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

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PRINCIPAL CONTENTS

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

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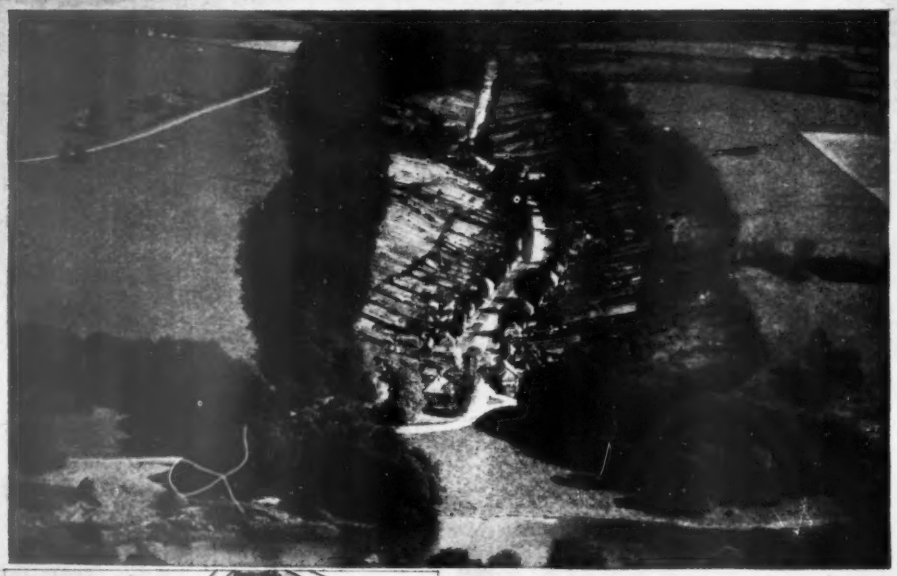
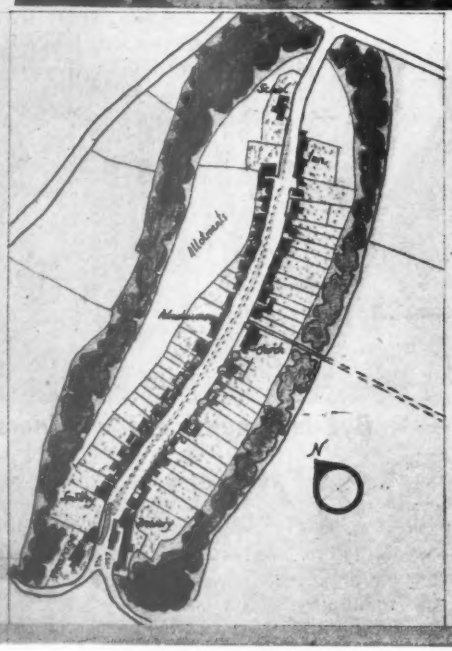
THE VILLAGE





At first cottages were grouped together for safety & convenience beside the Church & Manor & were usually in the valleys to be near a water supply.

Sometimes large landowners planned whole villages for their own workers, such as this one, MILTON ABBAS in DORSET.

YOUR INHERITANCE

An exhibition entitled Your Inheritance, designed by the Housing Centre for use in schools, was reviewed in our last issue. The above illustration shows one of fifteen sheets devoted to an historical survey which emphasizes the closeness of the connection between architecture and the social and economic life of the community.

BUILDING SCOTLAND THEN AND NOW

Illustrations on this page are from the book "Building Scotland" reviewed on page 7

1 *Simple straightforward tenements at Inveraray*

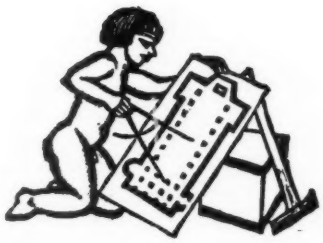
Their dreary modern equivalent

2 *Well designed houses at Banff*

Bye-law housing for miners

3 *Primitive unassuming bungalows at Kirkcudbright*

New bungalows containing every type of modern convenience



SCOTLAND

THOMAS JOHNSTON, Secretary of State for Scotland, in his foreword to Building Scotland, reviewed elsewhere in this issue, suggests that the architecture of a community, which on the whole reflects the attitude to life of the people who compose it, might justly be described as "The outward and visible sign of an inward and spiritual grace."

The old architecture of the Scots is very similar in character to the architecture of their northern neighbours the Swedes. Why, one is tempted to ask, has the Scottish tradition lost itself, while the Swedish tradition has flowered in a way that has no parallel?

If it is time to regard architecture as the visible expression of the character of a society, then a comparison between the social and economic history of Sweden and that of this country should provide an answer to the question.

Sweden during the last two centuries has been affected by the same economic developments that have revolutionzed our own society. But in Sweden the order of events was reversed. In Britain the agricultural and the industrial revolution took place simultaneously. Both began round about 1760. The importance of the latter, however, greatly overshadowed that of the former and by 1840 the passing of the Corn Laws put an end to agricultural prosperity. From that date onwards the prosperity of the countryside declined.

The decline of agriculture was not merely the decline of an industry; for many people it meant the disappearance of an ordered way of living, the only way that was known to them. It was many years before even the framework of a new order was evolved. The guild system broke down in England at a very early date. Trade unions and trade councils only became important right at the end of the 19th century Our system of State education was not yet in existence; technical schools, adult education, provincial universities also came later. During a long interval of roughly 100 years the mass of people in Britain, uprooted by eviction from the land where there forefathers had worked, were shifting and disorganized.

The most important reforms carried through in this period were connected with popular government, *i.e.* government by the middle class manufacturer and merchant man. Commerce was king. Very little attention was paid to the welfare of anything else. The country was ruled by economic laws.

The agricultural revolution in Sweden ran parallel with our own but it came alone. The population as a whole continued to work on the land; land reclamation was the Swedish alternative to eviction. Between 1750 and 1880 the area of land under cultivation was increased fourfold. Growing prosperity resulted in an increase in population. During the period 1750—1880 the population of the country doubled. But it was not until 1840 that population began to outstrip the supply of new land.

There were as yet few industries to absorb and make use of this surplus population. The government was able to introduce social legislation of a sweeping kind, in order to educate it for other ways of life; in 1842 a law was passed setting up an elementary school in every village, and this was quickly followed by the establishment of institutes of technology, trade, agriculture, forestry, mining and veterinary surgery. When the industrial expansion of Sweden did eventually begin sometime about the 60's, it was founded on an educated population.

The change over from the old economic order to the new, once it began, was surprisingly rapid, and the interval of disorganization correspondingly short. Trade guilds were not abolished until 1846. By 1909 industrial labour was sufficiently well organized to call a general strike. There was a short interval of free trade, 1857—80, but the experiment was quickly abandoned because the effect on agriculture was disastrous. In spite of this, however, the standard of living in Sweden continued to rise until, just before the present war, it was higher than our own.

The most startling difference perhaps between Swedish history and ours is that until 1867 Sweden was governed by four estates on the pre-revolutionary French pattern. Only in very recent years have the Swedes had popular government as we know it, based on direct election; they are apparently already looking round for something better.

The moral of this story is clear. Architectural order in Sweden results from social order; which in its turn is founded on education and on the balance which has been maintained there between country and town, between agriculture and industry, between the human being and the money machine. Social order is the necessary foundation for good architecture. In the last two centuries it has unfortunately been lacking in this country. The first duty of architects is to reform our way of living. The war has thrown many things into the melting pot. It is important to see that *before it is ended* the form of a new and better society shall have taken shape. We must not allow democratic enthusiasm to be side-tracked a second time into a struggle over political institutions.

The Architects' Journal
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NOTES & TOPICS

R.I.B.A. RECONSTRUCTION COMMITTEE

IF after the war we were faced with no further destruction than has now befallen us, we should still have to deal with a programme of building bigger than that following the last War and of infinitely greater urgency. But in fact the limits of destruction have yet to be drawn, invasion is a probability, and no-one can foresee how much there will be to rebuild or what powers and resources we will have to draw on.

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Obviously the *method* of reconstruction is going to be of greater importance than ever, and may at this moment overshadow the *art*. By which I mean that because of the scale of the thing and the overwhelming pressure exerted by a vast army of demobilised people, the question of just how we will *produce building* at a sufficient rate even to look as though it would meet demand, will tax our powers to the utmost and call for whatever economies in material and in labour science can produce.

