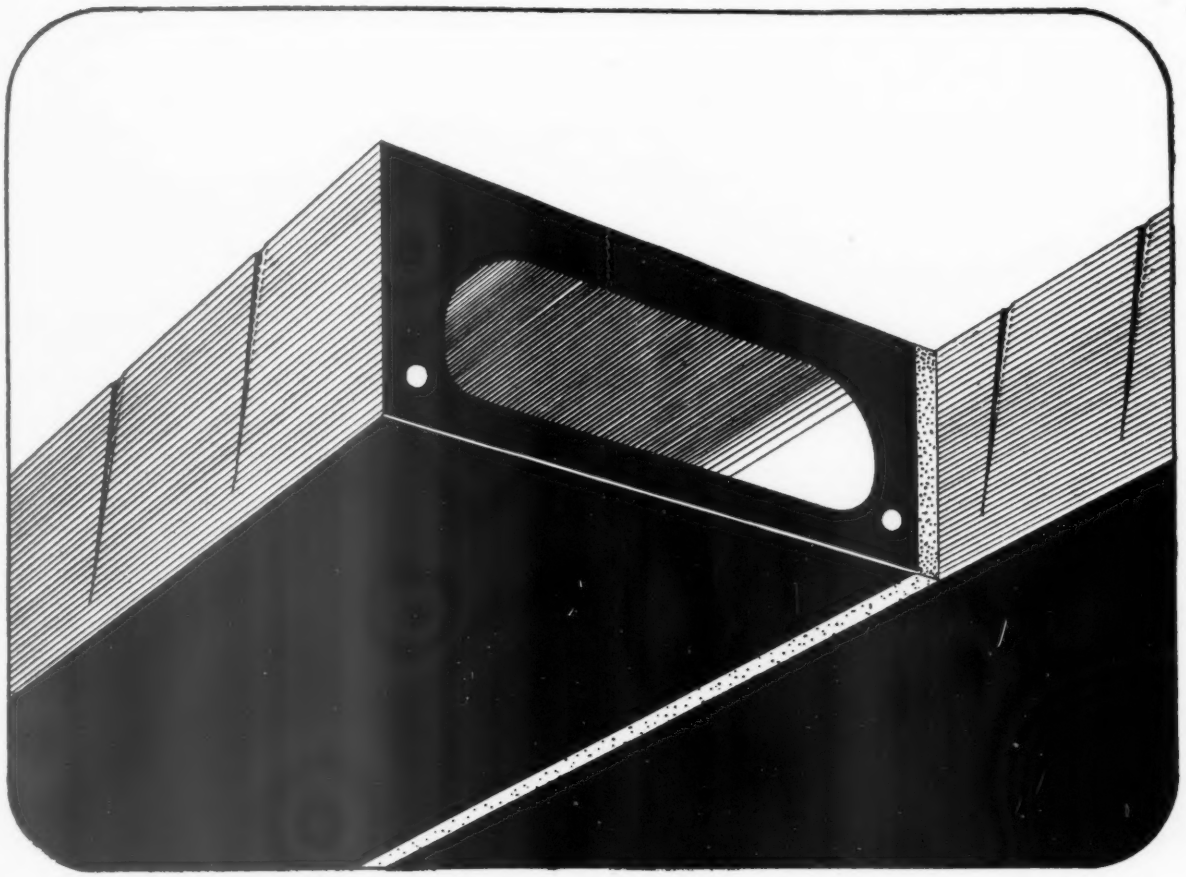

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The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

THURSDAY, APRIL 17, 1941. NUMBER 2412: VOLUME 93

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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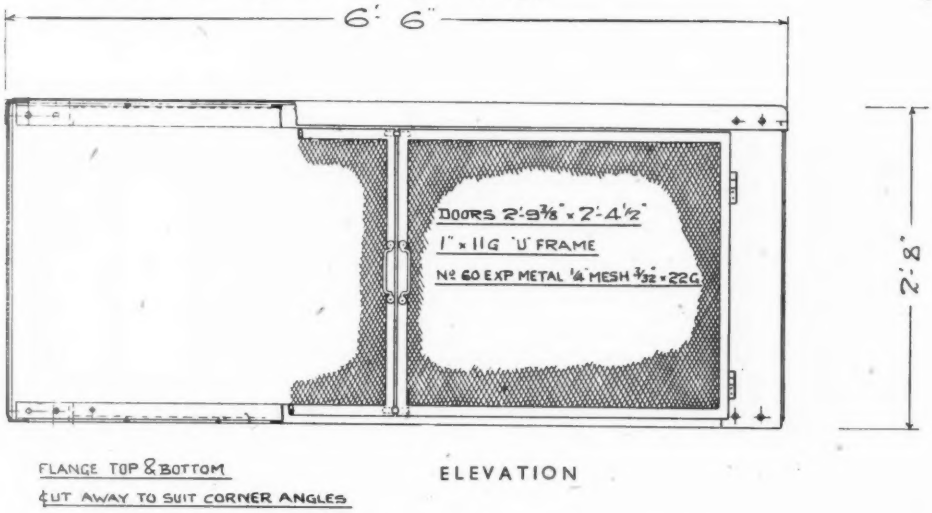
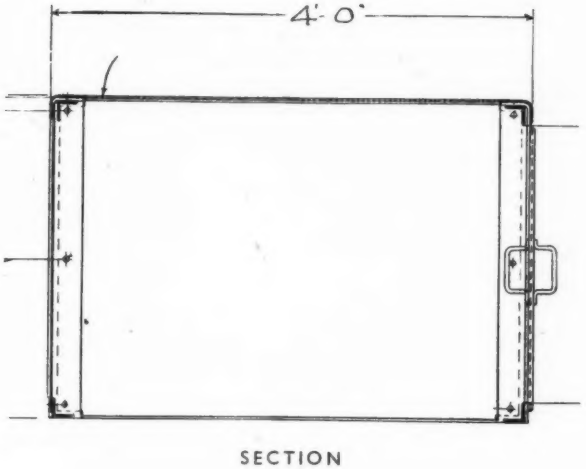
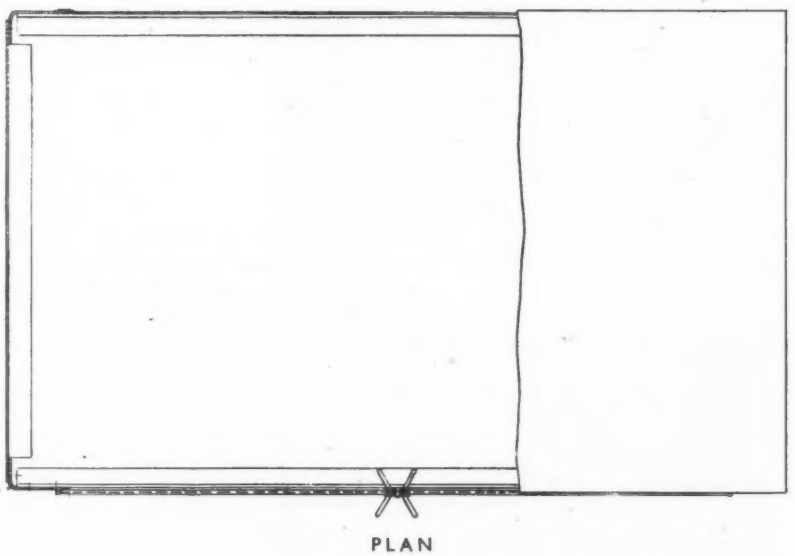






DESIGN FOR A TABLE SHELTER

During the weeks since it was first shown to the public a considerable amount of adverse criticism has been made of the Government's new indoor table shelter. Much of this criticism has concerned aspects of the shelter which can hardly be put to final proof —for instance, whether or not it is a "death trap." The JOURNAL *is therefore very glad to publish a design for a similar shelter prepared by an engineer after a very careful examination of the Government's shelter, to see whether certain apparent disadvantages of that shelter could be simply eliminated.*

