

*Described in the leading article in the A.J. for June 25.

of a job to support a whole-time trade union organiser on the site to facilitate the removal of possible causes of labour troubles by nosing them out at an early stage and settling them in consultation with the management.

These *ad hoc* recommendations do not guarantee the setting up of a job committee on every site, but they certainly encourage it.

What are job committees for? It seems pretty clear that their purpose is to keep the operatives happy. There is no suggestion yet that they should discuss organization or output. One thing they cannot call themselves is production committees.

EXHIBITION

The British Coal Utilization Research Association* recently opened an exhibition designed to show (i) simple means of cutting down solid fuel consumption; (ii) existing solid fuel burning appliances that are modern and efficient; (iii) work and progress on the Association's programme of domestic research.

The simple means of cutting down solid fuel consumption seemed to be sufficiently complicated to daunt the average housewife. They include lagging not only the hot water cistern but all the hot water pipes as well, banking the fire at exactly the right angle and poking it at exactly the right spot—a feat which seems easy enough when the grate is drawn in section and the appropriate spot marked with a red star, but which is not so easy when there's nothing to be seen except smoke swirling up the chimney. In fact, this section of the exhibition gives colour to Mr. Fitzmaurice's remark that it takes a scientist to stoke an ordinary open fire.

Work in progress on the Association programme of domestic research includes the testing of solid fuel burning cookers in a Model Research Kitchen, specially designed

*Founded 1938 by the Combustion Appliance Makers' Association, subsequently expanded into an independent research association, financed by a number of different interests including the Mining Association of G.B., T.C.I. Also subsidised by D.S.I.R.



Model Research Kitchen designed by Miss J. Ledeboer for the British Coal Utilization Research Association.

by Miss Ledeboer. The idea is that the housewife setting out to buy a cooker will ultimately be able to run her eye down a list and choose whatever model gets best marks for fuel economy, slow roasting, or whatever else she happens to be specially interested in. It is said that B.C.U.R.A. is not debarred from making known unfavourable conclusions.

Unfortunately the results of experiments so far carried out have not been published in an easily readable form. But it is said that they can be read by anybody who is sufficiently energetic to dig through the files of the journals of the Institute of Fuel and the Chemical Society of another publication called Fuel in Science and Industry.

BAEDEKER AND RECONSTRUCTION

Baedeker bombs are few in number, their interference with the war effort can justly be considered *nil*, and no sane person would wish to swap them for the raids of 1940. They have inflicted losses on English architecture—losses which may amount to a millionth part of those caused by private greed during the preceding twenty years.

Yet if architects are honest with themselves they must feel at moments a grievance against Baedeker

bombs in that, while they do not hamper us in winning the war, they do not help us to win the peace. Each 1940 bomb which fell in an old industrial area did, by a minute degree, make reconstruction more probable.

There can be no doubt about this. To take one example: Some years before the war it was suggested that it would be sensible to set up near each old, industrial sprawl a really well planned and equipped industrial "estate," to which new industries would first be attracted and, at length, most of the older-established industries in the area. It was obvious that—in time—this is what would happen everywhere, and as a dashing attempt to help special areas two such estates were begun with Government assistance in 1936. But in one case at least, local industrialists could not have been much more hostile if the new idea had been the establishment of a Communist Republic. The scheme was persistently attacked on the grounds that it both subsidized new industries out of the hard-won profits of old-established firms and that, by attracting industry to one district, it would arbitrarily distort the "natural" development of the area. There were also other objections.

In similar ways all other worthwhile pre-war schemes for redevelopment were blocked or shelved, and the process would probably have continued indefinitely if it had not been for the blitz. In provincial cities especially the cause of planning made more progress in a week of raids than in the previous twenty years. The most conservative councillor felt that as reconstruction was inevitable it might as well be good, and nearly every bombed city began to prepare schemes.

★

They began to prepare schemes, but unfortunately the principles which should govern the preparation of schemes have never been thrashed out. Planning is a most ambiguous word. It *can* mean nothing more than deciding in advance what one is going to do and committing the results to paper.

★

Officially the Government is interested in planning. A central planning authority has been set up and local authorities are being encouraged to prepare plans for its approval. Unofficially the Government is not in the least bit interested. The people who ought to be working out the theory of the subject are in the army, e.g., P. E. A. J. Marshall, of Coventry, who was conscripted a few weeks after being appointed head of the town planning department of Coventry.

★

Who then is doing all this planning? The answer is that engineers employed by local authorities (and reserved from the age of 18 onwards), are doing it. There are fortunate exceptions, of course, but *on the whole* blueprints for the new Britain are being prepared under the direction of exactly those people whose lack of vision contributed to the misshaping of the old one. And those few men with ability to plan who have been given positions of responsibility, are acting under the same limitations that have crippled their activities in the past.

★

It is true they have been told to imagine that those difficulties no longer exist. But this is a strain on the imagination.

ASTRAGAL



LETTERS

HAROLD LEWIS,
Publicity Officer, MOWP

HON. LIONEL BRETT, A.R.I.B.A.

FELIX J. SAMUELY

ERIC D. HILL, A.R.I.B.A.

Directorate of Post-War Building

SIR,—Astragal, in last week's issue, raised an important point in connection with the Standards Committee which is now being set up by the Directorate of Post-War Building. Surely it goes without saying that standards must include structure and technique, and it is not to be thought that because the Committee is placed under the Policy Committee for Design that it intends to deal only with superficialities. Nothing could be further from the truth.

The other Study Committees included in the Design Section will be much concerned with the integration of technical studies undertaken by Committees in the Sections for Structure and Installations. The Committee for Houses and Flats, for example, and that for Business Buildings, will have many questions to put to the Committees for Steel Structures, Lighting and Plumbing. They will also have views of their own to express upon these and other subjects. It will be the same with the Standards Committee, which must gather many threads into what we hope may be an intelligent and consistent whole.

When the Director of Post-War Building says that the only kind of standardisation worth having is that which results in good design, he is thinking of just this kind of integration. He is also using the word in the sense in which it is used by the aircraft designer, and not in the sense familiar among those who deal in the various brands of facade.

Further, I would emphasise that the Standards Committee will give much time to prefabrication; and the subsequent setting up of a special Sub-

Committee will be decided as the problems become clearer. Prefabrication is a big subject, going far beyond questions of structure, and other Committees concerned with special aspects have already given a good deal of attention to this matter.

HAROLD LEWIS,
(Publicity Officer, MOWP).

The MARS Plan

SIR.—May I have a dozen lines to reply to Mr. Samuely? He suggests that your readers go through my article again. This is asking a good deal, but should any do so I think they will agree that my criticisms were intended to be constructive, or at least friendly. Yet Mr. Samuely is irritated. If I attempt to define the nostalgia which Londoners feel for their city, at once I am Col. Blimp and the old jibes are trotted out. But this nostalgia is too strong a force to be merely laughed out of court. We must be cleverer than that.

I share Mr. Samuely's objectives (as he recognises), but I question his tactics. Planning is still in the phase of propaganda, and I am afraid that so long as architects are intolerant of the ordinary point of view their plans, however perfect, just will not sell. It is partly, of course, a matter of presentation, but partly also of mental attitude. We shall never destroy sales resistance by making a fool of the customer.

LIONEL BRETT.

SIR,—Your summary of my letter in the JOURNAL for July 23, is really too far off the mark to pass uncontradicted. There is an enormous difference between saying that a plan is a skeleton and that a plan should not be taken too literally.

I am sure that you are wrong if you imply that the whole architectural profession, as well as the general public, does not know the definition of a "Master Plan." I appreciate, however, that anyone who has not read the description in the *Architectural Review*, but who has been presented by the figures illustrating the article by the Hon. Lionel Brett, selected without the knowledge of the Town Planning Committee of the MARS Group, might well misunderstand this term.

F. J. SAMUELY.

Unity in the Architectural Profession

SIR,—Unification must be the wish of nearly every architect, of whatever body he may be a member, yet nothing seems further from realization at a time when it is so abundantly necessary that the profession should speak with one voice.