★

From what one has seen of the more detailed terms of reference of the groups set up by the R.I.B.A. Reconstruction Committee to report on the various aspects of reconstruction, the need for a scientific outlook and a wide revision of every regulation obstructing the operation of a planned programme, have not been overlooked. Most of these groups have now started work : the Housing Group with Major Maxwell Fry as Chairman ; the Building Technique Group with Mr. J. C. Martin ; the Building Industry Group with Mr. Howard Robertson; and the Planning and Amenities Group with Mr. W. R. Davidge. The Publicity Sub-Committee has Mr. John Gloag for a Chairman ; if the Chairmen of the remaining groups are as well chosen as these, the R.I.B.A. has made a good start.

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We are already feeling the pressure of a housing shortage which is accentuated by the lack of building labour and the severely restricted range of available materials. In towns which have suffered most from bombing the problem of providing some sort of accommodation is desperate. If ever we had need of intelligent standardisation it is now, and as the great programmes of building for the services diminishes, we may find that we have entered on a growing programme of house building, much of which by the nature of the materials open to us to-day will be far from temporary in character, and may, with the addition of services and amenities, be in use for years to come. To this extent, we must reckon that re-housing has already started and that we must be at great pains to safeguard the quality of what is now being built and to improve on the method of its building, so that it may offer more than a clue to the greater programmes to come later.

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At some period soon after the end of war, demand is going to exceed supply, and it is for that period we must plan, because it is then that standards of building and design will be in the greatest danger of being lowered or set aside in order to increase quantity.

THE BISHOP SAYS CHUT

The Bishop of Birmingham, who was successfully sued for libel some months ago, on account of disparaging remarks that he made about the management of the cement industry in war-time, has recently renewed his offensive in the House of Lords, where he is protected by privilege.

★

Some of his opponents, who do not seem to realize where the real strength of their own case lies, have attempted to side-track the issue by appealing to popular prejudices of one kind or another—the Bishop acts like a Communist, he brandishes Communist pamphlets, he does not defend his statement as a gentleman should, when called upon to prove them in a court of law. On the whole, however, the industry is being defended with spirit, all the damaging allegations made by Dr. Barnes have been denied, and these denials have behind them not only the weight of a united industry but also the impartial authority of the Government.

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Dealing first with the war record of the cement industry, Lord Wolmer stated that the Government was well satisfied with it. He referred in passing to the fact that he himself was acting as Government adviser on cement while he remained in the pay of the Cement Manufacturers' Federation, but he saw nothing improper in this, and he did not control the price of cement. He pointed out that the industry had made very satisfactory progress since the outbreak of war ; wages had been raised, output had been trebled, and prices had been lowered. He asked what more could reasonably be demanded in war-time. He concluded by saying that every R.C. shelter in existence was a service that the industry had rendered to the community, for which it deserved thanks.

★

Lord Wolmer also denied the alleged shortage of cement. He said that there was no shortage now and that there never had been a shortage. There had been a period of several months round about June, 1940, when the demand for cement had considerably exceeded the supply, but it was not correct to describe this as a shortage. This was due to circumstances which it had been quite impossible to foresee. "After Dunkirk, quite suddenly, the public realized that they would have to endure bombing they had never anticipated."

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The Duke of Devonshire, speaking later, rammed home this point by stating that local authorities had used mortar

for air-raid shelters, made without any cement at all, as the result of "an unfortunate misunderstanding due to a certain looseness in the wording of the instructions for the use of lime mortar." They had not been influenced by a shortage of cement; there had always been plenty of cement although it had not always been in the right place. He went on to say that with the right kind of brick lime mortar could be perfectly satisfactory.

★

His Grace concluded his speech with a short summary of the present situation. He said he thought the Morrison shelter was very sound; 18,000,000 people had individual shelters of one kind or another, and public shelters (brick?) were available for some 3½ million. Work on new shelters was proceeding and greater attention was being paid to existing shelters. There was every reason to suppose that when long winter nights returned and we had to face again severe raids like those of last year, we would find ourselves in a better position than we had been in then. He explained that the Haldane shelter had been dismissed after due consideration, because the Government considered it an unsuitable type. The decision had nothing to do with the difficulty in obtaining cement.

★

The arguments put forward by the Bishop were so vague and untechnical that they are scarcely worth summarising. He merely said: "I understand that the Government denies the existence of a shortage of cement. They can only make this denial because their policy is adapted to that shortage." He would probably have difficulty in proving this statement. He also said that he thought there was a widespread demand for safer shelters than had yet been provided.

REPLANNING LONDON

The L.C.C. is seeking wider powers; they are summarized in the news. It is to be hoped that they will be granted. It is also to be hoped that before they start their "speedy rebuilding" someone will lay down for them the principles which should govern town planning. No detailed account is given of the use that will be made of the wide powers that are being sought. It is suggested, however, that "public buildings and hospitals could now be enlarged owing to the destruction of adjacent properties."

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Planning, if it means anything, means expressing in physical terms the organization of society for social and economic purposes. Piecemeal, ill considered planning undertaken from a narrowly technical and architectural point of view may be worse than no planning at all.

★

There are many aspects of modern life that must be expressed for better or for worse in a planned community. The social services are growing and changing daily. It is vitally important that our reconstructed towns should be planned to allow for the reorganization of these services to meet our probable future needs, and not to petrify them on the basis of past performance, even at the best level so far reached.

★

Is the new town plan for London going to invite the hospitals back to buildings from which so many of them have evacuated, and make it possible for them to rebuild and enlarge premises which have been damaged or destroyed, without first enquiring into the purpose which these hospitals should serve and the positions which they should occupy in a planned community?

ASTRAGAL

ON THE AIR

The GENERAL SECRETARY of the National Federation of Building Trade Operatives to the BUILDING TRADE

I'm glad, as a representative of building trades workers, to have this opportunity of saying a few words to my comrades in the building industry.

You in this industry are doing particularly valuable work just now, for upon you, as upon anyone, depends the effective progress of the war and the winning of it. Munitions are wanted in an ever increasing stream, planes are wanted in an ever increasing supply. But munitions require factories, and planes require dromes; and in connection with both we, that is, the country, must have hostels, camps and all the other necessary amenities without which advance in impossible.

Yes, we are all in this grim fight; its issue depends upon the working masses. Nothing and no-one dare to underestimate their importance.

I would like it to be said of us in the building industry, of all those who work in it, of those who administer it, that the self-discipline we choose to accept far more than counterbalances the discipline imposed in a totalitarian state.

Building workers have endured many hardships in the past—the hardship of lost work in a casualised industry, or work reliant on the vagaries of the weather, of dependence of laissez-faire methods, but the stern necessities of the war have largely cured the industry of these shortcomings. True, everything in the garden is not yet lovely, but it will be much less lovely if we go down in this struggle. You, my colleagues in all building trades, can do so much if you will. A grand co-operative effort is necessary if we mean to pull through.

We know that there is still muddle about, that red tape, as we call it, still exists, that there is still good cause for grumbling and room for improvement. But we don't, I know, wish the onus for any relaxation to be laid on us. At any rate, let us see to it, for our own sakes, that our effort is a maximum one, worthy of people who count.

I know there can be little willing response to the uninspired call of "work harder" or "produce more," but I think there can be no disputing that the maximum efforts of all are now really needed.

Whatever our views may be on the methods, conduct, or any other aspect of the war, and whatever our views may be as to what kind of society or organization should follow the war, it is certain that none of us will be in a position to debate these issues if we don't emerge successfully. Abstractions as to the right or justice or motives of our part in this struggle may be left aside for the present. Sufficient to know that we are fighting for our lives and very existence.

Amidst the devastations of war, the homeless look for help to those who can reshelter them; with no less urgency the munitions of war must have homes too, and so the cry is also for more factories. The earnestness with which building workers regard their contribution to the war will be reflected in the speed they give to that contribution. No need to tell the workers what part they play in this battle, for they have the sense to appreciate it.

I have been on jobs up and down the country, and like others who have also done this, I know and appreciate the imperative part you, the building workers, are playing—a hard part—a vitally urgent part. This appeal for the best that lies in you is made just because of your important task. Of course, I know that you on your side have grievances to be remedied, and these must be dealt with. They will be.