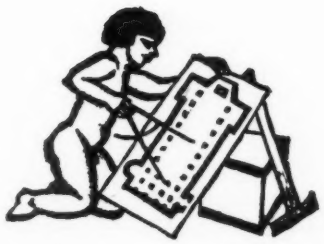
The JOURNAL *considers the following points of this improved shelter to be of some interest.*

1. *The new shelter measures 6 ft. 6 ins. by 4 ft. on plan as does the Government shelter, but its height is increased to 2 ft. 8 ins. Reasons: Bottom of Government shelter is of hoops forming 8 in. squares. To cover these large holes a 4 in. flock mattress would be needed—leaving only 1 ft. 8 in. headroom at entrance. New shelter has 1½ in. mesh expanded metal for bottom, 2 ins. from floor.*
2. *New shelter has three solid sides, long side of 16-gauge metal and ends ⅛ in. steel plate, giving greater stiffness. Doors of new shelter are side hung, with ¼ in. mesh expanded metal. Sides of Government shelter are top hung, making it difficult to get in and out in a hurry. Doors of new shelter can be lifted off to allow one side to be used as table with knee space, and base makes reasonable foot-rest: 8 by 8 in. holes in government shelter base makes it a treacherous foot-rest.*
3. *It is suggested that solid side of new shelter should be put against wall. If this is not convenient 8 by 1 in. wood boards can be fitted as extension pieces to table top, thus giving knee space all round.*
4. *Weight of new shelter is 5 cwt. 9 lb. —less than official shelter—and its erection involves the fitting of 35 bolts against over 200 for the Government shelter.*

PROBLEMS FOR RECONSTRUCTION

These three examples of buildings damaged by bombs give an indication of the difficulties of post-war reconstruction. In the aggregate a large number of warehouses, many of them of considerable architectural merit and constructional interest, have been destroyed. Whether such buildings should be rebuilt where they stood or should be grouped together will be a question of great consequence.

The photographs on the left are typical of the houses of industrial districts, and of the damage so far done to them. The houses were rarely unfit for human habitation before being bombed and only a minute proportion has been made unfit by the Luftwaffe. Those in charge of reconstruction may therefore find that they have either to demolish large numbers of still sanitary buildings or be unable to carry out any redevelopment for lack of room.



SMALL HOUSES AND ARCHITECTS: 1

IN the past few weeks the JOURNAL has been rebuked by a number of distinguished architects for statements contained in its leading article of March 6, and particularly for the following passage:

> In 1919 architects failed to realize that the small house is the most fundamental of all architectural problems, and that if architects did not design that house and show constant interest in its improvement the standard of design of all other buildings would be lowered. By 1939 most architects had begun to see the consequences of that failure . . . that the profession's neglect of small houses was coming home to roost in . . . (small house tenants') ignorance of architecture and distrust of architects.

The JOURNAL's correspondents have read this as meaning that architects did nothing about the problem of rehousing after the last war, and they have pointed out that the R.I.B.A. held regional competitions for several classes of houses, examined over 1,700 designs and published the results in book form.

This rebuttal seems to construe too narrowly the accusation it is intended to meet. In the JOURNAL's view the profession's failure concerning rehousing after the last war was twofold. It did not realize that small house construction must be so big and so fundamental a part of post-war building that it was essential that architects should control it *on any terms*: not merely a programme that it would be nice for architects to control if pre-war professional etiquette, customs and method of remuneration could be simultaneously retained. Secondly, architects did not comprehend that a programme of building half a million almost identical small houses within a very short period raised entirely NEW building problems. The satisfactory solution of these problems by a highly industrialized country whose building industry was disorganized and weak in numbers required new methods of approach, design, construction and organization. It was on these hard, dry matters—construction, equipment, standardization, costing and organization of production—that success or failure depended. No one, at that time, had had experience of such large-scale repetitive building; no one, no organization, obviously had the right to handle it. But architects were nearest to being the right men and could have made themselves complete unchallenged experts with the help of some engineers, costing advisers and contractors who had handled munition workers' housing.

Architects did not do so. They shrank from the dry facts of housing. They produced layouts, plans and perspectives, many good and many charming: but it is clear that their attitude towards construction, costing and production was that of men designing twelve cottages for a wealthy landowner in early 1914.

The JOURNAL makes no pretence to have been wiser than anyone else after the last war. In common with the vast majority of architects it completely failed to see that, while the 1919 housing programme demanded new building methods and new organization, architects were designing, were living, in the world of 1914. And, like architects, the JOURNAL was furious when in January, 1922, Sir Charles Ruthen, Director-General of Housing of the Ministry of Health and President of the Society of Architects, threw the profession's mistakes in its face in no measured terms.

Even nineteen years afterwards the JOURNAL has trepidation in mentioning the *affaire* Ruthen.* It does so because it is certain that after this war the rehousing problem will be very similar to that of 1919; because it is certain that architects will then have their last chance to recapture their proper influence on housing design; and because it is sure that if architects do not then see that production, construction and standardization are the central factors of small housing—and that all professional customs and preferences must if necessary give way to them—they may as well give up the battle on all fronts in advance. Therefore, before considering how the profession might prepare itself for housing after this war, the JOURNAL quotes Sir Charles Ruthen on architects' failures in rehousing after the last:

> Circumstances following rapidly one upon another, during the years immediately following the Armistice, have caused one to wonder whether the architect of the twentieth century is much if anything ahead of his brother of a century ago. . . . Some (of the public), but comparatively few, understand the architect and value his work. Many others look upon the architect as a kind of necessary and expensive evil, mainly useful in connection with building matters, in avoiding difficulties in relation to regulations and by-laws; but generally a costly luxury to be avoided whenever possible. . . .
>
> Do the representative bodies of the architectural profession, today, stand for the architecture necessary for the social and industrial well-being of the people, or do they stand for that civil architecture which is the art of designing such edifices as display symmetrical disposition and fitting proportion of their parts, and are adorned by pillars, entablatures, arches, and other contrivances for their embellishment? Is this in the true sense the architecture of the architects of today, and, if so, is the architect giving to the State in these essentially commercial days the services which the State has a right to demand? In other words, is the architect adapting his art to the needs and requirements of the present time? The difficulties which the State had to face immediately after the conclusion, and mainly as a result, of the world-war, gave the architect and the profession an opportunity of a century. A torrential flow of almost entirely new work was released as the direct outcome of the cessation of hostilities.
>
> The question I have asked myself over and over again is: Did the architect rise to the occasion, or did he creep out from his seclusion and practise his art with a benumbed and slow-moving mentality—taking, so far as his opportunity permitted, full advantage of the difficulties and trouble of the State—first to practise his art without consideration of the consequences, and secondly to earn fees, large ones if possible, without a thought of his master, the State, and without a thought of the effect of his actions upon the future of the profession?
>
> Did he assist to any appreciable degree those who had preached for years the enormous arrears in housing for the people, or did he forget his responsibilities to the State, if indeed he ever fully appreciated them, and his duty to architecture, and allow his pencil to run wild in the dream of the artistic home, and did he forget that the bankruptcy of the State would be the inevitable result? All these things require serious and concentrated study. The architect must face the prime responsibility of the financial disaster of the great State Housing Scheme.
>
> The architect, as the fountain-head of this national effort, should have practised his art with a very keen and critical eye upon the serious financial side of the problem, and it is just at this point that he missed his opportunity. The danger was not even seen; the architect, I believe, would largely argue that he was not called upon to view this side; that is where the profession went wrong.
>
> Two hundred millions capital loss will be the price to be paid for this great effort to correct the errors of generations.