So far as one can see, no difference

MORNING AT THE MINISTRY

[BY HUGH CASSON]

A pale autumn sun was shining through the window of the dining-room where John and Frances Foster (A.A.R.I.B.A.) were eating their breakfast. It was a pleasant, untidy little room which did not even attempt to conceal the fact that it also served the Fosters as office and nursery. A T-square leaned against a cot, a one-armed Teddy-bear shared the top of a plan-chest with a pile of *Architectural Reviews* and a bottle of sherry, while beneath the dining-table, whose pale birch surface bore the scars of a slipped drawing-board, was seated the youngest Foster. He was happily engaged in licking over some lino samples, humming and squeaking to himself like a half-tuned wireless set.

"Anything good in the A.J. this week?" said John without looking up from his porridge.

Frances flicked over the pages. "Quite a nice house; American of course."

John assumed the high-pitched monotone of a soothsayer. "... I see fur rugs... venetian blinds... exposed polygonal stonework..."

"Quite right, darling," said Frances placidly, "and all done a good deal better than you or I ever did it." She sighed a little, remembering suddenly the familiar smoky atmosphere of the fifth year studio. "More coffee?"

"No time. As a Civil Servant I must be on time, or what would Sir Horace Wilson say?" said John. "Where the hell's my hat?" He seized it from its perch on the Best & Lloyd lamp, kissed Frances, removed a pair of springbows from the pouch of Junior's cheek, and was gone.

Junior's squeaking swelled to a wail of despair, compelling Frances to take him on to her knee. As she soothed him, she wondered for the umpteenth time exactly how John spent his time at the Ministry. He never seemed able to explain just what he did, and this she found curiously irritating, for in the days before the war she had taken such an intimate and active part in his professional life. Now neither of them ever touched a drawing-board, and John never asked her advice—how indeed could he? Rather crossly she began to read *Astragal*. Even he, she thought, didn't seem so light-hearted these days. Her eye wandered unresponsively down the page.

Twenty minutes later John was wedged in the lift which was bearing him to his office on the fifth floor of the elderly block of mansion flats requisitioned by the Government to house his Ministry. It was a dark, echoing building, full of sudden draughts, and as blood-red and cavernous as the belly of some huge animal. The lift moaned upwards with

exists in fundamental policy between the various bodies, which can justify their separate existence, in the face of the evident disservice and confusion which their number renders to the standing of architects. The registration authority stipulates that all present and future entrants to the profession must pass an accepted qualifying examination and, unless something is done about unification in the near future, it is quite possible that the present position will be further aggravated by the introduction of alternative examinations by those bodies who have not yet held examinations for membership.

It would seem that the common members of all architectural bodies should insist that their councils be instructed to get together for the purpose of achieving unity. A method of commencing would be for each body to publish on the same date, in the same professional press, a clear statement of the terms on which it would be prepared to effect a merger. Common members of all institutions would then see at once to what extent unification is being worked for.

It is realized that the path is beset with difficulties, not least of which is the fact that two of the present societies incorporate surveyors in their membership; but, so long as it is borne in mind that unification is a most important major issue, these difficulties should not prove insuperable.

Unless unification is achieved, there is every possibility that the cessation of hostilities will find two or more bodies claiming to speak for architects, with the result that responsible Government opinion will be disinclined to bother with a house divided against itself, and architects will once again be left wondering why theirs should be the Cinderella of the professions.

ERIC D. HILL.

Arbroath.

SOCIETIES AND INSTITUTIONS

BUILDING SOCIETIES

Following are extracts from a speech by Mr. William McKinnell, Chairman of the Building Societies Association, at the monthly General Meeting of the Midland Association of Building Societies at Birmingham:

The special Reconstruction Committee appointed by the Building Societies Association is already at work under Lord Sankey, whose chairmanship is a guarantee of the movement's determination to make a constructive contribution to the solution of post-war problems as they affect Building Societies and their millions of existing and potential members. I am confident that the Reconstruction Committee, conscious all the time of the magnitude of our movement and of its unrivalled capacity for service, will in due course produce a report which by concessions to public opinion will meet with widespread approval. The Committee is getting down to brass tacks on many subjects especially those connected with the better housing of the people, in which I include rural housing. Long neglected, this problem is one of many that must be tackled boldly, resolutely and wisely.

We must not forget there are many who think that as the proper study of mankind is man, so the proper study of Building Societies is housing. I must say I agree with them. We must have regard to that point of view now finding expression here, there and everywhere. The end of the war will provide us with the greatest opportunity for public service we have ever had. Let us take full advantage of it.

Lord Sankey's special interest in housing dates, as he has told us, from the time of his chairmanship of the Coal Commission when he saw the appalling conditions under which many of the miners lived. You can take it that he and his colleagues, men of wide knowledge, experience and drive, are already closely and keenly examining the lines on which Building Societies can assist in ensuring the provision of homes which in design, construction and character will be acceptable to, and worthy of, our people. We have made up our minds, I hope, that we will have nothing to do with shoddy or inferior housing. The public are certainly not going to tolerate it.

As Chairman of the Building Societies Association I give this undertaking to the vast army of people who already belong to the Building Society movement as borrowers, share investors and depositors—that their interests are in safe keeping. We shall not fail them.

R.A. EXHIBITION

The 174th Annual Exhibition of the Royal Academy will close on Saturday, August 8, after the most successful season so far since the outbreak of war. It has been visited by 15,000 more people than in 1941 and 17,500 more than in 1940: the attendance has included many members of all arms of the Forces of the United Nations. The reduction of the admission charge from 1s. 6d. to 1s. 0d., and the opening of the Exhibition on Sundays (from 2 to 6 p.m.) have again proved acceptable. Sales this year have been remarkably good, 237 works having been sold for £6,511. This compares with a total of 152 for £4,147 in 1941 and 137 for £5,262 in 1940.

HOUSING CENTRE

At a meeting of the Housing Centre, Mrs. P. M. Stevenson spoke on "Co-operative Housing in Sweden."

Mrs. Stevenson said that co-operative housing started in Sweden in the 'seventies, and was then mostly for the employees of societies comparable with the Co-operative Wholesale Societies of England and Scotland. The houses had been built near the factory where the workers were employed, the Swedish ideal not being to get as far away as possible from the workplace but to make the workplace itself agreeable and attractive. Shortly after the last war the housing problem in Sweden had become exceedingly acute, and an organization, the H.S.B., was formed in 1923 combining some of the principles of a building society with those of a savings bank. Its main object was the acquisition of land for the construction of houses and flats. This organization had a mother society in each town where there was H.S.B. building going on. Each such mother society had daughter societies, consisting of tenants, to manage the various properties, and all the mother societies were federated in a central society in Stockholm. These arrangements gave the occupants of the flats and houses a very close interest in the finance, the methods of construction and also in the care and management of the buildings and gardens. Financially and technically the organization was on a perfectly sound footing, and the H.S.B. was now one of the largest owners of real property in the whole of Sweden. A feature of its work was that even when it had parted with a property to a purchaser, it retained rights of supervision and could enforce the carrying out of necessary repairs. The original equipment of a house or flat included electric or gas cooker, a sink with two draining boards and a wash boiler also heated by gas or electricity.

its load. Against the twisting lily-roots of its art-nouveau interior, the mild and unenthusiastic eyes of John's companions gleamed fishlike through a haze of pipe-smoke.

John felt his depression mount as he regarded them. They were a complacent-looking crowd, Burberry-clad, soft-hatted and bespectacled. Every self-important face bore that look of furtive triumph which is the property of the man who has a safe job and the minimum of individual responsibility.

The lift sighed to a standstill, disgorging its passengers into a dark corridor lit by naked bulbs, and lined to dado height with glazed, green and embossed tiles.

John hurried along this until he reached a door which bore, in execrable lettering, his name. His office smelled like a disused schoolroom, and he went straight to the window, flinging it wide and letting the chill September air sweep in to stir the papers on his desk.

The door opened again and Mr. Clark, his colleague, entered. He was a bald, shapeless little man who had spent his life in the lower grades of Government service and whose daily routine was as inflexible as his bowler hat.

The first hour of his morning was spent locked in the lavatory with the *Daily Telegraph*. Then, after an interval for tea, Mr. Clark would launch into his daily battle over the 'phone with some crony in another department over some missing stores. In between the rounds he cleaned his pipe, repeated at length to John what he had read in the paper, and wrote irritable little minutes to his crony confirming what he had just said on the 'phone.

Although he was a bore, John quite liked him, and he found him invaluable on matters of Ministry procedure.