War strategy is being constantly debated in Parliament—most of it in secret, but it needs little imagination to realize that strategy is linked closely with production. Strategy is the clue, and production the answer. Building trades operatives can help to provide that answer. Building workers have a war emergency wage agreement; it would be nice to know that they had also a war emergency production agreement, which helped to hoist Hitler and noose the Nazis.

The Government is evidently aware of the importance of building work, but it has not been content to leave our labour to the hazards of private enterprise in times when private enterprise does not meet the occasion of a crisis. There can be no reasonable objection against a system of control and direction if it operates for the public good and not administered merely for the few. A well organized body can, even in war time, have some say in the way it is controlled and directed.

R. COPPOCK.

NEWS

A.A.S.T.A. AND TRADE UNIONISM

At a meeting of the A.A.S.T.A., under the chairmanship of Mr. Colin Penn, a discussion was held on the Defence of Working Conditions and the Future Policy of the Association. Mr. Penn stated that the most immediate task of the Association was the defence of working conditions and the firm establishment of the Association as the recognized trade union for all building technicians. Mr. K. Campbell, A.R.I.B.A., pointed out that the Association must base its future work on national trade union principles. After discussion the meeting passed unanimously the following resolution :—

"This meeting of the London Members and Friends of the A.A.S.T.A. deplores the working conditions that have been forced on building technicians and expresses its determination to fight for suitable salary scales, war bonuses, adequate holidays, and the establishment of satisfactory conditions of fire watching.

ALL BUILDERS TO BE REGISTERED

Registration of all builders throughout Great Britain is to be made in the near future. This is a further step in the drive for increased output which was referred to by Lord Reith, Minister of Works, when explaining the reasons for the application of the Essential Work Order to the building industry recently. Details of the Registration will be issued shortly. Every builder will be obliged to state the number of men, skilled and unskilled, he is employing and the work he is engaged on.

Details will also be issued in due course of the establishment of the National Building Council. This will consist of representatives of all sides of the industry under independent chairmanship. The chairman has not yet been selected, but it is stated that the greatest possible care is being taken to find a man whose eminence and authority are such as to inspire the confidence necessary for this difficult office.

The function of the Council will be to facilitate the smooth working of the industry and to ensure a state of mutual trust, so that all concerned will be able to direct their full effort to every vital work before the industry. Further steps towards the elimination of non-essential building work will also be taken shortly.

NEW HOMES AFTER THE WAR

A warning against a repetition of the housing errors of the industrial revolution by building tenements or terrace dwellings, or resort to the Continental tendency towards communal existence for workers in barrack-like blocks of flats, was given by Mr. David W. Smith, chairman of the Building Societies' Association, at the annual conference of the association in London.

"There is no justification for gloomy foreboding that after the war there will be any substantial movement away from home-ownership and back to rent," Mr. Smith said. "The natural aspiration of the Briton to possess an individual house—his traditional castle—is an essential part of his national character and should on no account be checked."

The incidence of war damage would not dissipate the soundness of property as a security and investment. The total assets of all building societies in Britain stood at £756,242,391 at the end of 1940, an increase of 6.4 compared with 1937.

In 1934 building societies paid £2,400,000 in income tax. Last year the estimated figure was £7,700,000, plus £500,000 in National Defence Contribution. To meet the "great and growing burdens," a further general reduction of interest rates on investors' accounts and an increase in the rates paid by existing borrowers might have to be considered.

The Scottish Scene THEN

A SIMPLICITY

The Scottish Scene NOW

A SAMENESS

ROYAL SOCIETY OF BRITISH SCULPTORS

Mr. Gilbert Bayes has been re-elected President of the Royal Society of British Sculptors.

CLYDESIDE RECONSTRUCTION

Mr. Sam Burton, A.R.I.A.S., called in to organize the emergency repairs in a Clydeside area, has adopted Mr. O. N. Arup's scheme for safe housing in war time as a solution to his own problem of reconstruction. With the co-operation of Mr. Arup he prepared drawings, which were adopted by the Council. Detailed drawings are now in preparation for submission to the Ministry of Home Security and the Department of Health for Scotland.

REPLANNING LONDON

Following are extracts from a statement prepared by the Civil Defence and General Purposes Committee of the London County Council on the post-war reconstruction of London :—

LARGE AREAS which call for comprehensive redevelopment. London has many such areas, particularly in riverside districts both north and south of the Thames. In some there remain buildings which, because of their architectural, historical or public interest or their modern character, should be preserved. There may also be groups of properties it would be unjustifiable to destroy.

SMALL AREAS in which property has suffered war damage, though the general standard of development is satisfactory. Here restoration should fit in with the general scheme for the district. Areas should be left for open spaces or playgrounds.

NEW OR WIDENED ROADS, previously in hand or in contemplation, could be incorporated in areas in which many properties have been damaged in varying degrees.

PUBLIC BUILDINGS, as well as hospitals, could now be enlarged owing to the destruction of adjacant properties which hitherto it would have been too expensive to acquire.

The committee insists on the needs of enlarged powers over land and buildings and the rights of compulsory acquisition.

One of the main recommendations is

B STURDINESS

C VERNACULAR CHARM

B OSTENTATION

C FALSE TRADITIONALISM

that areas which, owing to war damage, need to be redeveloped as a whole should be prescribed and their positions shown on publicly exhibited "stabilization maps." No dealings in, or creation of, any new interest in land within such an area would be allowed to increase the purchase price to the local authority, and if building was to take place on it, it could be only with that authority's consent.

Against compensation to be paid there should be a set-off, it is recommended, for any betterment which the improvement might effect to any other property of the vendor not included in the purchase.

The L.C.C. is already engaged on a provisional town-planning scheme for the whole of its area, and in the post-war reconstruction period this may be applied, it is stated, far beyond the confines of the administrative county.

CHARTERED SURVEYORS' PRESIDENT

Major-General H. C. Cole has been elected president, and Mr. Geoffrey L. Vigers senior vice-president, of the Chartered Surveyors' Institution.

LITERATURE

BUILDING SCOTLAND

A Cautionary Guide by Alan Reiach and Robert Hurd. The Saltire Society, price 2/6 net.

Building Scotland is an excellent piece of propaganda in favour of a rational architecture based on local traditions. It should appeal even to the converted. The photographs are good, and the buildings photographed are well chosen ; the text is brief and witty ; when one is not admiring one is laughing. The only fault to be found with the publication is one for which it is probably unfair to blame the publishers. The page devoted to contemporary buildings which give grounds for hope of better things to come, is not quite as inspiring as it might be. Two out of four photographs show buildings which exhibit distinct traces of suburban influence.

The most delightful photographs are of old Scotch buildings ; it is impossible to look at them without being aware of the character of the people for whom they were designed and the nature of the landscape that framed their setting. They are not the product of any style, but of a real building tradition, and they remind one strongly of Sweden. Sweden is architecturally the most interesting country in Europe ; it is the only one in which a really vigorous native, almost peasant, tradition has survived prosperity ; not only survived it but profited by it. The result is a general standard of design that is far higher than in other European countries. I do not mean to imply that contemporary Swedish architecture is arty-crafty, though there has at times been a tendency in that direction ; but that it is almost completely free from imported affectations and relies princi-

PRECEDENT *for a* MODERN SCOTS IDIOM

The buildings illustrated are, on the left, a clinic at Stockholm and, on the right, a shop in Edinburgh. The shop in Edinburgh is a lonely example of modern architecture; but it is not an imported freak. A comparison between it and some of the traditional buildings of Scotland, illustrated on pages 2, 6 *and* 7, *shows it to be a natural development. There need be no long struggle to evolve a modern idiom for Scotland. The Swedish tradition which has been adapted to suit a variety of needs is very similar to the Scottish tradition, and affords numerous precedents.*

pally on elementary forms that are suitable for their purpose, on sound structure and good materials.

It is well to have the attention of the public drawn with the force of such admirable lucidity, to the existence of similar strong healthy traditions in our own country. We have waited long enough for barren classicism to breed new beauties; and "functionalism" was never designed to act *in vacuo*. In almost every part of this country there exist local traditions of a sturdy straightforward kind; the stone houses of the Peak district, the brick farmhouses of Cheshire, knapped flint and timber buildings in East Anglia, honey-coloured villages in the Cotswolds; but the lovely whitewashed buildings of Scotland might have been specially invented for the purpose of providing the stock on which functionalism could be grafted. The alternative is shown in this book (it is a cautionary guide) the dreadful offspring of official illiteracy and the bye-law street. A.H.T.B.