* A tremendous uproar followed Sir Charles Ruthen's speech. The lay press put architects in headlines as the men who wrecked housing. The JOURNAL said he was trying to find a scapegoat. His statements were repudiated at a special meeting of Society of Architects (of which he was President). R.I.B.A., of which he was a Fellow, asked him to withdraw his charges or substantiate them in detail. The storm went on for weeks and muttered for months.

The Architects' Journal
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NOTES & TOPICS

SKETCHES OF THE FUTURE

AT 12 noon, sharp, on April 8, Lord Reith took his seat at a longish table in his Ministry. He glanced to right and left, picked up a piece of paper, pushed it away and began.

"With one exception," he said, "this is my first Press conference. I hope I do not say anything wrong. . . . Not that I am not very pleased to see you."

*

My own experience of Press conferences being very similar, I felt we had something in common straight off. And in the event, I would rather have missed every gathering I have ever attended than Lord Reith's second meeting with the world's Press.

*

We learnt that reconstruction had but a line or two in the brief with which Lord Reith was first entrusted; but that, when the brief was published, it was that line or two which caught all the headlines. Public interest in reconstruction (rechristened "Physical Planning") was enormous, and that side of the Ministry's activities bulked larger and larger.

So a small body of men were set to work on it. "Here," said Lord Reith, "are the representatives of the experts —Mr. Vincent, Professor Holford and Mr. John Dower."*

*

Lord Reith went on to say that compensation and betterment were the problems which must be solved first of all, if any measurable amount of good planning was to take place; and legislation to clear the field would follow the report of the Uthwatt Committee. Secondly, "test plans" were being prepared by blitzed cities: these plans would not lay down what was definitely going to happen so much as show clearly what the big obstacles were to comprehensive redevelopment.

* Mr. John Dower was plainly Mr. Chalton Bradshaw, who it was explained later had taken Mr. Dower's place at the meeting. The representative experts were therefore Mr. H. G. Vincent, C.B.E., C.V.O., private secretary to Baldwin and Macdonald, Professor W. G. Holford, M.A., A.R.I.B.A. (Rome Scholar: Leverhulme Professor of Town Planning), Mr. John Dower, M.A., F.R.I.B.A., and Mr. H. Chalton Bradshaw, F.R.I.B.A., (Rome Scholar).

It was made quite clear that Lord Reith had been told to assume, in his investigations, that a Central Planning Authority with adequate powers would be created to control post-war redevelopment. He was not told to assume that his Ministry would be that authority—still less that it was his job to carve off other Ministries such planning powers as they now have.

*

But it seemed clear to me that Lord Reith's small band of experts are working on more assumptions than that of a Central Planning Authority alone. It seemed to me that they are assuming that a Central Authority will design the mechanism for the comprehensive guidance of redevelopment; on a brief from the Government's economic and industrial advisers it will then lay down the main physical framework of redevelopment; and that thereafter Regional Planning Authorities will work out local applications. A large reshuffle of Local Government powers seems therefore one of the prerequisites of good Physical Planning.

*

I hope they are. I have said before that it will be all or nothing after this war. A Central Planning Authority, betterment and Local Government reform must all be solved or executed together or all will fail together. It is wonderfully encouraging that Lord Reith seems to be shirking no difficulty. And it is encouraging to architects that of the four representatives of his band of experts named by Lord Reith, three should be architects.

THE MEASURED DRAWINGS OF SPOOKERY NOOK

According to an old Cuban recipe, if you want to raise the dead you go into a churchyard at midnight and fire a gun. One or two other details of ritual have to be gone through: burning sulphur I think, but I've forgotten. In any case, if anyone wants to do it in Britain now is the time. It would excite no remark.

*

All this is *à propos* of Borley Rectory. Borley is a little village about fifteen miles from Bury St. Edmunds in the diocese of Chelmsford. The Rectory is opposite a twelfth-century church, was built in 1863 on the site of at least two, and probably more, earlier buildings. It is L-shaped, with ancillary buildings (*circa* 1875) almost completing the rectangle. It is isolated, by no means an architectural gem, . . . but, things *happen* there.

The place is crawling with *poltergeister*, with raps, knocks and bumps. A spectral nun walks the garden, a phantom coach travels the lanes, missiles of every description hurtle from room to room and floor to floor; there are thumps and stamps; the house is practically a self-contained blitz. Recently an oil lamp was overturned and the Rectory was partly burned out, and has since been unoccupied.

*

This, however, has not put an end to the liveliness, and finally Mr. Harry Price took the Rectory in hand. His researches cover several tenancies including his own—a period of ten years altogether; and the results of his psychical investigations (and those of over one hundred sceptical, hard-boiled colleagues) are now available in book form.* Mr. Price is no novice at this game: his apparatus includes infra-red cameras, thermometers *and* measuring tapes.

* *The Most Haunted House in England.* By Harry Price. Longmans, Green and Co. Price 10s. 6d. net.

This is where we come in. The plans which are included in the book were made by a Consulting Engineer and a Lieut.-Colonel attached to the R.A.O.C. Stolid, precise men without a doubt. But, one notes with surprise, all internal and external walls are the same thickness. Can this really be so ?

*

A study of photographs taken before and after the fire show clearly that it is not. So here is the knowing face of an ERROR beginning to poke through the glittering palisade of science. And errors in the survey of a rambling house are cumulative and may lead to a final picture far removed from truth—as most of us have noticed at one time or another.

*

From then on the architect reads this fascinating book with increasing unease; and a special professional chill touches him when he notices that the cellars below the Rectory do not conform with the Rectory plan at all, but with the brick foundations of a much earlier building. Is it possible that a *poltergeist* twitched the measuring tape or wrote down new measurements in the Lieut.-Colonel's note-book ?

PERIOD PIECE

I assisted a colleague the other day to prepare a schedule of dilapidations for a house in Half Moon Street—that traditional stronghold of ex-army bachelors and their ex-army batmen.

*

True to form, the business of this house was the letting of chambers for gentlemen. Externally, it was a typical building of its period, thin, high and grimy, with a festoon of pipes draped untidily over the porch. Within, it cannot have changed at all for fifty years. The front door opened not only on the darkness of the hall, but also on an age almost as dark in memory—an age of Norfolk jackets and cheroots, of hansom cabs and watch chains, of Gaiety girls, moustaches and terra-cotta façades. Surely NO woman, no lady anyway, had ever entered here ?

*

The staircase, Turkey-carpeted, wound up from the lincrusta-papered hall, stopping on the half-landings to provide parking for potted palms and access to the little lavatories, whose walls were yellow-varnished and whose willow-pattern fittings were snugly encased in mahogany.

*

The rooms, though decreasing in size and splendour from floor to floor, were all similar in furnishing and *décor*. In each of them stood the lacquered brass bedstead, the heavy wardrobe, and chest of drawers and the marble-topped washstand with its chipped basin and ewer. Before every window hung the tassel of a blind which lay rolled behind the ball-fringed velvet curtains. Every brass and moulded switch controlled a light in an identically frosted and fly-blown shade. These, of course, were the fittings provided by the management, but the personal belongings of the occupants—absent presumably at their clubs—were equally similar to each other, and just as impersonal in character.

*

Behind every door stood a row of highly polished brown shoes. Ivory-backed hair brushes, heavily initialled, lay on every chest of drawers, some yellow and moulting, but still proud of their Jermyn Street origin. In every room the smell of tobacco, hairwash, and boot-polish hung like a miasma.

The pictures, of course, varied. Some were of cattle in a Highland mist, some of kittens playing with a ball of wool, one even depicted a pierrot playing a banjo while seated on the lower end of a crescent moon. These slight differences in character were repeated sometimes in the belongings of the various occupants. One had by his bedside a bottle of whisky, another a bunch of badges admitting the wearer to racecourse enclosures. A third, a photograph in a heart-shaped frame of a young man signed " Bobby "—evidently a favourite nephew. The mantelpiece of one bore such relics of past experiences as a regimental crest, the sports programme from an almost forgotten cruise, and a matchbook bearing the name of a famous snob hotel. That of another—more daring—bore the portrait of a girl, drawn in coloured pencils by an artist in a night-club and dated 1924. Over the bed in one suite was thrown a khaki coat and a Service gas-mask.