"Morning, Mr. Foster," said Mr. Clark. (Everybody in the Ministry called everybody else Mister.) "I should close that window if I were you. Catch your death."

He extracted the *Telegraph* from his mackintosh and left the office.

John closed the window and sat down at his desk. The morning mail had not arrived, but there were two communications in his in tray. One was an inter-departmental minute from the Director of Personnel. "A decision has been reached," it announced in what John assumed to be English, "regarding the desirability or otherwise of the wearing of stockings by lady members of the staff. In view of the approaching warm weather, it has now been agreed that these items of attire may be dispensed with if so desired."

John placed this in the OUT tray and picked up the other note. It was from the Accountants Dept. (Rm. 72c) and was headed Ref. Travelling Claim HDC/743/2 (e), dated 2.7.40. "You have omitted to state," it continued crossly, "the time taken in transit from Paddington to the Ministry as

required by para. 12 (k) Chap. 16920/LC/60A.O.(7) 3.a. Ministry Regulations (Amended 1939 Ed.). Claim returned for correct completion."

John's eye wandered wearily over the waste of symbols, numbers, and reference figures. The trouble about this sort of letter, he thought, as he put it aside to deal with later, is that it is so exactly like the funny imitations which you see in *Punch*.

He 'phoned for some files, and while awaiting them he sketched a new layout for his office on the gritty blotting pad. As he drew in the circulation lines (for messengers and visitors) he was swept by a wave of nostalgia for his T-square and his yellow scale with its chipped edges. Next leave day he really *would* get down to a bit of drawing.

The files arrived and he settled down to read up the history of the case which was to be discussed at the 11 o'clock conference. At 10.30, two cups of bright orange tea arrived. The thick white cups, distilling a strong aroma of umbrella drippings, were borne reverently in by an elderly messenger who walked with a curious clicking noise. Clark, who had a facetious wit, used to remark (on most mornings) that it was the death-watch beetle at work. The old messenger did nothing but brew and distribute tea (at 1½d. a cup) throughout the day, and though paid by the Ministry presumably for some official service, he was never seen to perform it. He published no accounts and was reputed to be very rich.

At exactly 11 o'clock, John walked along to the conference room with his burden of files. He did not look forward to the meeting. He was used to making his own decisions and to standing by them, and he disliked these conferences, which were erected like umbrellas to shield individuals from responsibility. Nor was he yet accustomed to the types who attend them—the plaintive, the facetious, the man who had served out East, the man with the *idée fixe*, the voluble and the silently obstructive. He chafed and fidgeted as the Civil Service jargon swam heavy and unfamiliar through the smoke-laden air . . . "procedure . . . optimum . . . relevant . . . authority . . . desirability . . . nugatory . . . duly ascertained. . ."

Never, he thought, as he doodled idly over his papers, had he heard authority more debated and less used. The conference lasted an hour, and three minor decisions were reached, "subject, of course," as the chairman remarked, "to approval from the S.O.'s department."

Who was it, he wondered, who once described the Civil Servant as an inverted Micawber, waiting for something to turn down?

As John strolled back to his room he wondered if, through inexperience, he was misjudging his colleagues and their

methods. Was this cats-cradle of conferences and "paper-chasing" perhaps necessary? Was this haggling parsimony in reality a conscientious guarding of the nation's cash, this paralytic progress to action in fact a justifiable caution to avoid reckless decisions? Or was a ramshackle, top-heavy system being desperately upheld by a routine-ridden set of petty tyrants with no vision beyond their blotting pads, and one eye fixed firmly on their pensions?

Back in his office Clark was, as usual, on the 'phone, and some more files had arrived. He glanced through them and decided to deal with them after lunch. He always tried to answer letters the same day, a symbol of protesting energy which amused Clark, who was fond of saying that the longer you keep an urgent letter the less urgent it becomes.

John had just decided to go early to lunch when the bell shrilled. It was the boss, the S.O., a senior Civil Servant who lived on the first floor in an office with a carpet and who was very rarely encountered. John knew him as a conscientious and loyal official—slow, humourless, hardworking and unfailingly obstructive. What the hell did the old man want now?

He rushed down the stairs two at a time and pulled up against the S.O.'s door, straightening his tie. It was quite absurd the way this headmaster's-study feeling returned whenever he was summoned by that bell. He knocked and entered in a manner which he hoped combined the right mixture of courtesy and nonchalance.

"Ah, Foster," said the S.O., looking over his spectacles.

"Yes, sir?" said John enquiringly.

"You, ah, were an architect, were you not, before you entered this department?"

John looked surprised. Were his qualifications then at last to be used? Perhaps the offer of the post of architectural consultant to the Ministry? He would ask for at least £1,150. "Well yes, sir, as a matter of fact, I was."

"Ah, good," said the S.O. "Forgive my bothering you"—John smiled deprecatingly—"perhaps you can help me fix this drawer"—he tugged at the handle—"it's jammed and I can't get it open. A trivial matter, but in my long experience I have found that it always pays to go straight to the expert—however small the problem."

"Typical of you," muttered John to himself, "that you choose the wrong expert."

"Well, sir," he said, "I'm no joiner, but I'll see what I can do. I expect it's the damp."

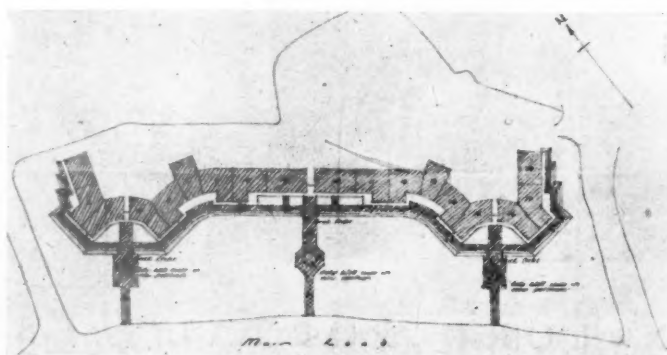
He got down on his knees and started to ease the jammed drawer.

At any rate, he thought, as he wrestled with the job beneath the benevolent eye of the S.O., I shall be able to tell Frances what I did at the Ministry to-day.