LETTERS

Prefabrication

SIR,—I like your leader (June 19). A striving towards a reform in building technique is accepted as being necessary and urgent. This field is the only one in which architectural influence could, and should, be felt in the framework of the existing set-up of building activity.

However, wistful references to prefabrication as an ideal are misleading; standardization and mass-production are the ideal means to the end, providing the proper people are at the design end. Prefabrication, as a technological fact, just hasn't come.

Hundreds of groups and individuals in the U.S.A. have for years experimented with the prefabricated house in every imaginable material, including plastics. Even the great Thomas Edison developed a system which showed a technical advance. Edison had resources and backing, and the failure of his houses to come anywhere near the low cost he anticipated is significant.

From the outset one thing was clear, approval of existing financial interests could never be won because of the colossal sums sunk in existing mortgage property and builders' equipment which, were a prefabricated product available, would become obsolete.

Much worse placed than the U.S.A. is this country to absorb a product with a huge output. 40,000,000 has been mentioned in the Press recently as the number of persons requiring rehousing at the end of the war, but even this surprising figure would not justify the setting up of a group of factories, not to mention the preliminary planning of an organization to handle the raw material and distribute it in the form of housing to the consumer.

These and a dozen other well known reasons dismiss the prefabricated house, as such, as unfeasible in a competitive social system.

On the other hand standardization, of a necessarily high order, can be used for the components of the house but even in this work no immediate sudden movement can be expected.

The current question is who are the right people for the work, and how are they to get in on the ground floor?

KATHLEEN GRANT

London

Reserved Occupations

SIR,—The reports about some of the activities of the A.A.S.T.A. published in the ARCHITECTS' JOURNAL should bring "good cheer" to architects generally, the Association is doing a useful service for the nation. But I would point out that we, a united nation and empire, must continue to pursue a one hundred per cent. course of co-operation to bring about certain and complete removal of the evil forces abroad at this hour, let us bear this in mind.

I should therefore like to preface my following remarks by saying that I have no quarrel with the Minister of Labour or with the Engineering profession, and set out my queries which have occurred to me from time to time, and which may be in the minds of some of your readers.

(1) Why is there such a large gap in years in the Revised Schedule of Occupations between Civil Engineers (23 years) and Architects (35 years).

(2) Does not the average architect specialize in building works, supervision, specifications and contract prices.

(3) Is it a civil engineer's work to specialize in services, water supplies, roads, bridges, harbours, docks and sewage syetems, etc.

(4) Are my remarks borne out by reason of the fact that large cities employ a city engineer, and a city architect, and that similar relations exist with county councils.

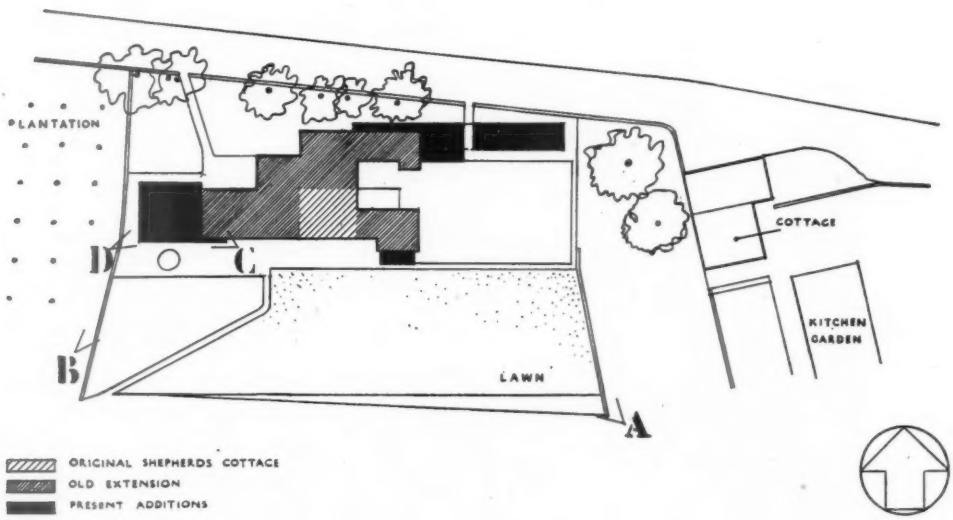
(5) To assume that many civil engineers cannot possibly be occupied with new large works subject to grants such as mentioned in my query No. 3 would be fair assumption.

I might add I am under 35 years of age, and have registered sometime ago, and I hope to pull my weight for the future benefit of mankind.

INTER NOS.

HOUSE AT DOCKRAY

BY J. L. MARTIN AND S. SPEIGHT



BLOCK PLAN

The work consists of the extension of a smallish country house which was itself an extension of a typical local-style shepherd's cottage. The house is in the Cumberland Fells, high up above the village of Dockray, near Ullswater.

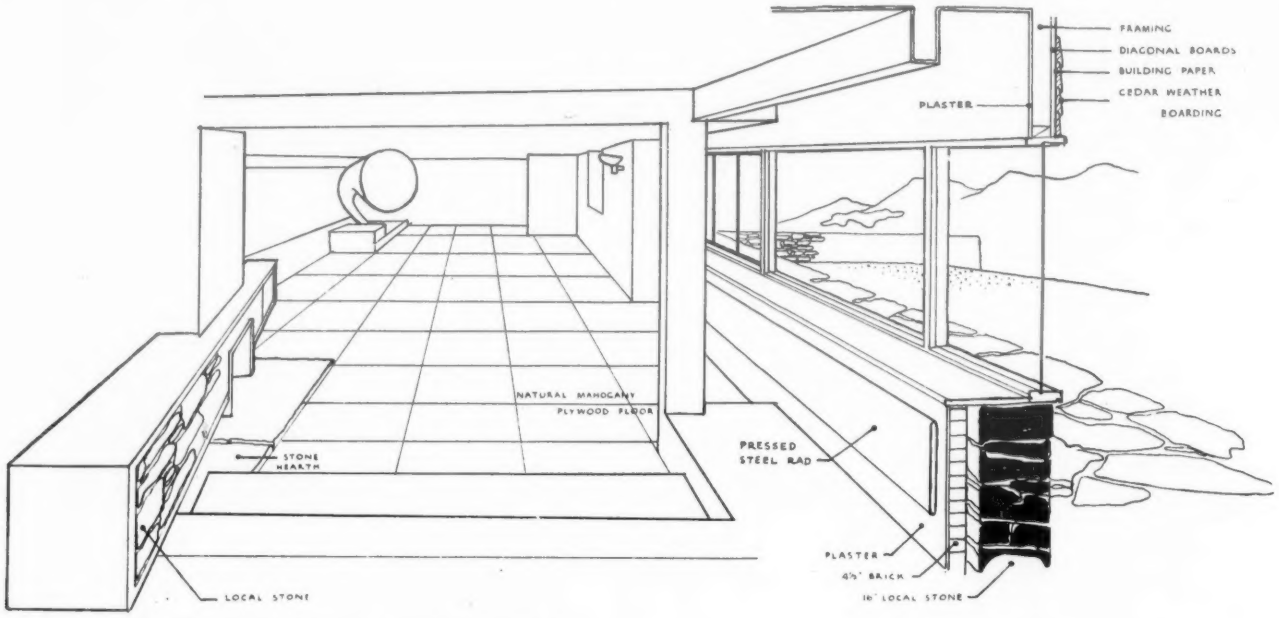
Above, the whole of the south front, with the new wing on the left and the new glass house at the far end of the terrace on the right

GENERAL — The original shepherd's cottage was built in

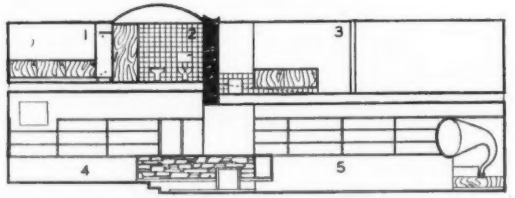
HOUSE AT DOCKRAY, CUMBERLAND

BY J. L. MARTIN AND S. SPEIGHT

GENERAL — The original shepherd's cottage was built in the local greenish brown stone, which is normally too hard to work and is laid with a rough face, left unpointed. 18 in. walls are formed of flat stones with their beds sloping towards the outside face of the building, to throw off water. The first extension, which took place some years ago, converted the cottage into a six-bedroomed house, which was used chiefly in the summer months. It resulted in a more sophisticated "period" exterior rather out of keeping with the directness and simplicity of local building traditions. The present remodelling is an interesting attempt to restore the traditional character of form and outline while still preserving freedom to handle space and use materials in a modern way in the new portions. The purpose of these portions is to provide more bedroom and kitchen accommodation and, in particular, to provide a large living- and music-room with a private suite of rooms over it. The general purpose of the remodelling is also, by adequate central heating, etc., to make the house as comfortable as possible, in spite of its exposed situation, for use throughout the whole year.