*

Another suite was evidently occupied by a man more in touch than his fellows with the humanities of life. In his bookcase there was certainly a guide to the turf, but alongside stood *The Story of San Michele* and a book by J. B. Priestley, while over the fireplace hung a reproduction of a Russell Flint water-colour.

*

We amused ourselves by trying to reconstruct from these apartments the appearance of their owners. Gradually they combined into a single, composite, but clearly outlined personality—the epitome of Half Moon Street.

*

A bachelor certainly, grey-haired and rubicund as well—look at the whisky-bottle and the mellow patina of those polished shoes. Old-fashioned in dress undoubtedly—those five-button coats with slits at the back and raking pockets were the thing before the last war; fond of good living, good wine, good horses, and a decent club though impervious to the appalling discomfort of his room; a reader of *The Times*, *The Field*, and because he had never heard of its more sophisticated modern rivals, *La Vie Parisienne* ; a carrier of sticks and a wearer of carnations; a defender of his class, and a fierce opponent of any monkeying with such traditions as governed the breeding of cattle or the clothing of gentlemen: a trifle indignant perhaps, though not in actual want; kindly but stupid, courageous but obstinate, honest but intolerant.

*

So we pictured him, drying his cut-throat as he hummed a pre-war song-hit, scenting his yellowing moustache with bay-rum, or unfolding his morning paper above a plate of kidneys and bacon.

*

Later we descended to the kitchen. As we halted by an early model of a water-softener called The Pasteur, we asked of the housekeeper if we were accurate in our imaginary portrait. Only partly so. A few of her gentlemen were the nice old-fashioned sort, but since the war they had all gone. If it wasn't for the War Office, she would have had to close down.

*

" The War Office ?" we asked.

*

" Yes," she replied. They had arranged for her to billet a detachment of A.T.S. women for a few weeks. " Nice girls," she added, " but very particular about the way their shoes are cleaned."

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ASTRAGAL

NEWS

POST-WAR RECONSTRUCTION

Preparations for Guidance of Physical Replanning

On April 8, Lord Reith, Minister of Works and Buildings, discussed with the Press the general aims and immediate future work of that section of his Ministry which is examining the best means of guiding post-war land utilization. Lord Reith was at pains to emphasize that, in order to make clear one or two points on which his Ministry was definitely working, he had to mention many other and many great questions; and that it must not be assumed that because he mentioned a problem he had any mandate to solve it.

The main points raised during the discussion and the solutions for some of them which will probably be put before the House of Commons are as follows:

When the Ministry was first appointed the Minister's brief contained little about post-war reconstruction. But this little figured in headlines. The public was obviously greatly interested in reconstruction, and believed that preparations for doing things better after war was a part of and not a thing apart from the present national effort. Thus reconstruction began to bulk larger and larger in the Ministry's work.

The Ministry's advisers on the general plan of guiding land utilization after the war said that unless problems of compensation and betterment were solved all such guidance would fail. Mr. Justice Uthwatt's committee was therefore set up, and when its final report had been received legislation to clear this part of the field would be prepared.

Simultaneously, typical provincial cities which had suffered severely in the blitz were asked to prepare " bold and comprehensisive " plans for redevelopment. Among these cities were Coventry, Birmingham and Bristol. It was not expected that such cities could produce, now, perfect final plans. What it was hoped they could do was to find out, definitely, what were the biggest obstacles to properly guided redevelopment.

From the test surveys and test plans it should be possible to prepare, in conjunction with the findings of the Uthwatt Committee, legislation to remove obstacles.

The L.C.C. and City of London were now beginning to prepare a similar survey of Greater London planning requirements, from which it was hoped that the best form for a Greater London Planning Authority would emerge.

The results of these and other preliminary investigations would be examined by a small group of planning experts, among whom were Professor Holford, Mr. Vincent and Mr. John Dower. The Consultative Panel would meet as a body on April 23, but would not often so meet afterwards. It would be subdivided in panels of persons with special knowledge of a particular subject, and these panels would be asked for their views as needed.

In answer to questions, Lord Reith said he had no knowledge whether his Ministry would be given any statutory authority soon or after the war, either as Ministry of Planning or in any other way. He had been instructed to investigate planning problems and to assume in so doing that a central planning authority would be established after the war. That did not mean that the Ministry of Works and Buildings was to be that authority. The Ministries interested in planning and land utilization were not merely those of Health and Transport: Agriculture was a Ministry which was deeply interested in this matter.

Further questions and answers gave the impression that the immediate tasks of the planning section of the Ministry of Building was to investigate obstacles and keep things moving; ultimate aims did not at present go further than making recommendations of a yet undecided kind at an opportune moment.

Regionalism was, the Minister implied, a subject which came under Mr. Greenwood, for only a Cabinet Committee of appropriate strength could decide the international, economic and strategic policies which must control the location of industry, and thus the best form of any new regional areas. But Lord Reith implied that his Ministry was assuming that regional planning authorities would in fact be set up after the war.

Answers to further questions made it seem probable that the Ministry is working in the belief that post-war land utilization of all forms will be guided in the following manner. A Cabinet Committee will lay down national policy in various fields of foreign trade, agriculture, light and heavy industry, strategy, and so on. The central planning authority will then decide the larger measures needed to translate these policies into terms of land utilization, and regional planning authorities will carry them out in detail. The central planning authority will not itself carry out actual physical reconstruction of any kind. Physical reconstruction will be the job of regions and their " drawing-board " experts.

CONSULTANTS' PANEL ON PHYSICAL PLANNING

On April 8 it was announced that the following persons had been appointed by the Minister of Works and Buildings to advise him on the physical planning aspects of post-war reconstruction.

L. Patrick Abercrombie, F.R.I.B.A. :	Professor of Town Planning, London University. Chairman of Council for the Preservation of Rural England. Member of Royal Commission on Distribution of Industrial Population.
W. H. Ansell, M.C., P.R.I.B.A. :	President of the Royal Institute of British Architects.
Lord Balfour of Burleigh :	Chairman of the 1940 Council.
Sir Montague Barlow, Bt., K.B.E., LL.D. :	Chairman of the Royal Commission on Industrial Population.
The Rt. Hon. Sir Walter Citrine K.B.E. :	General Secretary, Trades Union Congress.
Sir George Etherton, K.B.E. :	Clerk of the Lancashire County Council. Chairman of the Society of Clerks of County Councils.
W. H. Gaunt, C.B.E. :	Member of the Hertfordshire County Council, Advisory Council and Town Planning Institute.
T. W. Haward :	Past President of the Land Agents' Society. Member of the Town Planning Institute.
Mrs. Lionel Hitchens :	Member of the Royal Commission on Distribution of Industrial Population.
F. R. Hiorns, F.R.I.B.A. :	Chief Architect to the London County Council.
L. H. Keay, O.B.E., F.R.I.B.A. :	City Architect and Director of Housing, Liverpool.
T. Alwyn, J.P., F.R.I.B.A. :	Past President Town Planning Institute. Member of Executive Committee of the Council for the Preservation of Rural Wales.
Sir Miles Mitchell, J.P. :	Alderman, City of Manchester.
Richard L. Moon :	Clerk of the Gloucestershire County Council. Member of the Town Planning Institute.
F. J. Osborn :	Hon. Secretary to the Garden Cities and Town Planning Association.
D. A. Radley, LL.B. :	Town Clerk of Leeds. President of the Town Planning Institute.
L. Dudley Stamp, D.Sc. :	Director of the Land Utilization Survey. Professor of Economic Geography, London School of Economics.
G. W. Thomson :	President of the National Federation of Professional Workers. Member of the General Council, T.U.C., and of Royal Commission on Distribution of Industrial Population.
Sir Cecil M. Weir, K.B.E., M.C. :	President of the Glasgow Chamber of Commerce. Member of the Scottish Development Council.
Sir Wm. E. Whyte, O.B.E. :	Hon. Chairman Town Planning Institute, Scottish Branch. Member of the Royal Commission on Distribution of Industrial Population. Chairman of the Scottish Advisory Committee Housing Act, 1931.
T. G. Wilson :	Director of the Highland and Islands Agricultural Society. Member of the Board of Governors, West of Scotland Agricultural College. Chairman of the Scottish Milk Marketing Board.