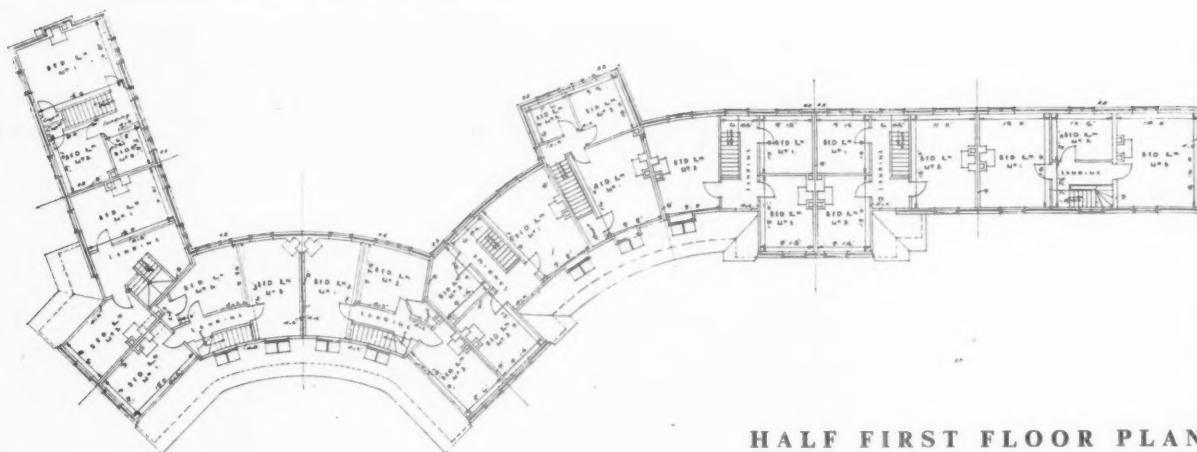


COTTAGES FOR LANDWORKERS ON LORD PORTAL'S

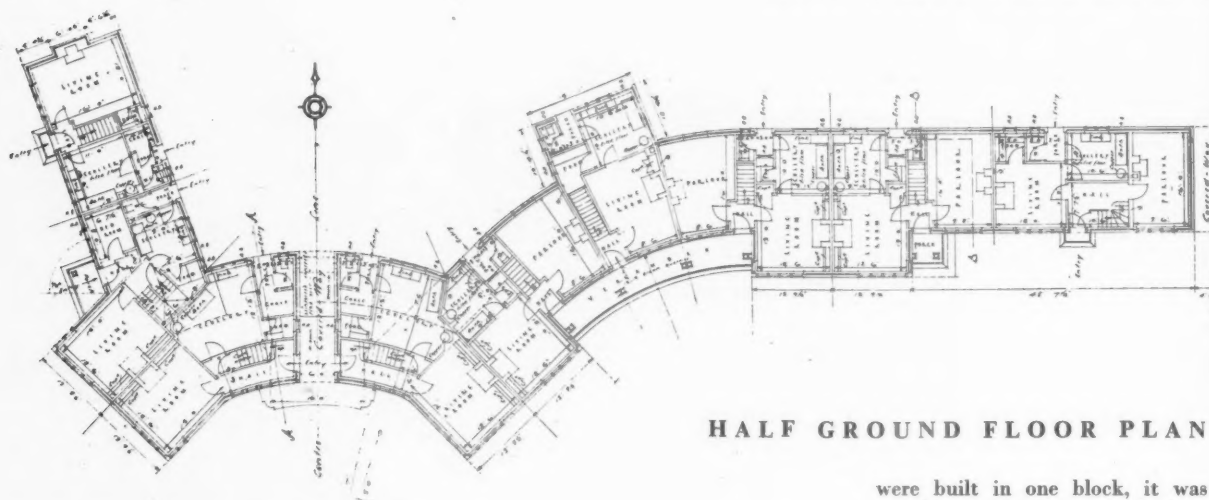
ESTATE IN HAMPSHIRE
ARCHITECT: ARTHUR E. T. MORT



GENERAL—These eighteen cottages for agricultural workers have been built on land owned by Lord Portal, the Minister of Works and Planning, at Freefolk, near Laverstoke, Hampshire. They replace (at a very reasonable cost) fourteen cottages, mainly flint built and over one hundred years old, which were low-lying, very damp and beyond repair. The old cottages were built in pairs irregularly over the ground which the present cottages and gardens cover. As the new cottages



HALF FIRST FLOOR PLAN



HALF GROUND FLOOR PLAN



View from the south-west

were built in one block, it was possible to build two of them before pulling down any of the old ones, and similarly to demolish two at a time throughout the rebuilding, in order that the tenants could be rehoused without difficulty. Sufficient bricks were saved from the old buildings to form the plinth of the new cottages; otherwise, no other materials were sound enough for re-use.

PLAN—The chief disadvantage of the old cottages was that they were low-lying and damp. It was therefore decided to build the whole of the cottages in one block on a raised site. This was accomplished by using the flint and brick rubble from the old cottages to form a terrace to accommodate the new cottages; the south side consists of a series of ramps leading up to the terrace. Ten of the cottages are of agricultural type—living room, three bedrooms and scullery—and eight are larger, with the following accommodation; parlour, living room, three bedrooms, scullery and bathroom. All the bedrooms are on the upper

COTTAGES ON LORD PORTAL'S ESTATE,

★ BEFORE



These two pictures, taken from the same viewpoint, show the difference in site levels of the old and the new cottages. In the above photograph, the village church is clearly seen; below, it is hidden up to the eaves by the new block, which is built on a terrace reached by ramps.

★ AFTER



HAMPSHIRE. DESIGNED BY ARTHUR E. T. MORT



Two views of the south front. On this front the roofs are covered with Norfolk reed thatch; they are tiled on the north side. Facing page: close-up of the centre of south front.



floor, with the exception of cottages 2 and 17 (see site plan), each of which has one small bedroom on the ground floor. All living rooms face south. Access from the south to the north front is by three covered ways, one in the centre of the block and one at each end. Each cottage has a shed at the back for storage of coal and garden implements.

CONSTRUCTION AND FINISHES—Reinforced concrete raft; 11 in. brick cavity walls, weather-boarded above; plinth, bricks from the old cottages; Norfolk reed thatching carried out in Hampshire style to one side (south) of the roofs only; tiles to northern slopes of roofs. The old well "heads" were taken down, refixed in new positions and thatched. The sheds at the back of the cottages are of brick and the yards are of concrete.

RENTS—The rents are as agreed with the Agricultural Wages Board for Hampshire, and in this case they have been increased from the normal rate of three shillings to five shillings per week. The larger cottages are let at eight shillings and sixpence per week, **COST**—£13,000.

COTTAGES ON LORD PORTAL'S ESTATE
DESIGNED BY ARTHUR E. T. MORT



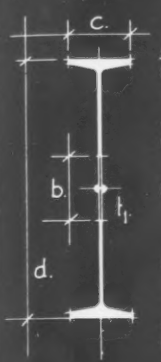


Views from the south-west (top) and a country lane.

COTTAGES ON LORD PORTAL'S ESTATE
DESIGNED BY ARTHUR E. T. MORT

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ORIGINAL
BEAM
SECTION,
Inches.TABLE GIVING COMPARATIVE PROPERTIES AND EFFICIENCY
COEFFICIENTS (e) OF R.S.J.s WITH INSERTED WEB PLATES.

	b.	OVERALL SIZE, c x d.	I.	Z.	w.	Z/w.	e.
 $24 \times 7\frac{1}{2}$ $I_0 = 2533, t_1 = 0.5 \text{ in.}$	0	24 x 7½	2533	210	95.0	2.20	2.20
	6	30 x 7½	4267	284	105.2	2.70	2.56
	9	33 x 7½	5339	324	110.3	2.94	2.79
	12	36 x 7½	6557	366	115.4	3.17	3.01
	15	39 x 7½	7929	407	120.5	3.38	3.21
	18	42 x 7½	9459	451	125.6	3.60	3.42
22×7 $I_0 = 1677, t_1 = 0.5 \text{ in.}$	0	22 x 7	1677	152	75.0	2.02	2.02
	6	28 x 7	2949	210	85.2	2.48	2.36
	9	31 x 7	3750	242	90.3	2.68	2.55
	12	34 x 7	4672	275	95.4	2.88	2.74
	15	37 x 7	5718	309	100.5	3.08	2.93
	18	40 x 7	6899	345	105.6	3.27	3.11
$20 \times 7\frac{1}{2}$ $I_0 = 1673$ $t_1 = 0.5 \text{ in.}$	0	20 x 7½	1673	167	89.0	1.88	1.88
	6	26 x 7½	3085	238	99.2	2.40	2.28
	9	29 x 7½	3985	276	103.3	2.66	2.53
	12	32 x 7½	5023	315	108.4	2.90	2.76
	15	35 x 7½	6206	356	113.5	3.14	2.98
	18	38 x 7½	7540	398	118.6	3.36	3.19
18×8 $I_0 = 1292$ $t_1 = 0.5 \text{ in.}$	0	18 x 8	1292	143	80.0	1.79	1.79
	6	24 x 8	2498	208	90.2	2.30	2.19
	9	27 x 8	3277	243	94.3	2.58	2.45
	12	30 x 8	4182	280	99.4	2.82	2.68
	15	33 x 8	5220	317	104.5	3.03	2.88
	18	36 x 8	6392	356	110.6	3.27	3.09
16×8 $I_0 = 974$ $t_1 = 0.5 \text{ in.}$	0	16 x 8	974	122	75.0	1.62	1.62
	6	22 x 8	2015	183	85.2	2.14	2.03
	9	25 x 8	2702	216	90.3	2.39	2.27
	12	28 x 8	3508	251	95.4	2.63	2.50
	15	31 x 8	4441	286	100.5	2.85	2.71
	18	34 x 8	5502	323	106.6	3.08	2.94
14×8 $I_0 = 706$ $t_1 = 0.5 \text{ in.}$	0	14 x 8	706	101	70.0	1.45	1.45
	6	20 x 8	1591	159	80.2	1.98	1.88
	9	23 x 8	2189	191	85.3	2.24	2.13
	12	26 x 8	2901	223	90.4	2.46	2.34
12×8 $I_0 = 488$ $t_1 = 0.375 \text{ in.}$	0	12 x 8	488	81.2	65.0	1.25	1.25
	6	18 x 8	1220	135	72.65	1.85	1.76
	9	21 x 8	1734	165	76.48	2.16	2.05
12×5 $I_0 = 221$ $t_1 = 0.375 \text{ in.}$	0	12 x 5	221	37	32.0	1.15	1.15
	6	18 x 5	568	63	39.6	1.59	1.51
	9	21 x 5	817	77	43.48	1.78	1.69

● for explanation of notations, see reverse side of this Sheet.