PERSPECTIVE VIEW OF COMBINED MUSIC-AND LIVING-ROOM



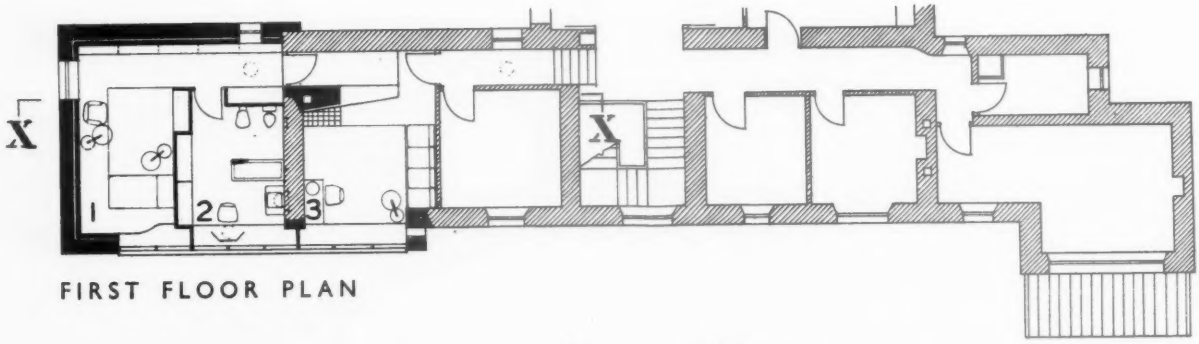
SECTION XX

LONGITUDINAL SECTION THROUGH NEW PORTION

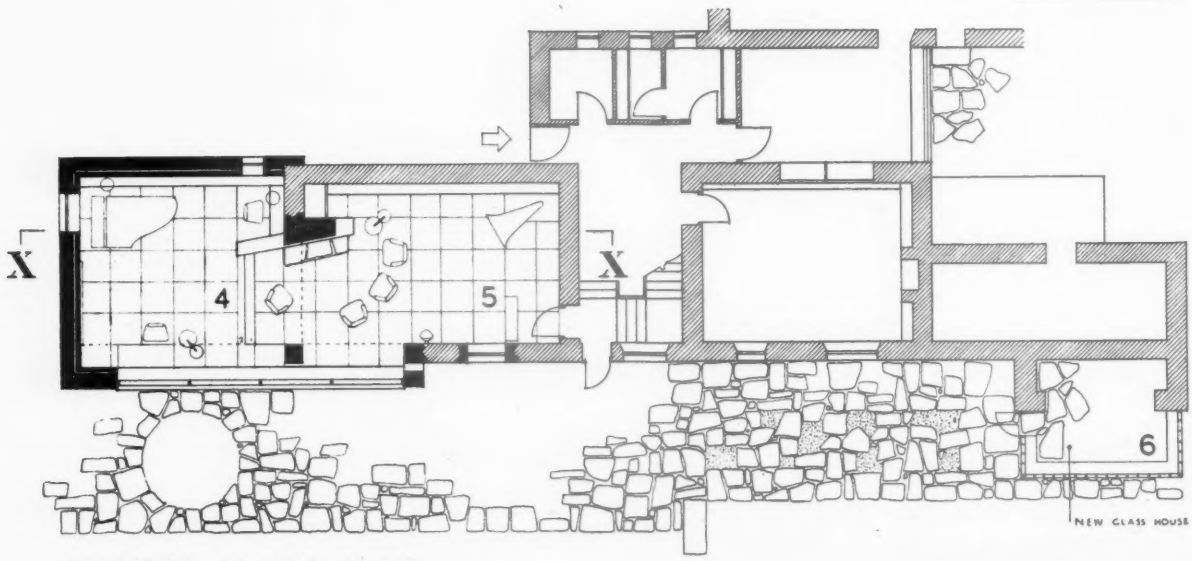
CONSTRUCTION—The new portion has walls of the local unpointed stone about 18 in. thick, inside which is a 2 in. cavity and then a 4½ in. brick wall, giving a total thickness of 2 ft. A large part of the south wall is opened up with windows, the first floor joists being carried on rolled steel joists. The long window to the living-room and the windows to the suite of rooms over it are grouped as a single unit enclosed in a timber frame, the infilling being Western red cedar weather-boarding. This weather-boarding has a backing of diagonal boarding fixed to timber studding, which is plastered on the inside. The opening lights are standard metal casements. The pitched roof is finished in local slates. Many of the materials were salvaged from the demolition which was necessary in the remodelling and from a local barn.

Facing page, the new west wing

HOUSE AT DOCKRAY



FIRST FLOOR PLAN



GROUND FLOOR PLAN

KEY TO PLANS

1. Bedroom
2. Bathroom
3. Sitting-room

all en suite.

4 and 5. Combined music-room and living-room.
6, New glass-house.

PLAN—The original living-room has been extended by breaking through the west wall and adding approximately another 20 ft. to the length. The fireplace has been turned round to face the window and rebuilt as a free-standing element connected to existing flues. The slope on the site necessitated a floor level 1 ft. higher in the extension. Steps are recessed into the new room so that the floor area of the main living space is appreciably greater than that at high-level. This allows chairs to be drawn in a semi-circle round the free-standing fireplace, which is slightly canted to face into the main part of the room. The upper level accommodates a grand piano and writing desk lit from small windows in the west and north walls, the remaining part of the west wall being occupied by a large painting by Ben Nicholson, around which the room has been to a certain extent designed, particularly the colour scheme. The south wall is opened out by a main window 26 ft. long, which commands a magnificent view of the fells across the valley.

Right, the house before and after the remodelling

The general contractors were Messrs. J. and F. Hebson.

For list of sub-contractors see page xx.

BY J. L. MARTIN AND S. SPEIGHT

HOTEL AT DENVER, COLORADO

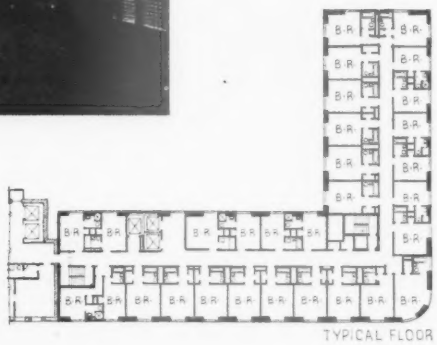
BY BURNHAM HOYT

CONSTRUCTION—Reinforced concrete foundations; steel frame, concrete floors; brick walls; roof, covered with 2 in. cork. The walls and roofs are insulated with cork. Shopfronts are bronze

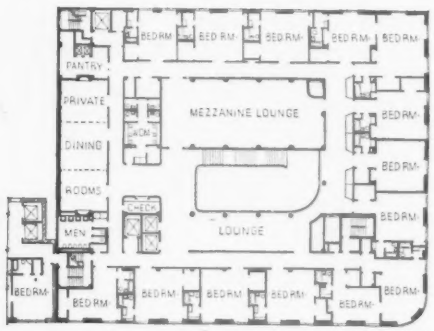
Above, the main front; left, the hotel previously standing on the same site. It was built in 1884

HOTEL AT DENVER

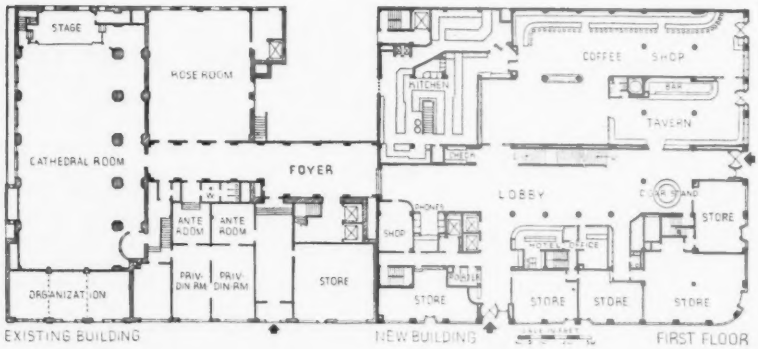
INTERNAL FINISHES — Staircase, terrazzo and alundum cement. Floors, public spaces and bathroom, terrazzo ; dining spaces, cork tiles. Walls, public spaces, cork tile and linoleum ; mezzanine, wallpaper. Kitchen equipment, stainless steel. Heating and air conditioners, steam system, filtered, humidified and cooled



Above, mezzanine lounge



The illustrations of this hotel are reproduced from "The Architectural Forum"



BY BURNHAM HOYT

HUMAN STANDARDS IN RECONSTRUCTION

At an ordinary general meeting of the Architectural Association, with Mr. Joseph Hill (President) in the chair, a lecture was delivered by Mr. F. J. Osborn (Hon. Sec., Town and Country Planning Association), entitled "Human Standards in Reconstruction."