BUILDING LICENCES

The Ministry of Works and Buildings desires to call attention to an important amendment in Regulation 56A of the Defence (General) Regulations which concerns licences for building operations. The amendment came into force on April 14, and the chief changes may be summarized as follows:

(*a*) On and after April 14, no building operation estimated to cost more than £100 may be commenced except by licence issued by the Ministry of Works and Buildings or, in the case of local authorities and public utilities, by an authorization issued by the appropriate Government Department. Under the old regulations works under £500 were exempt from licence or authorization; under the new order only works under £100 are exempt. Works carried out by, or at the expense (in whole or in part) of a Government Department, or by a local authority under the Civil Defence Acts, 1937 and 1939, are, however, excluded from the operation of the Order, since they are adequately controlled through the Departments concerned.

(*b*) In the event of more than one building operation to the same building being undertaken within any period of 12 months, a licence or authorization is obligatory where the aggregate cost of these operations will exceed £100. In estimating the amount to be spent on the operation, the cost of decorative work and also of works to provide water, light, heating, and other services, must be included.

ARCHITECTURAL RECORDS

Many architects have been forced to move their offices, and in doing so have been compelled to clear out accumulations of old drawings. The accumulations in many cases contain drawings of considerable historical value and surveys which may be needed for record purposes or to help in reconstruction.

All members who make such clearances are asked to notify the R.I.B.A. Librarian if they think that there may be drawings of interest in their scrap lots. As far as possible the library will arrange for inspection or, if informed of the kinds of drawings and the type of practice which produced them, will be able to give general advice as to the records which may be worth preservation.

The following request from Oxford University is an example of the need which such care in the disposal of drawings may help to meet:

The University of Oxford is anxious to obtain early information regarding the existence and whereabouts of any measured drawings or plans of the principal University buildings in order to supplement the information already in its possession. The buildings in question are the Bodleian Library, Radcliffe Camera, Divinity School and Convocation House, The Sheldonian Theatre, Clarendon Building, Old Ashmolean Building, Ashmolean and Taylorian Museums, St. Mary's Church and the Examination Schools. The Curators of the University Chest would be grateful if anyone in possession of such drawings would communicate with the Secretary of the University Chest.

LETTERS

COURTENAY M. CRICKMER, F.R.I.B.A.

J. ROGER PRESTON AND PARTNERS

Architects and Reconstruction

SIR,—I have recently read the article published in your JOURNAL of March 6, and in order to correct possible misinterpretation, I should like to point out that the subject of the small house, under the term "Housing," was fully studied and worked on by architects after the last war.

At that time the Local Government Board invited the assistance of the Royal Institute of British Architects in this matter. The latter secured the co-operation of various provincial architectural societies, with the result that a great series of regional competitions for small house designs was organized, and the results were published in a volume called "Cottage Designs," where the whole matter was thoroughly dealt with and numerous designs for various types of small houses were shown.

Largely as a result of the interest taken in these competitions, local authorities held other competitions in their own areas for their housing schemes.

The *Daily Mail* also organized a series of architect's competitions for workers' houses in 1919, and the results were published in volumes dealing with different areas, and where the particulars can be seen in detail. In the same year the *Daily Mail* also organized the Labour-Saving House competition for rather larger houses.

To my mind this activity shows that after the last war, far from being apathetic, architects were very fully alive to the importance of the small house from the "housing" point of view.

On the other hand, the small house which is so frequently acquired by members of the public through building societies, and which forms the basis of the building estates all over the country, has not claimed the attention of architects to any considerable extent. These estates are nearly all speculative, and although some types may have been designed by an architect, it cannot be said that the profession generally has had much opportunity to participate in this class of building.

COURTENAY M. CRICKMER

London

Services in Building

SIR,—We were very interested in the proposals put forward by "Astragal" in your issue of April 3 regarding the suggested panel to advise on reconstruction after the war, and this, in conjunction with the letter from Messrs. Cochran and Co. in the same issue, leads us to write to you.

We feel that the large amount of rebuilding which will be necessary in certain areas should enable broad views to be taken, and allow special consideration to be given to certain aspects of building, and particularly the special services of heating and hot-water supply which in normal circumstances cannot be dealt with in a comprehensive manner.

We would go further than your correspondents and suggest that island blocks of buildings should be grouped into units, each unit being served from a centralized boiler-house. By so doing, economies of space will result and particularly economies of fuel; deliveries of fuel would be centralized, with less interference with traffic; and in these larger plants special attention could be paid to the smoke problem with consequent reduction of air pollution.

We therefore feel that at the very least an expert in this branch of building services should be included on the panel so that this aspect of improved planning will receive the attention which it merits. Even better is the suggestion that an advisory body should be formed to give consideration to the whole question of these and allied services.

J. ROGER PRESTON AND PARTNERS

London

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A week or two ago we published an appreciation by Mr. Robert Donat of Uncle Charles. *Here Mr. John Betjeman contributes another of—*

C. F. A. VOYSEY

By John Betjeman

I AM aware that there are others better qualified than I, to write personal notes on Mr. Voysey—brethren of the Art Worker's Guild of which he was once Master; those who will remember him in his heyday, Sir Edwin Lutyens, Arthur Sanderson, Lady Lovelace, H. G. Wells, the Hornimans, who either as fellow architects or patrons of architecture took a practical interest in his work; those who worked with him during the last war; friends in the Arts Club in Dover Street; his family and relations. I only knew him in the last ten years of his life; but since my knowledge of him is tinged with hero-worship I know that those who knew him longer and, probably, more intimately, will forgive my intrusion, for Mr. Voysey was a hero.

Ten years ago we were busy trying to find the origins of what was known as the modern style. Some said Germany, others France, others Glasgow. Back numbers of *The Studio* were much in demand, and who, glancing over that cabinet of late nineteenth- and early twentieth-century art and architecture,

could fail to be impressed by the simple and solid houses, practical interiors, severe and chaste furniture, lively wall papers and chintzes that appeared above the name of C. F. A. Voysey? I shall never forget the day when a letter contesting some provoking remark in the previous month's number arrived at the *Architectural Review* office.* It was unlike any other correspondence that morning. The envelope was bright blue, the ink bluer still, and the handwriting, large, bold and flowing, was so regular that it might well have served for type. The signature was C. F. Annesley Voysey. One always expected the great man of the early numbers of *The Studio* to be dead or out of reach. But this letter came from an address just the other side of St. James's Park. The opportunity was not to be missed, and I wrote a reply practically asking myself to be invited to see Mr. Voysey. A less detached, a more embittered man of that generation would certainly have refused to see me, but my letter resulted in a first acceptance of hospitality from one who was to prove the most hospitable man I met. I confess that I was expecting to see an angry, rather Morris-y person who had long ceased to take an interest in this world, a dreamy man with a hint of Bedford Park about him. Instead, I found a neat, precise, practical person well aware of what was going on and with clear uncompromising standards of judgment.

Mr. Voysey reflected his beliefs in his appearance, his surroundings, his reading, his conversation and his way of life.