*Issued by Brailhaite & Co., Engineers, Ltd. Compiled by Samuels & Hamann, Consulting Engineers.*INFORMATION SHEET: STEEL FRAME CONSTRUCTION, 76: WELDING 32:
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INFORMATION SHEET

• 865 •

(Revised)

STRUCTURAL STEELWORK

Subject : Welding 32 : Comparative Properties and Efficiency Coefficients of R.S.J.'s with inserted Web Plates (a).

General :

This series of Sheets on welded steel construction is a continuation of a preceding group dealing with riveted and bolted construction, and is intended to serve a similar purpose—namely, to indicate the way in which economical design as affected by general planning considerations may be obtained.

Both the principles of design and the general and detailed application of welded steelwork are analysed in relation to the normal structural requirements of buildings. The economies in cover and dead weight resulting from the use of lighter and smaller steel members and connections are taken into consideration in the preliminary arrangement of the building components, in order to obtain maximum economy in the design of the steel framing.

This Sheet is the fifth of the section on detailed considerations of design in welded steel, and gives comparative Moments of Inertia, Section Moduli and Efficiency Coefficients of R.S.J. beams which have been cut into two parts and increased in depth by the insertion of an intermediate web plate. Such extended beams can be used with or without flange plates, but the Efficiency Coefficient is, of course, much larger in the first case.

Advantages :

The advantage of this type of beam is that a beam of the R.S.J. type can be rearranged so that it is deeper than the standard R.S.J. and, therefore, shows a marked increase in its Efficiency Coefficient.

Inserted Web Plate :

In all the examples the thickness of the intermediate web plate is assumed to be the same as that of the R.S.J.

Example :

If a 12 in. by 5 in. is cut into two parts and a web plate 12 in. by $\frac{3}{8}$ in. is introduced, the

total depth is the same as that of a 24 in. by 7 $\frac{1}{2}$ in. R.S.J., but the thickness of the web is .375 in. instead of .57 in. Such beams are not, therefore, used where the Shear Force is exceptionally large, and requires considerable web area.

Use :

These sections are particularly useful for long spans where, compared with the Bending Moment, the Shear Force is comparatively small, and where an increase in depth is desirable to avoid excessive deflection. Compare the properties of the sections in the tables on the front of this Sheet with those in the tables on the front of Sheet 31 of this series.

Notations :

b = Depth of inserted plate, inches.

t_i = Thickness of inserted plate, inches.

I_o = Moment of Inertia of original section.

I = Moment of Inertia of increased section.

z = Section Modulus of increased section.

w = Weight of section in lbs. per ft. run.

$\frac{z}{w}$ = Efficiency of section, by weight only.

e = Reduced efficiency of section allowing for extra labour costs.

Flange Plates :

Flange plates can be added to joists where the web plate is increased, and the formula given in Sheet 31 obtains :

The Efficiency Coefficient will be proportional to $\frac{z}{w}$ (but for the sake of comparison with R.S.J.'s, it will be reduced slightly to account for the additional labour costs).

w = weight per ft. run = 3.4 by total area.

z_i and h_i in this case, refer to the increased section including web plate, but without the flange plates.

Previous Sheets :

Previous Sheets of this series on structural steelwork are Nos. 729, 733, 736, 737, 741, 745, 751, 755, 759, 763, 765, 769, 770, 772, 773, 774, 775, 776, 777, 780, 783, 785, 789, 790, 793, 796, 798, 799, 800, 801, 802, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 816, 819, 821, 822, 823, 824, 826, 827, 829, 830, 832, 836, 837, 838, 839, 840, 842, 843, 845, 847, 848, 849, 850, 851, 852, 853, 855, 856, 857, 859, 860, 862, 863, 865, 867, 869, 870 and 871.

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PATENT WELDED TUBULAR CONSTRUCTION

Data Sheet No. 6

METHODS OF FABRICATION

This form of construction lends itself admirably to the prefabrication of single storey buildings of any size. The standard sections (roof trusses, wall frames and columns, and door and window frames) are light in weight and conveniently transportable. Assembly on the site is simply and rapidly effected, the sections being bolted or welded together according to specification. The buildings can be dismantled with equal facility, and only the loss of foundations is involved since the various sections all remain available for re-erection—thus it may be said that this form of construction has all the essentials of a permanent building plus the facilities of a portable building. A further consideration is the flexibility of the system, allowing alterations or extensions to be made to existing buildings simply and quickly.

Three alternative methods of fabrication are available:—

- (1) Complete factory prefabrication, leaving assembly only to be carried out on the site.
- (2) Site welding. The welding of the final fixings and connections is sometimes more satisfactorily effected on the site; where site welding is not practicable or economical special bolt joint or joint plates are supplied for such connections (see Figs. 3 and 4 reproduced from data sheet No. 3).
- (3) Site fabrication and welding. In certain circumstances complete site fabrication is advantageous. Though more costly than factory prefabrication, in cases where transport costs are heavy and access to the site difficult, and where the fabricated sections required are large in number and simple in design, it sometimes proves economical to erect temporary portable workshops on the site where the fabricators and mobile welding units can execute the whole of their work.

The method to be adopted is in each case dependent upon the circumstances prevailing, and the type and size of the building, or buildings, to be erected, and it is well that proper consideration should be given to these factors before a decision is made.

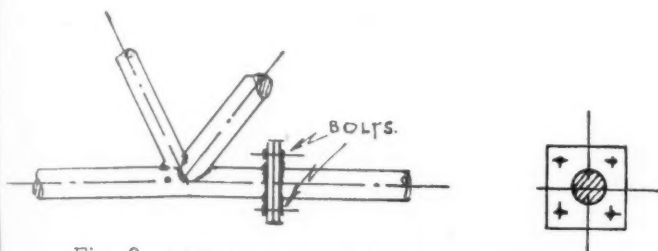
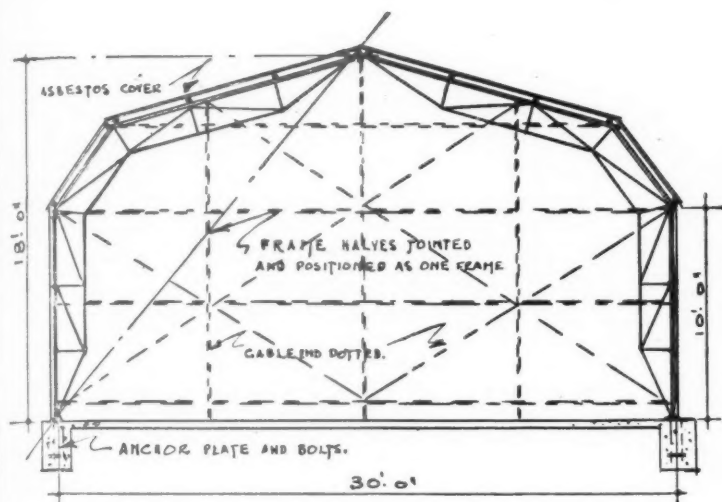


Fig. 3. DETAIL. JOINT FOR SMALL SPANS.

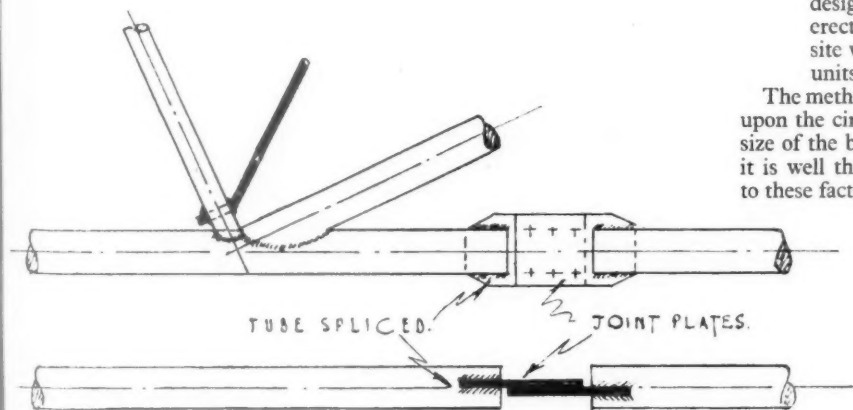


Fig. 4. Bolt connection for larger trusses.