Mr. Osborn said that towns were so far the most conspicuous failure of our civilization. In 1907 goods produced for mass consumption were badly designed and often shoddy. They were now much cheaper and were better designed because technicians had been busy while politicians were merely wailing or railing. But during this period of advance the biggest and most important thing of all, the town, had gone from bad to worse, from squalid muddle to crazy and bewildering congestion and complexity. Brilliant technicians of building and transport were simply overwhelmed by it, while artists tried to reveal beauty in smoke, scaffolding and pasty faced and poster coloured people sitting under cafe lights. We still rushed full speed down the Gadarene slope and London, like all other great towns, grew more unfitted for its purpose every day. The number of families per acre grew, rooms per family remained inadequate, skyscraper slums were going up everywhere, tube trains became more crowded, playing fields were less and less accessible and gardens more and more a luxury for the few. Town planning had been in existence long enough to affect the situation, and town planners, therefore, could not escape responsibility. They concentrated on the frills of their subject and forgot its fundamentals. For instance, faced with the sociological-economic-military-political problems of London they babbled about brick buildings in Regent Street and chinks through which to see St. Paul's.

Any standard of housing density was based upon components which could be analysed, and the maximum tolerated density would differ according to the advantages we were prepared to scrap. We were all more or less in agreement that the minimum floor space inside the house for the average family of 3·6 persons should be something like 750 square feet. As to sunlight, even under the most drastic city conditions we ought not to exact a continuous light angle higher than twenty degrees in any part of any town occupied for residential purposes. Then access to earth was absolutely vital. Most families at some stage contained children, and these should be able to run in and out between the living room and the garden. The great majority of people wanted to have some opportunity for gardening but we might have to scrap that in the minimum standard. Privacy when indoors was important : he did not think a window should be less than sixty feet from another window. Ground floor windows must not be nearer than fifteen feet from the public footpath under any conditions, and twenty feet should be aimed at. Outlook must be remembered : this included architectural amenities but outlook should be on to something more than a facade opposite. It should include some growing things and the more the better. Lastly, the standard should include adequate road access.

Putting all these standards together, you could comply with the requirements for room space, light, access to earth in all but the gardening sense, with the minimum of indoor privacy and not a very high care for outlook and adequate road access, under normal conditions at 15,000 sq. ft. per acre. This was equivalent to 20 houses at 750 sq. ft. each. If you went beyond that you dropped one or other standard, *e.g.*, if you built flats the people on the upper storeys were deprived of access to earth. If you abolished the front forecourt which gave privacy from the footpath, you could probably increase the number of houses per acre by two or three, but you would lose privacy and probably the right angle as well.

At the present family size the figure given would work out at about seventy-two persons per residential acre, and this figure, when you had allowed for business premises, public buildings, public open space, allotments and so on, would convert itself into twenty to twenty-five persons per acre for all over the town. This meant a considerable opening out of centres of many existing towns, and this opening out was practicable at the moment at a higher speed than before the war. Evacuation and decentralisation having occurred we should not allow the whole of the decentralised industry and population to come back.

We might find ourselves having to deal with a spill over of five or six million people from the overcrowded parts of towns. Where should we put them ? A great many could go to smaller towns, and we might build twenty or thirty new towns as a war memorial. Supposing that on the edges of the smaller towns and in the new towns we absorbed 300,000 acres of additional land we could house something like 6,000,000 people. We had in this country 30,000,000 acres of farm land and 18,000,000 acres of hill land of which a good measure could be reclaimed, so that the development proposed would not make any appreciable difference to the amount of agricultural land.

ANNOUNCEMENT

Owing to the appointment of Mr. John Swarbrick, F.R.I.B.A., as Emergency Works Officer to the Ministry of Works and Buildings, for Cumberland, Westmorland, and North and Central Lancashire, the work upon which he was engaged is being carried on, during his absence, by Mr. J. Henry Price, F.R.I.B.A., and Mr. George Willis. Communications regarding such matters are to be addressed to Mr. Swarbrick, as hitherto, at 1, King's Bench Walk, Temple, E.C. 4, or to 66, Mosley Street, Manchester 2, where they will receive attention.

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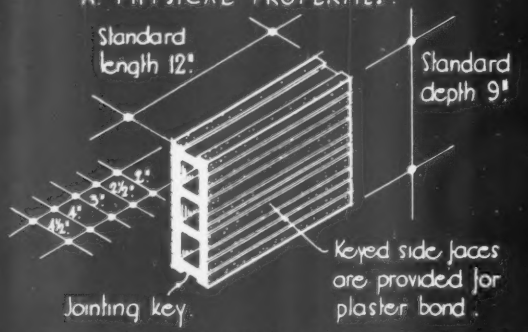
•TURNALL• INSULATING BUILDING BLOCKS :

A. PHYSICAL PROPERTIES.



SKETCH SHOWING TYPICAL CONSTRUCTION OF BLOCKS.

TABLE GIVING SIZES & WEIGHTS:

SIZE, Ins.	WT. PER SQ. YD, lbs. ozs.	WT. PER BLOCK, lbs. ozs.
12 x 9 x 2	61 8	5 2
12 x 9 x 2½	63 12	5 5
12 x 9 x 3	78 0	6 8
12 x 9 x 4	96 0	8 0
12 x 9 x 4½	110 4	9 3

THERMAL CONDUCTIVITY:

MEAN TEMPERATURE, DEGREES F	THERMAL CONDUCTIVITY •k• B.Th.U./sq.ft./hr./°F./In.
50	1·08
100	1·18
150	1·28
200	1·38

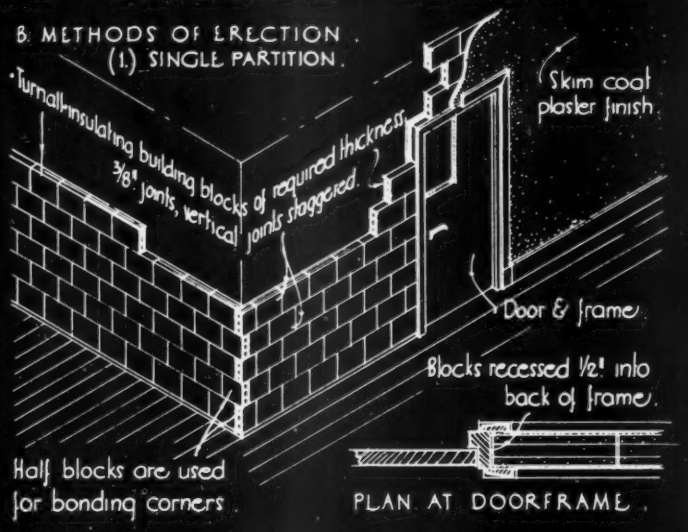
EXPANSION:
Thermal movement is sufficiently small to be ignored for all normal building practice.