He was a little below middle height, slight and with an ascetic clean-shaven countenance. He bore a facial resemblance to John Wesley, to whom he was related. His dress was of his own design. He wore dark suits with no lapels to the coat, blue shirts and collars and a blue tie through a gold ring. He was always scrupulously neat and clean, and his appearance never altered for all the time I knew him. He took snuff, and smoked clay pipes that were made at a curious old pipe-hospital in Soho, from clays dug up from the foundations of old London. He said they gave the proper flavour to tobacco.

In his little flat everything had its place, so that the whole effect was of a ship's cabin made of seasoned oak. I remember how on a later visit I overcame his modesty enough to let him show me his drawings. In a short time we had covered the room with Imperial sheets of hot-pressed Whatman, on which he always drew with a 3H pencil; in fact, from that little room there emerged enough to fill the whole of Batsford's Gallery when the generosity and co-operation of that firm made it possible for the Architectural Press and Batsford's to hold the first Voysey Exhibition in 1933. Yet the flat itself never seemed crowded.

* Mr. Betjeman was then Assistant Editor of the *Architectural Review*.

Regularly, Mr. Voysey would take out books from the London Library. They were generally philosophical works. He was not a reader of fiction. But his favourite reading was the works of his own father, Rev. Charles Voysey (1828-1912), who was ejected from the Church of England and founded the Theistic Church in Swallow Street. His father had not believed in hell fire, and was so much a Latitudinarian as to be what is now termed a "Modernist." The son's beliefs are expressed in his book *Individuality*, and are based on a sure faith of individual survival, the beneficence of the Almighty and the dignity of man.

Mr. Voysey's *bête noir* was materialism. He owed far more to his father for the style of his architecture than to Morris, as has been supposed, for he would say, "Morris is too much of an artist for me." He had a most vigorous contempt, which he did not fear to express, for the bad money-making architect. He was not influenced by any school of architects, but by his father's school of theology, by a sort of liberal puritanism which demanded moral qualities in architecture. One who knew him better than any of us says: "He must have known where he wanted to go and to have seen what he wanted to produce very clearly in his mind. He had none of our doubts and torments. Perhaps he was very uncritical of his own productions. I doubt if he ever possessed a piece of indiarubber!" It is not surprising that young architects, presented with new materials and new sorts of buildings to design, should sympathize with the work and outlook of Mr. Voysey.

Yet he was horrified to find himself proclaimed a pioneer of modern architecture. He reverenced the works of God in nature and disapproved of the later Morris patterns because the flowers reproduced were not any known flowers. Similarly he disliked machinery as "unnatural," and would always advocate the use of craftsmen—from the craftsmen who made his pipes to those who built his houses in local materials. Mixed with this was an intense nationalism. He disliked the flat roof as "un-English"; he despised the Renaissance because it came from Italy. His sympathies were all with Gothic, and his later competition designs were always in the Gothic style, with a strongly individual Voysey note. The two architects he most admired were Pugin and Comper, and he considered Bainbridge Reynolds the best craftsman he knew.

I seem to have drawn a picture of an inflexible Puritan who disapproved of nearly everything. That was one side of Mr Voysey, but his greatness lay in his generosity of character, kindness with which he tempered his inflexibility, the humour with which he mixed his austerity,† the modesty and sweetness of his nature. When he was a practising architect he refused to join the R.I.B.A. for somewhat similar reasons to Bodley's; he disliked trades-unionism among artists. Yet when, later in life, he had retired from practice and letters after his name could be of no use to him, he accepted the Fellowship which the Institute offered him. It was a generous action on both sides.

† His humour appeared even in his architecture. He would make a caricature of his client in an ironwork hinge or bracket in the house.

I cannot hope to reproduce Mr. Voysey's compelling personality; to suggest for those who did not know it the emphatic way of speaking, the sudden smiles and lights of his blue eyes, the humorous stories told over sherry in the Arts Club, the jokes he made against himself, the constructive criticism, the self-deprecation, the hundreds of little kindnesses he did, the friendly way in which he received a tribute.

I know that London will not be the same for his many friends who used to find him at the Arts Club or see his little figure crossing St. James's Street. But I do know, as all his friends know, that he did not in the least mind the idea of dying. He had such a firm faith in a benificent Creator that he longed for death. Moreover, he thought he had outlived his usefulness. But this was not true, for so long as he was alive he was useful. He was a rock of integrity to which all who knew him turned. And in a world that, before the war at any rate, was losing those values by which Mr. Voysey set such store—the sanctity of the individual, honesty and truth—such a rock was rare and very precious.

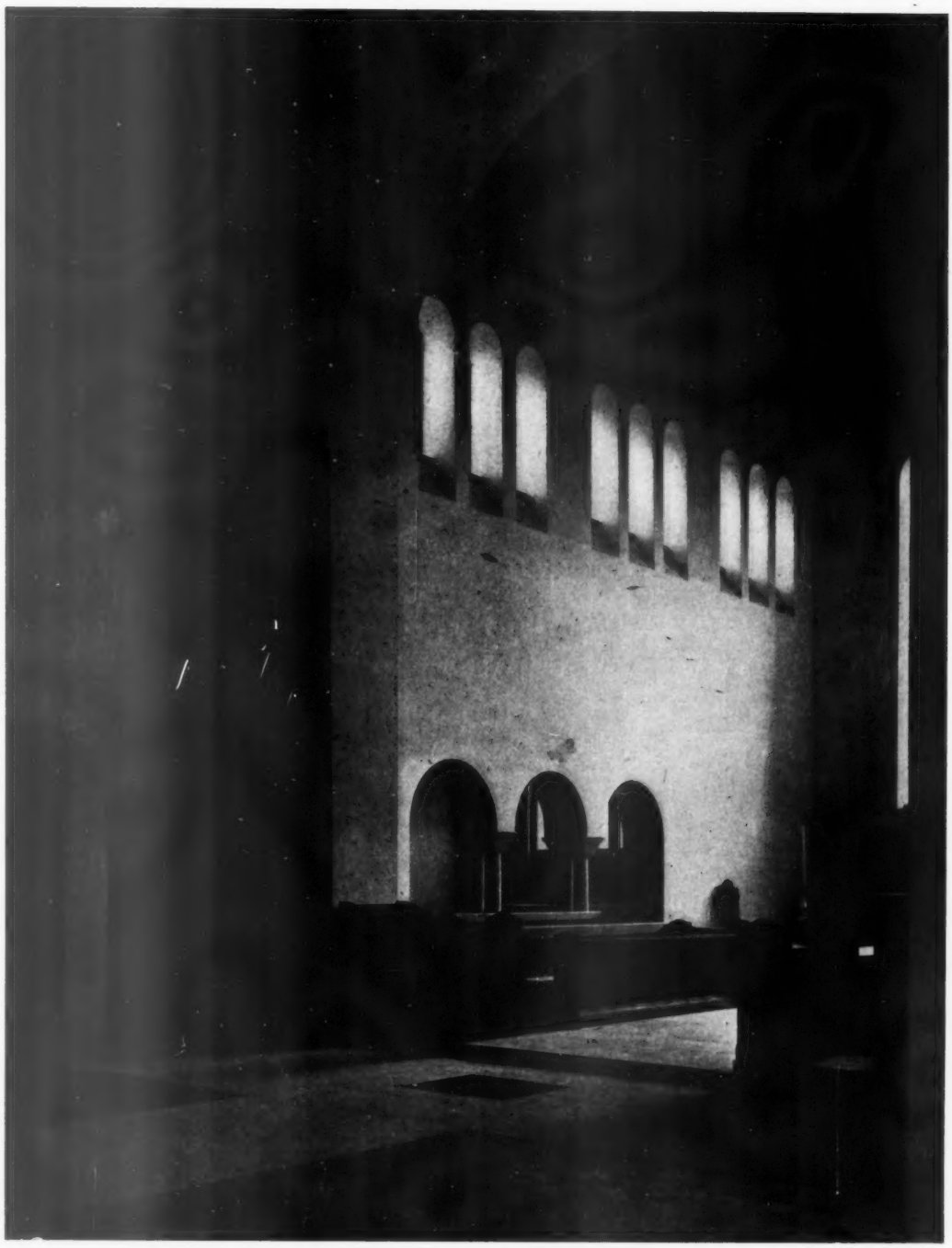
THE LATE MR. F. W. TROUP

We regret to record the death of Mr. Francis William Troup, F.S.A., F.R.I.B.A., a partner in the firm of Troup and Steele, chartered architects, of London. He was born at Huntly, Aberdeenshire, in 1859; educated at the Gymnasium, Old Aberdeen and the R.A. Schools, and won the Silver Medal for measured drawings at the R.A. Schools and the Silver Medal in the Soane Medallion Competition.