- Speed in erection
- Economy in steel
- Lightness of structure with great strength

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We print below the Memorandum of Evidence by the Council of the Chartered Surveyors' Institution to the Sub-Committee on Design of Dwellings of the Central Housing Advisory Committee of the Ministry of Health. The terms of reference to the Sub-Committee were:—To make recommendations as to the design, planning, layout, standards of construction and equipment of dwellings for the people throughout the country.

Design of DWELLINGS

INTRODUCTION.

In their request to the Institution for the submission of a memorandum of evidence, the Sub-Committee intimated that evidence based on the experience of surveyors in the management of house property would be specially valuable. The Institution, therefore, in considering the nature and scope of its evidence, has decided to approach the subject from that starting-point, and to confine its remarks largely to those practical aspects of housing design and construction with which surveyors, in their capacity as managers of residential properties of all kinds, are most familiar.

In this connection, it may be convenient to quote the definition of housing management given in the Report of the Housing Management Sub-Committee of the Central Housing Advisory Committee in 1938:—

"Management must include far more than rent collection and the ordering of repairs,

for unless some steps are taken to educate the tenant so as to secure his co-operation, the landlord, striving to maintain his property, and the tenant destroying it by his neglect, will remain warring parties. Hence good management additionally postulates the application of skill in treating the person who is paying for the use of the commodity so that he too may do his share in preserving its value: it is in effect a form of social education and aims at teaching a new and inexperienced community to be 'housing-minded'."

Bad management may arise from several causes, including the general attitude, whether negative or positive, of the landlord towards his tenants. The most frequent cause of bad management is the outlook which regards house property as a mere source of income, and management as the business of rent collecting and accounting combined with a faculty for avoiding all obligations and outgoings beyond those strictly required by statute or by-law. It is an attitude which is opposed not only to public policy, but is also, from the standpoint of the owner, a short-sighted one. Good standards, therefore, of design, construction and equipment are not only necessary for the health, convenience and comfort of the occupier; in the long run they are the best policy for the owner of house property. The higher initial outlay is repaid both indirectly by contentment among tenants and directly by lower outgoings for repairs and maintenance during the life of the building.

The aim of good estate management must always be to establish, as far as possible, an identity of interest between the landlord and the tenant for the benefit of both and of the property which, in their respective rights, they share between them. It follows that out of enlightened management is born a knowledge of the likes and dislikes of tenants and of the factors which attract or repel them in the design and construction of the homes in which they live. That is the general background against which the Institution presents its evidence to the Sub-Committee.

The case of the owner-occupier, however, has by no means been excluded from consideration. In particular the position of the house-purchaser of small means who needs special protection from the somewhat superficial attractions of certain types of speculatively built dwellings, has been borne in mind.

The memorandum of evidence now submitted has been prepared for the Council by a specially appointed committee of chartered surveyors selected for their experience in the management of residential property in public and private ownership. The personnel of the Committee included women members of the Institution. The evidence is presented under two main heads. The first relates to the design, planning and layout of dwellings and their equipment; the second to standards of construction of dwellings and their equipment. Under each of these heads recommendations are made as to matters which (a) should be the subject of compulsory regulation and (b) should receive greater attention than hitherto in relation to design or standards of construction as the case may be.

The terms of reference, however, can be read as including questions such as the selection of sites for dwellings, the laying out of the land, and density of development. For the reasons already stated, however, the Institution has assumed that its evidence will be of most

value to the Sub-Committee if presented against the background of management proper. As regards those questions, therefore, it need only be observed that consideration will presumably be given to them in the impending overhaul of planning legislation. In any case, it will be for the planning authorities to secure that housing development shall be carried out on proper planning lines, and shall provide for open spaces and other necessary amenities for the benefit of residents and the public as a whole.

As regards density, it is dangerous and probably impossible to dogmatise. Present tendencies, however, towards the prescription of lower maximum densities for both flats and houses are supported.

DESIGN, PLANNING AND LAYOUT OF DWELLINGS AND THEIR EQUIPMENT.

(a) *Matters which should be the subject of compulsory regulation.*

With a view to improving present standards of dwelling accommodation from the standpoint of health, convenience and saving of labour, regulations, applicable throughout the country, should be made with respect to the matters indicated below. Such regulations should require:—

(i) The provision, in the design both of flats and houses, of adequate space for the storage of coal, bicycles and perambulators.

(ii) Where houses are to be built in terraces, the provision of secondary means of access to the back of every house.

(iii) The provision of lifts in blocks of flats over four storeys in height.

(iv) Measures for the prevention of sound transmission, both vertically and horizontally. Owing to the hardness of the materials now used, noise has become something more than a nuisance even in modern buildings of the best quality. The time has arrived when some form of sound insulation must be made compulsory.

(v) The boarding or felting of all pitched roofs.

(vi) A higher minimum standard of light, especially to domestic kitchens.

(vii) The provision of adequate site drainage.

(viii) If there is not more than one water-closet in a dwelling, that it shall always be separate from the bathroom.

(ix) That the water supply service pipe shall be taken up an inner wall and the storage tank protected against frost.

(x) That the stop-cock on the main shall be in an accessible position, and that there shall be stop-cocks to all sanitary fittings, especially for shutting off the storage tank which is often in a loft or otherwise difficult of access.

(xi) There should be a draw-off tap at the lowest level of the water system.

(xii) The provision of overflow trays under water storage tanks.

(xiii) A heavier gauge for cisterns, and the fitting of an approved safety valve to independent domestic boilers.

(xiv) A standard diameter for iron flow and return pipes in indirect heating systems, to minimise risk of furring up.

(xv) Larger diameters than are now usually fitted for traps and waste pipes of baths and lavatory basins; cleaning caps to be made more accessible and easily operative.

(xvi) The provision of overflow pipes of a minimum size for baths and lavatory basins.

(b) *Matters which should receive greater attention than hitherto in connection with the planning of dwellings.*

(i) The position of water closets, which should, if possible, not be next to a bedroom.

(ii) The orientation of buildings; the maximum sunlight is obtained if the building is planned so that its greatest length is from north to south, and not from east to west.

(iii) Window design, with particular reference to ease of cleaning from inside the house.

(iv) The provision in block dwellings of private balconies to a depth of at least 4 ft.

(v) Where flat roofs are provided, special attention must be given to their construction to ensure that they are waterproof.

INFORMATION SHEET No. 865.

In the Information Sheet No. 865 (Structural Steelwork) published in THE JOURNAL for June 4, there is an error in the formula used for the calculating of the Moment of Inertia (I) so that all the figures in this column and those depending on them are incorrect. Sheet No. 865 has therefore been cancelled and a new Sheet (865 Revised) giving the correct figures is included in this issue.

(vi) The provision of parapet walls to pitched roofs of high buildings to facilitate maintenance work.

(vii) A more general provision of central heating and hot water systems.

(viii) The size of bedrooms, which should not be less than 70 sq. ft.

(ix) Efficient refuse disposal; all block dwellings should be provided with dust chutes which should be lined with glazed material. Refuse reception chambers should be tiled and water laid on.

(x) Prevention of infestation by vermin.

(xi) Kitchen design, in which connection the construction of kitchens to standard sizes, according to the number of rooms in the dwelling, should be considered. Walls should be tiled, and cupboards, which should be built to the full height of the wall, should be provided for china and domestic utensils. The arrangement of sink, cooker, copper, cupboards and other equipment should be such as to allow a clear, rectangular working space, large enough to allow for a small table for occasional meals. Easy communication between kitchen and living-room by means of sliding doors or serving hatch is important.

STANDARDS OF CONSTRUCTION OF DWELLINGS AND THEIR EQUIPMENT.

(a) *Matters which should be the subject of compulsory regulation.*

(i) Materials and workmanship for all components, internal and external, of a dwelling should conform with minima to be laid down in national standard specifications. The builder should be subject to penalties if breaches of regulations to this effect are subsequently discovered.