LIMITING HEIGHTS (unreinforced):

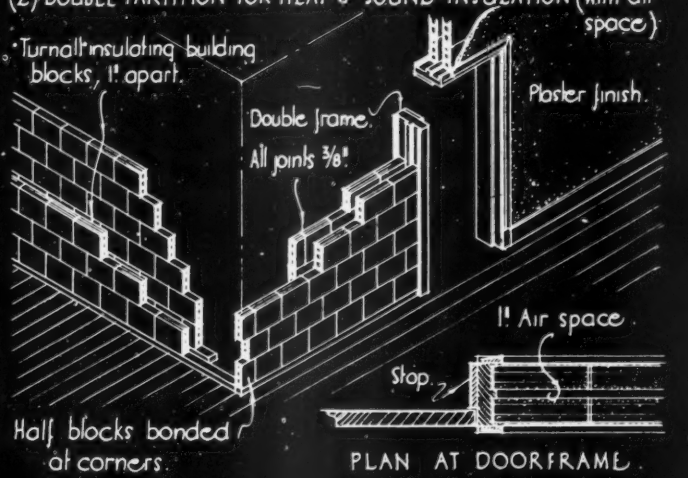
SIZE OF BLOCK, Ins.	HEIGHT OF PARTITION.	LENGTH OF PARTITION
12 x 9 x 2.	9' 0"	20' 0"
12 x 9 x 2½.	10' 6"	20' 0"
12 x 9 x 3.	12' 0"	25' 0"
12 x 9 x 4.	15' 0"	25' 0"
12 x 9 x 4½.	17' 6"	30' 0"

B. METHODS OF ERECTION.

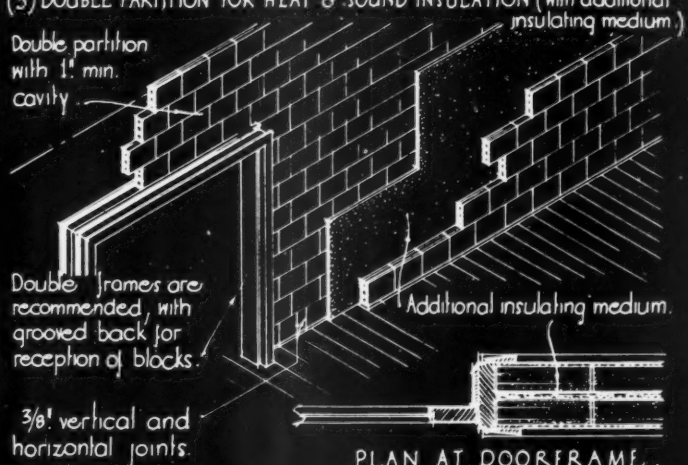
(1.) SINGLE PARTITION.



(2) DOUBLE PARTITION FOR HEAT & SOUND INSULATION (with air space)



(3) DOUBLE PARTITION FOR HEAT & SOUND INSULATION (with additional insulating medium.)



Issued by Turners Asbestos Cement Co, branch of Turner & Newall Ltd

INFORMATION SHEET : WALLING : INSULATING PARTITION BLOCKS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC

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INFORMATION SHEET

• 833 •

BRICK AND BLOCK CONSTRUCTION

Subject : "Turnall" Insulating Building Blocks.

General :

The partition blocks dealt with on this Sheet are for the construction of non-load-bearing internal walls. They are in the form of kiln dried hollow tile, and conform to the requirements of building regulations for this type of product. The top and bottom of each block is keyed for additional stability and jointing strength, and both sides are provided with grooves for plaster bond. In addition to their use for partitioning, the blocks are suitable for the underlining of flat roofs, mansard roofs and floors in cinemas, hospitals, hotels, schools, flats, churches and public buildings generally. They may also be used as internal linings to external walls and as stanchion and duct-casings, etc.

Laying Notes :

Blocks should be laid staggered joints of about $\frac{3}{8}$ in. wide mortar, consisting of 1 part Portland cement to 6 parts of clean sharp sand and 1 part of hydrated lime.

Where partitions are to be treated on a concrete floor, the block should be bedded direct. On timber, the partition blocks should be bedded on to a timber plate of a width equal to that of the finished plaster work.

Very long partitions may be given additional vertical support by including vertical timber posts at intervals, the blocks being keyed to the posts by means of flat angle iron brackets built-in. Door and window frames may also be fixed in this manner.

Thermal Conductivity :

The heat transmission for various mean temperatures is given in the table overleaf. The blocks represent an insulating medium, retarding the transmission of heat and cold, and from the values given for "k" it will be seen that the insulation obtained is approximately five times that of normal brickwork.

Size and Weight :

All blocks are in the standard size of 12 in. by 9 in., and half-blocks 6 in. by 9 in., and may be obtained in five thicknesses, viz., 2 in., $2\frac{1}{2}$ in., 3 in., 4 in., and $4\frac{1}{2}$ in. Their low density is the result of a reduction in the amount of bulk material, and has been obtained without impairing their strength. A reduction in the size of foundations may thus be effected, and easy handling and low transport costs are achieved.

Specially chased blocks and blocks up to a maximum length of 21 in. are manufactured to special order. Solid blocks and blocks with one or both faces smooth are also available.

Sound Insulation :

The three constructional systems listed below represent the following sound reduction values for a mean range of 200 to 2,000 cycles per second.

System 1.—Single walls unplastered.

Thickness of blocks, inches.	Mean sound reduction, decibels.
2	37
$2\frac{1}{2}$	38
3	39
4	40
$4\frac{1}{2}$	41

System 2.—Single partition plastered both sides with plaster $\frac{3}{8}$ in. thick.

Thickness of blocks, inches.	Mean sound reduction, decibels.
2	42
$2\frac{1}{2}$	43
3	44
4	45
$4\frac{1}{2}$	45

System 3.—Two partition blocks, plastered external faces with plaster $\frac{3}{8}$ in. thick. Air space 1 in.

2	50
$2\frac{1}{2}$	51
3	53
4	53
$4\frac{1}{2}$	54

For the purpose of comparison, the reduction for brickwork, plaster $\frac{1}{2}$ in. both sides, and taken over the same range, is 51 decibels for $4\frac{1}{2}$ in. work and for 9 in. brickwork, 56 decibels.

Other Physical Properties :

In addition to the various physical properties dealt with above, the blocks are fire and corrosion resisting, vermin proof, and do not crack or flake during saw-cutting, chasing or other tooling operations. Nails and screws can be driven or screwed directly into the block.

Crushing Strength :

The crushing stress of solid blocks is 800 lb. per sq. in. The crushing stress at the base of the hollow blocks, on edge, ranges between 221 and 163 lb. per sq. in., according to thickness of blocks. For blocks on flat, the equivalent stress range is between 298 and 156 lb. per sq. in.

Plastering :

Blocks should be thoroughly wetted before plaster is applied.

Reinforcement :

Where increased stability is required, or where partitions are to be built of greater height or length than that given in the table, strips of 18 gauge metal strip or expanded metal mesh should be inserted in every third or fourth course to the full length of the partition in between any supports.

Issued by : Turners Asbestos Cement Co. branch of Turner & Newall Ltd.

Address : Trafford Park, Manchester, 17.

Telephone : TRAfford Park 2181.

Telegrams : ASBESTOS, Manchester.

Branches : London, Birmingham, Glasgow, Newcastle, Bristol, Cardiff.

SOME QUESTIONS ANSWERED THIS WEEK:

★ *WHO makes and supplies Floor Clips?* - Q 748

★ *HOW can I estimate the cost of a war-delayed Housing Scheme?* - - - - - Q 749

★ *WHAT is the velocity of an incendiary bomb striking a roof?* Q 750

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

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

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

Questions should be sent by post to—

THE ARCHITECTS' JOURNAL
45 THE AVENUE, CHEAM, SURREY

—but in cases where an enquirer urgently requires an answer to a simple question, he may save time by telephoning the question to—

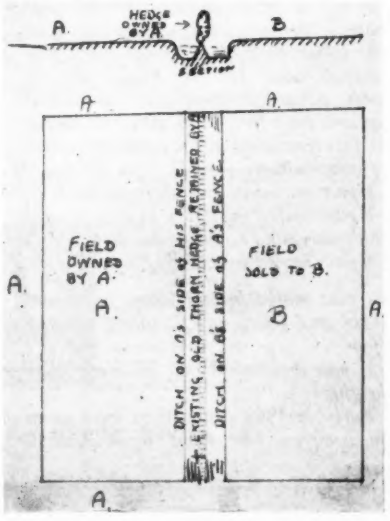
VIGILANT 0087

The reply will come by post.

Q 747

ARCHITECT, YORKSHIRE.—*Would you please give me your views on the following question of* DITCH OWNERSHIP.