Articled to Campbell, Douglas and Sellars at Glasgow, Mr. Troup later entered the office of J. J. Stephenson in London. He commenced private practice at Hart Street, Bloomsbury, and transferred his office in 1890 to 14, Gray's Inn Square, where he was till the time of his death.

He was supervising architect for the rebuilding of the Bank of England, and consulting architect to the Home Office (schools and police buildings); the Royal Caledonian Schools, Bushey; King's College, Strand; St. Bartholomew's Hospital; the Royal Albert Hall; and the Metropolitan Police.

He was old member of the Art Workers' Guild, and Master in 1923; a member of the Executive Committee of the Society for the Protection of Ancient Buildings, and latterly honorary secretary; a member of the Arts and Crafts Exhibition Society, and many years honorary treasurer. He designed a large number of buildings erected in London and the provinces.



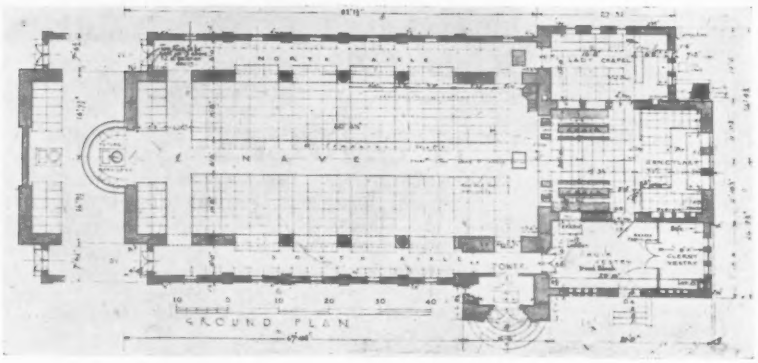
CHURCH AT GLOUCESTER

BY W. E. ELLERY ANDERSON

GENERAL—Church of St. Oswald, for the Church of England, on the Coney Hill housing estate on the outskirts of Gloucester, to seat 500, at a cost not exceeding £10,000. The baptistery is to be added at the west end at a later date.

SITE—The layout was influenced by the position of the existing vicarage and mission church, now the temporaty parish hall. The foundations are constructed of piers and beams, the ground being poor clay.

Above : The choir.



Above: The entrance front.

CHURCH AT GLOUCESTER

Another view of the choir.

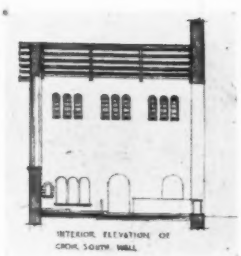
PLAN—The vestry was placed on the south side, next to the vicarage. Special attention was paid to acoustics.

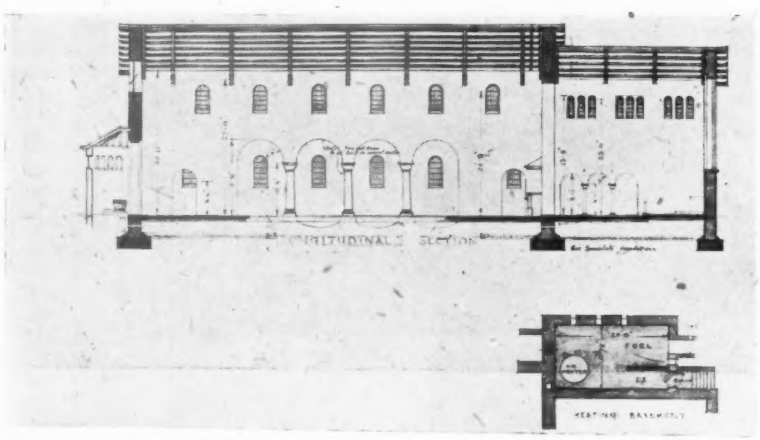
CONSTRUCTION—All walls are weight-bearing brickwork. The pitched roofs are covered with dark red interlocking tiles, and the flat roof over the vestry is finished with patent roofing. Facing bricks, Coleford silver greys; cills, tympanum and copings, red artificial stone; glazing, plain glass throughout.

INTERNAL FINISHES—Walls, plastered and lime-whitened; columns, precast stone; font, sedilia and pincinas, stone; doors and frames, pulpit and choir stalls, pine; roof trusses, Columbian pine. Floors are: chancel and circulation areas, precast stone slabs; vestries and seat areas, pitch pine blocks. Heating is by hot-air.

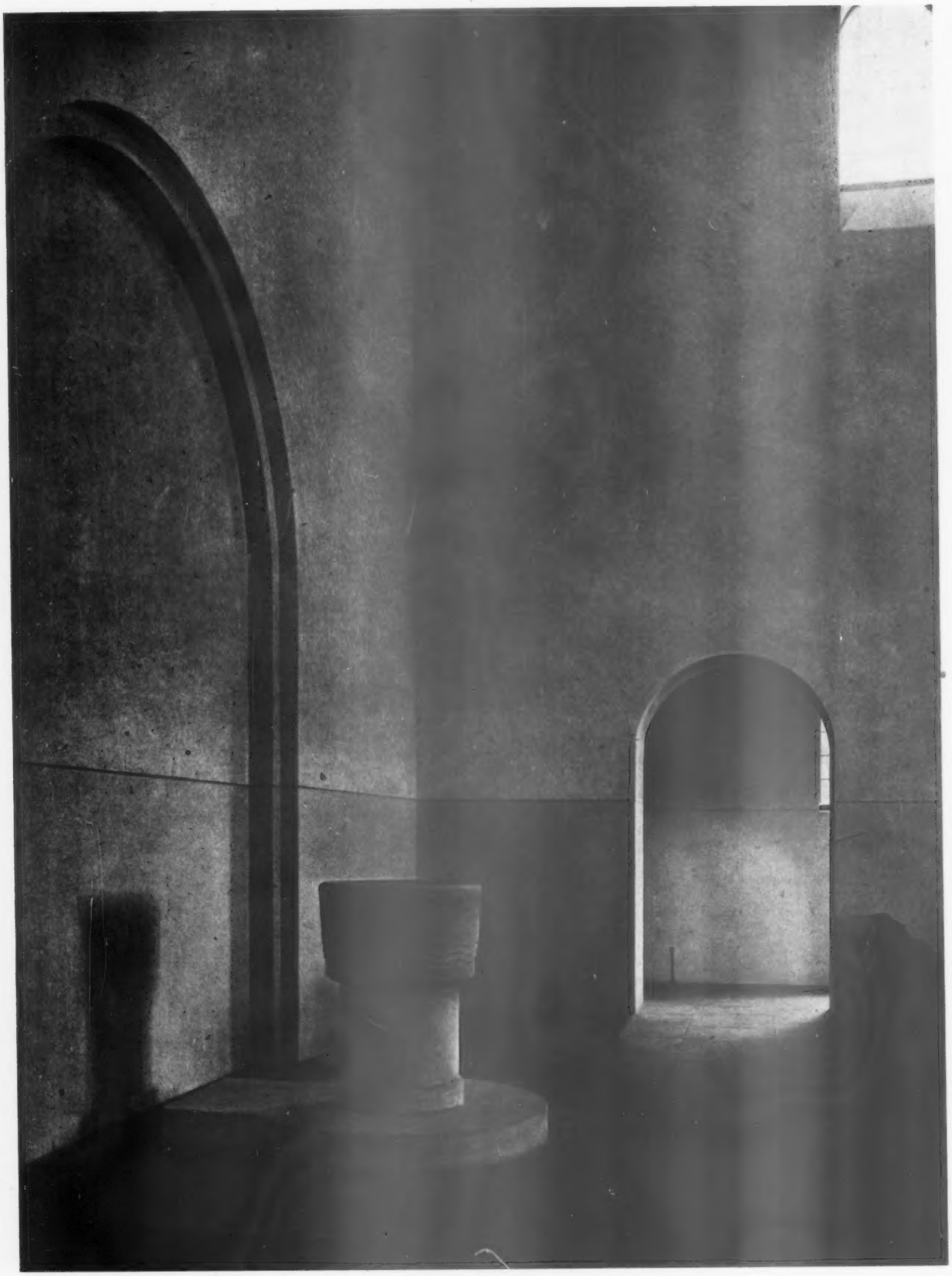
COST—Contract price, £9,092. Price per cube, 10d. Price per foot square, £1 13s. 1d. The church was completed without incurring any extras.