It is worth noting in this connection that the National Housebuilders' Registration Council have initiated a voluntary scheme by which houses erected by builders who adhere to the scheme shall conform with prescribed specifications.

(ii) Sanitary systems for dwellings should conform with a national standard of by-laws for house-drainage.

(b) *Matters which should receive greater attention than hitherto with a view to improving standards of building and the equipment of dwellings.*

(i) Greater standardisation in the sizes of tiles, doors and windows, and also of electric plugs and internal fittings generally.

(ii) The investigation of new building materials.

(iii) The modification of obsolete building regulations.

(iv) A more general adoption of the one-pipe system of drainage in blocks of flats.

(v) A wider use of metal drainpipes.

OTHER MATTERS INDIRECTLY INFLUENCING DESIGN OR STANDARDS OF CONSTRUCTION.

(a) *To be the subject of a compulsory regulation:—*

Water undertakings should be prohibited from supplying water of more than a specified maximum of hardness. It is considered that softening in bulk is the most satisfactory method of dealing with the problem of hard water. Domestic appliances for softening water are not on the whole satisfactory.

(b) *Matters requiring special consideration:—*

(i) The provision of cheaper and more universal electric power, with a fixed standard of voltage throughout the country.

(ii) The cheapening and popularisation of smokeless fuels with the object, eventually, of their use being made compulsory.

GENERAL.

While regulations in respect of the matters suggested in this memorandum should be applicable throughout the country so as to secure minimum standards of construction, and in the manufacture, of the components and equipment of dwellings, undue rigidity should be avoided. Regulations should take account of differing conditions or methods in different districts and be subject to periodic revision as new methods, improvements, or inventions of proved worth are introduced.

★ *Two questions dealing with contractors' profits, etc., for work executed since the commencement of hostilities* Q 941

THE ARCHITECTS' JOURNAL INFORMATION CENTRE

Q 941

ARCHITECTS, YORKS.—*Following are two questions dealing with contractors' profit, etc., for work erected since the commencement of hostilities:—*

1. *The Contractor is employed under a pre-war R.I.B.A. Form of Contract dated July, 1931, which does not include any relevant clauses covering fluctuations in cost of materials or labour. It is only recently, since work has been completed, that the Contractor has in his accounts put down additional charges to cover the above. Is he in order in doing this?*

2. *The Contractor is employed on a R.I.B.A. Form of Contract dated July, 1939, as amended to suit conditions of hostilities, which form includes special clauses to cover "fluctuations and war risks." These particular clauses state that variations in cost of materials and labour shall result in a nett increase or decrease to the contract sum. Assuming that the variation has meant an increase to the contract price, is the Contractor in order in charging profit on this, and, in the case of a Sub-Contractor employed under the same terms as the principal Contractor, in charging in the latter instance, both Sub-Contractor's profit and a cash discount payable to the General Contractor.*

It would also appear that some fair application of the above section might, perhaps, be a solution to No. 1 above.

1. The Contractor is not strictly entitled to any extras for price increases under the 1931 R.I.B.A. Contract, but it is not unreasonable of him to make a claim. The R.I.B.A. has suggested that architects should urge their clients to pay the nett extra cost and Government Departments usually give such claims sympathetic consideration.

2. (a) The Contractor is not entitled to profit on price increases under the 1939 R.I.B.A. Contract, and as price increases were anticipated by the Signatories there is no reason to give consideration to such a claim.

(b) If the Sub-Contractor was employed on the same terms he would not be entitled to profit on price increases either.

If a Nominated Sub-Contractor's estimate contained conditions contrary

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Q 940

ARCHITECT, YORKS.—*Since the beginning of the war I have been responsible for the "black-out" of a large number of public buildings. I find now that in many cases the efficiency of the "BLACK-OUT" CURTAINS is considerably reduced. All the curtains were of good quality "Italian" cloth and were subjected to stringent tests before acceptance. After two-and-a-half years of use the dressing of the material has perished and the curtains allow pin-points of light to show to such an extent that an appreciable glow is visible over the whole window area. As the cowering of lights is out of the question in many cases, I wonder if you can tell me of any method of dipping the curtains to replace the missing dressing and so increase the effectiveness of the curtains without the expense of providing curtain linings.*

The dressing in "Italian" cloth is put in during manufacture by the Schriener process, when the material is rolled between heavy rollers, and there is no simple or economical method of improving the material after use. We are informed by one maker of black-out curtains, etc., that "Bolton" cloth has been found to last much longer than "Italian."



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to the Main Contract and the Contractor placed the order (with the Architect's consent) in accordance with the terms of the estimate, such conditions would be valid and the Sub-Contractor might be entitled to additional profit. Clause 21 of the R.I.B.A. Contract, which defines the conditions under which orders with Nominated Sub-Contractors are to be placed, contains the words "Save where the Architect or Contractor shall agree otherwise." We mention this because an architect might "accept" an estimate and by doing so agree to conditions contrary to those in the Main Contract, without realizing the full implication.

(c) A Contractor is entitled to a cash discount on the full amount paid to a Nominated Sub-Contractor provided the order has been placed and the money paid, in accordance with the terms of the Contract. If the Sub-Contractor is entitled to the nett extra cost of price increases he must, therefore, be allowed the cost of providing a cash discount. If this were not the case he would only receive the actual price increases of labour and materials less 5 per cent., which is not the nett extra cost.

Q 942

ARCHITECT, HERTS.—*Some 30 years ago a client obtained a 60-year LEASE of an old building at £90 p.a., and after repairing and modernizing he relet on similar terms and period for £150.*

The property has now been damaged (slightly) by enemy action, but more important at the moment the tenant has closed his business owing to lack of trade (danger area). He continued to pay rent for a year after closing but now is nine months in arrear and says he is unable to pay anything more whilst the war lasts. This is probably true, also the building would not be lettable, even if he gave up the lease or it was legally possible to cancel it.

What can be done in a case like this? My client is finding it difficult to pay £90 p.a. to the freeholders now that nothing is coming in. Can he claim a moratorium? Also what will be the problem after the war between the three parties concerned. The tenant may owe a good many hundred pounds.

Disregarding the question of damage, there is no wartime legislation which affects the issues you have raised. Your client's tenant has presumably broken his agreement and can be turned out and sued for any arrears of rent; if your client does not pay his rent, the superior landlord can take the same steps.

If your client has spent a lot of money on the property and made it into a good business proposition, it is unlikely that he will be able to persuade the superior landlord to forgo his rights, and it would be as well for your client to keep the property, if possible, even if it means getting another tenant at a reduced rent for the remainder of the war. If, however,

it appears unlikely that the superior landlord will want the property returned to him, it would be advisable to approach him to see if any arrangement could be made for the duration, when a similar arrangement could be made with the tenant if desired; it might be possible to arrange to pay arrears of rent over an extended period after the war.

If the property has been damaged to such an extent that it is not fit for the purpose for which it was originally intended, it is possible for the tenant to "disclaim" the lease, which has the effect of terminating the lease unless the landlord decides to "avoid disclaimer" by agreeing to repair the property at his own expense as soon as possible; in the latter instance the payment of rent is stopped until the property is repaired.

APPRENTICES

The National Federation of Building Trades Employers has adopted an apprenticeship scheme under which, after the war, every recognized builder will be required to engage a number of apprentices each year proportionate to the number of craftsmen he employs. Discussions are now to be held with the National Federation of Building Trades Operatives on the details of the scheme with a view to securing their endorsement of it. The scheme is intended to apply to the whole country.