A owns an estate, and sold to B a portion of a field. The two portions of land were divided by an existing strong old thorn hedge with a ditch on each side of the hedge. See sketch.



A, in his legal agreement of sale to B, reserved the ownership of the hedge with the privilege of entering B's land once per year to cut the hedge.

Please inform me who owns the ditch on B's side of the hedge.

B has dug up and filled in a length of the ditch on his side of the hedge. Can he legally do this? If not what is the procedure to enforce clearance?

We are of opinion that the ditch on B's side of the hedge belongs to B, and that there is nothing A can do unless his ditch drains into B's ditch, and the drainage of his land is affected by the filling in of B's ditch.

Should the drainage of the land be affected in this way, or should it appear probable that the drainage would be affected if the filling in of the ditch were continued, you would have to take the matter to the Courts and either take an action for damage or ask for an injunction to restrain B from filling in the remainder of the ditch.

Q 748

CONTRACTORS, CHESHIRE. — *Who supplies FLOOR CLIPS for holding down the battens of boarded floors to surface concrete?*

We have in mind the floor clips which incorporate a rubber pad, confined by the metal clip on all sides.

Bulldog floor clips and Acoustic clips are manufactured by the Adamite Co., Ltd., Manfield House, Strand, London, W.C.2. These clips have an insulating material incorporated in them. The Abbey Building Supplies Co., of 47, Victoria Street, London, S.W.1, manufacture Spearpoint floor clips and also supply felt pads for seating flooring battens on the clips, if necessary.

Q 749

ARCHITECT, STAFFORDSHIRE.—*Prior to the war a contractor had commenced 20 houses for a local authority. In the latter part of 1939 the work was stopped, and the 10 houses in the least advanced stage were measured up and paid for. The other 10 houses at this time were in the following stages of construction :—*

1 pair roofed in and all floors laid.

1 pair roofed in, floors laid to ground floor only, and no plumbing done.

1 pair roofed in and no floors laid.

1 pair roofed in and floors to ground floor and joists and strutting to first floor.

1 pair brickwork up to wall plate height.

Early in 1940 instructions were given to complete the above mentioned 10 houses. Owing to difficulties in obtaining materials, bad weather, and the contractor being in financial difficulties, the job was only completed approximately two months ago.

The contractor has now left this district and his books and papers are not available. To arrive at a settlement both sides have agreed to a PERCENTAGE, over and above contract, being charged TO cover EXTRA COST due to the war.

I should be pleased if you could give me your opinion of a fairly reasonable percentage to suggest, bearing in mind the high percentage of joinery work, etc., to be done and its present high cost.

We are in entire ignorance of the specification and have no knowledge, for instance, whether the roofs are boarded and slated in all cases, whether metal windows were built in or only wood frames, whether partitions were erected, whether ground floors were of concrete or wood, and the state of the services, plumbing and sanitary fittings generally. Moreover, we find it difficult to interpret the information you have given us.

If you care to let us have further particulars, both as regards the specification and the state of the work when it was stopped, we will consider the matter again. In the meantime, we suggest the following as a very rough guide :—

1. Increased cost in the case of a house roofed in and with all floors laid, 15 per cent. calculated upon the total cost of the house as originally intended.

2. Increased cost in the case of a house with brickwork built up to roof plate, 25 per cent. calculated as last.

The above percentages only take into consideration the increased cost of labour and materials, and do not cover any special difficulties which may have arisen.

Q 750

ENGINEER, LANCASHIRE.—*In an answer as to the capacity of a roof to withstand penetration by an incendiary bomb, you quoted the VELOCITY OF the BOMB asbeing 350 feet per second.*

I have worked out the actual velocity of a 2 lb. bomb, dropped from a height of 6,000 feet and find that the velocity at the moment of impact is about 608 feet per second, and that its weight, at the moment of impact, would have increased to about 5 tons.

It seems to me that your answer was likely to mislead your correspondent.

The calculations in support of my contentions are as follows :—

Let V = Final velocity, U = Initial velocity, F = Gravity acceleration (32 ft. per sec. per sec.), T = Time in seconds, S = Distance traversed.

Then $V = U + FT = 0 + 32T = 32T.$

and $S = UT + \frac{1}{2}FT^2 = 0 + \frac{1}{2}FT^2 = 16T^2$

thus $6000 = 16T^2$ *or* $T = 19$ *secs. (approx.) to fall*

$V = 32T$ *(from above)*

so $V = 32 \times 19 = 608$ *ft. per sec.*

Equivalent static load or Kinetic Energy

$$= \frac{W \times V^2}{2G} = \frac{2 \times 608 \times 608}{2 \times 32}$$

$= 5$ *Tons (approx.)*

Our reference to the speed of an incendiary was taken from A.R.P. Handbook No. 9 which states that the maximum velocity of a 1 kilo bomb is about 350 ft. per second. Having studied your calculations we cannot agree with your conclusions nor can we see any reason to doubt the figures mentioned in the A.R.P. Handbook referred to.

You have calculated correctly the velocity of a body falling from a height of 6,000 feet in a vacuo, but in practice there is substantial air resistance, particularly in the case of the kilo incendiary bomb, the tail of which is fitted with a retarder ring. On this account the velocity is considerably reduced, and we understand, from the Ministry of Home Security, that experimental evidence indicates that the terminal velocity will be of the order of 350 feet per second.

The determination of the equivalent static load cannot be made without some knowledge of the resilience of the body struck and even then the matter is complicated by the inertia of the body. We understand, from the same source, that the resistance to penetration of various types of structures has been determined experimentally by firing a dummy bomb at the appropriate velocity, and that the data in A.R.P. Handbook No. 9 was based on these experiments.

INFORMATION CENTRE

TRADE NOTES

Fluorescent Lighting

The tubular fluorescent electric discharge lamp is one of the most interesting developments in contemporary lighting practice. Up to date it has been used mainly for industrial lighting, but it is safe to prophesy a very wide extension of its use after the war and the younger generation of architects and architectural students would do well to familiarise themselves with this new form of lighting and, in collaboration with lighting engineers, carefully to investigate the ways in which it might most effectively be applied to post-war lighting.

A fluorescent factory lighting installation by Edison Swan Electric Co.

In the factory illustrated at the top of this page, Royal Ediswan 80-watt fluorescent discharge tubes in specially designed trough reflectors provide the whole of the illumination, and it is claimed that perfect daylight conditions are obtained.

Fluorescent lighting gives a glare-free light source which has an initial efficiency some two-and-a-half times that of a gas-filled filament lamp yet radiates only about one-quarter of the heat.

The lamp consists of a glass tube approximately 1½ in. in diameter, fitted at each end with a standard B.C. cap ; the overall length is 5 ft. The interior surface of the tube is coated with a film of fluorescent medium, the function of which is to convert the short wave (invisible) U.V. radiation produced by the discharge tube into a visible radiation of longer wave length. Enclosed within each end of the tube are the electrodes between which the electric discharge takes place ; the tube has a low pressure filling of inert gas for the purpose of initiating the discharge and also a small quantity of mercury.

The Edison Swan Electric Company, who were contractors for the factory installation illustrated, will be glad to supply full particulars ; they also ask us to announce that they have recently issued a catalogue illustrating their latest range of standard industrial lighting units. Application for copies should be addressed to the Company, at 155 Charing Cross Road, London, W.C.2. A.B.

THE BUILDINGS ILLUSTRATED

EXTENSIONS TO HOUSE, BOCKLEY MOOR, DOCKRAY, CUMBERLAND (pages 9-12). Architects : J. L. Martin and S. Speight. The general contractors were J. and F. Hebson. Among the sub-contractors and suppliers were the following : J. Millburn & Sons (joinery, woodwork) ; Taylor Pearse & Co. Ltd. (door and window furniture) ; Robert Heyworth Ltd. (plumbing, heating) ; Shanks & Co. Ltd. (sanitary fittings) ; David Thompson Ltd. (lighting, electrical installation) ; Troughton & Young Ltd. (electric light fittings) ; Ideal Boilers & Radiators Ltd. (boilers) ; Crittall Manfg. Co. Ltd. (metal windows) ; R. Barker Ltd. (painting and decorating) ; W. R. Todd Ltd. (paint), Edinburgh Weavers Ltd., Morton Sundour Fabrics Ltd. (fabrics) ; Aga Heat Ltd. (kitchen cooker).