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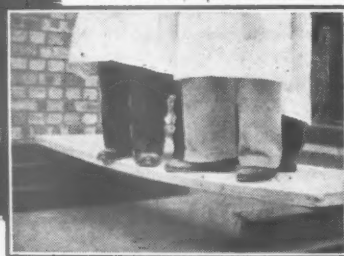
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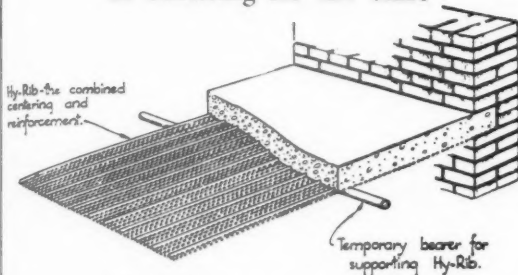
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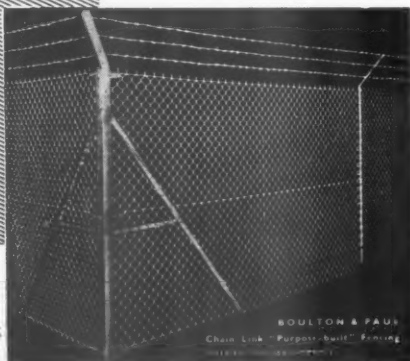
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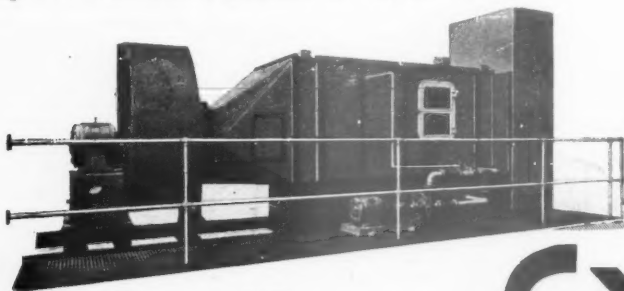
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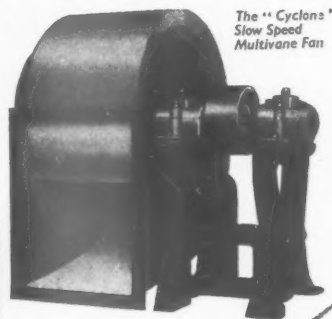
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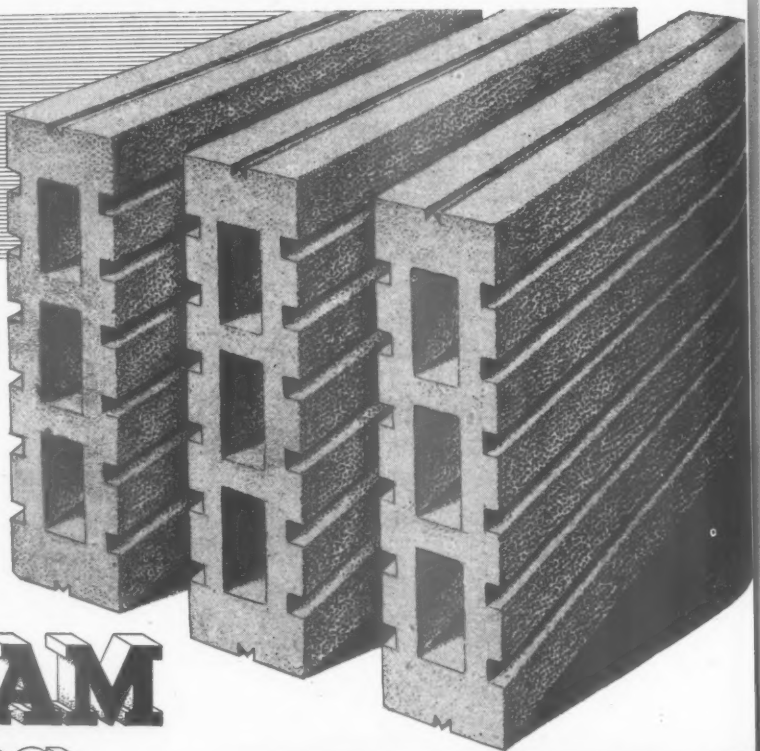
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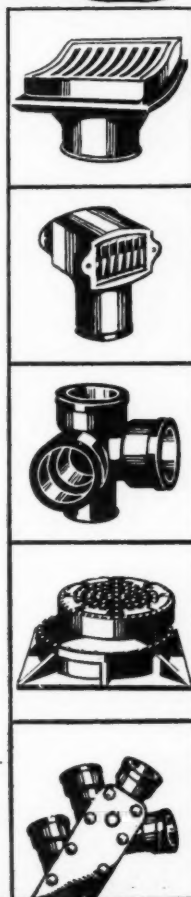
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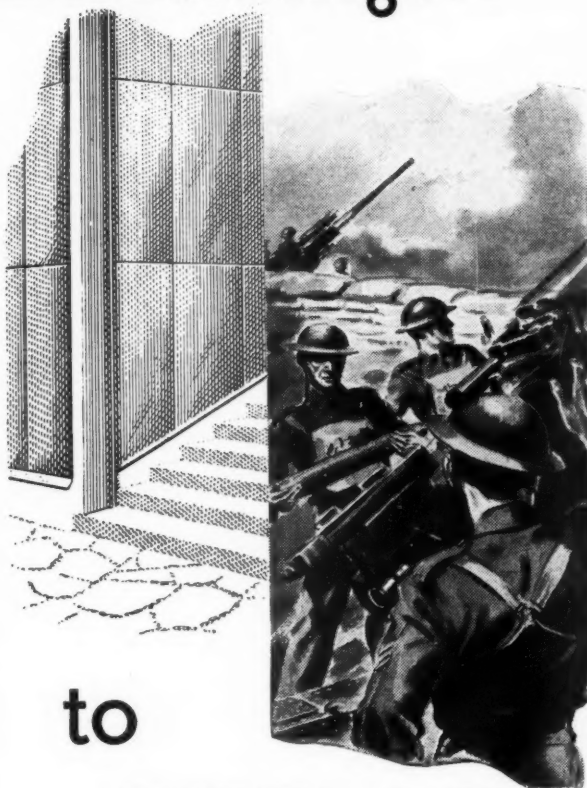
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Architectural Appointments Vacant

Advertisements from Architects requiring Assistants or Draughtsmen, and from Assistants and Draughtsmen seeking positions in Architects' offices will be printed in "The Architects' Journal" free of charge until further notice. Other "Appointments Vacant" and "Wanted" will be found under later headings, and are subject to the charges given under each heading.

Wherever possible prospective employers are urged to give in their advertisement full information about the duty and responsibilities involved, the location of the office, and the salary offered. The inclusion of the Advertiser's name in lieu of a box number is welcomed.

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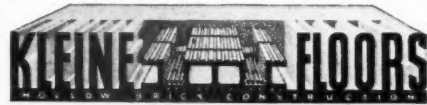
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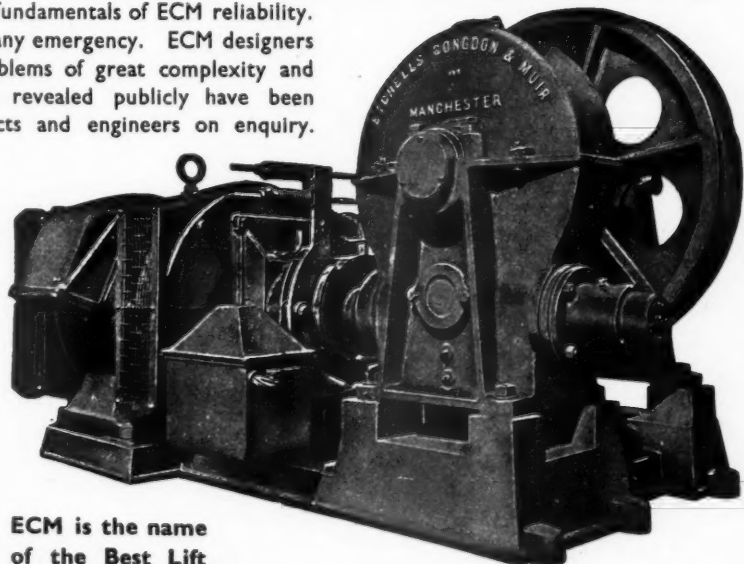
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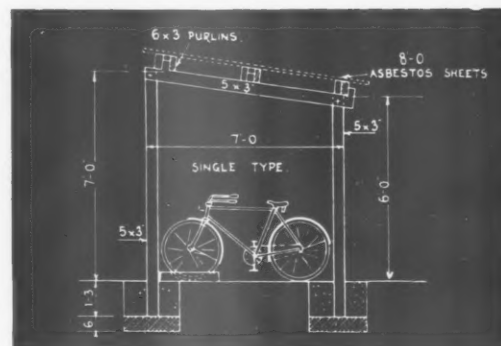
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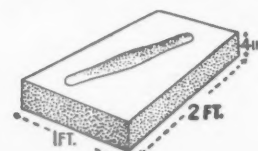
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