The general contractors were William T. Nicholls, Ltd. For list of sub-contractors, see page xxii.



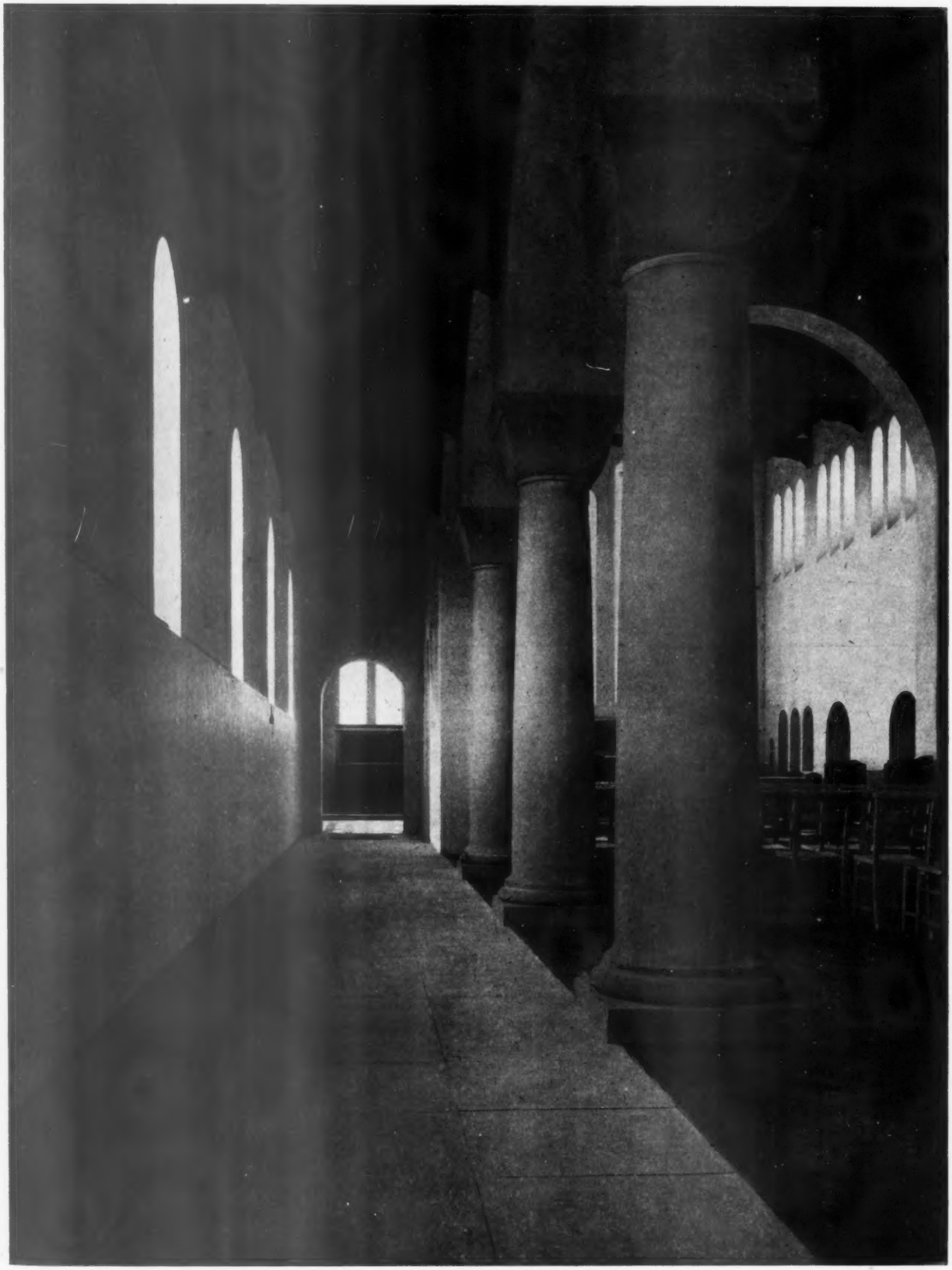


DESIGNED BY W. E. ELLERY ANDERSON



The Font.

CHURCH AT GLOUCESTER



The North Aisle.

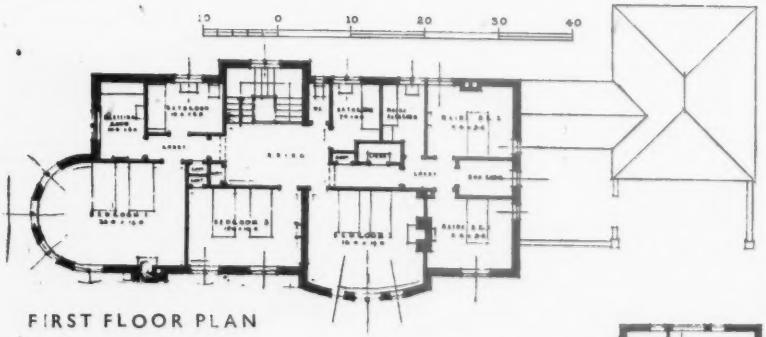
DESIGNED BY W. E. ELLERY ANDERSON

HOUSE AT GERRARD'S CROSS

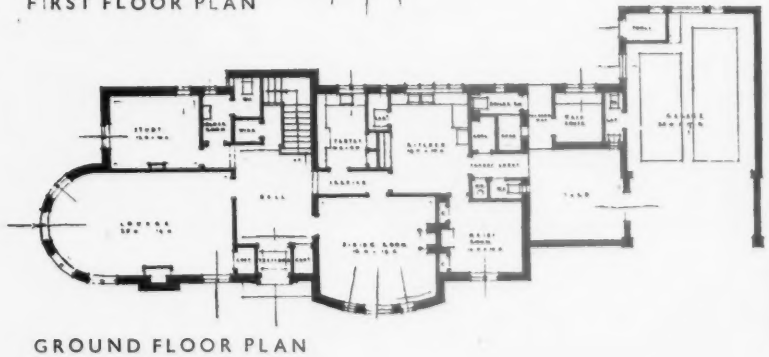
DESIGNED BY FRANK T. WINTER

CONSTRUCTION—11 in. cavity walls faced with Worcestershire facings flush pointed; roofs, brown hand-made sand-faced tiles; windows, deal casements in oak frames: all external woodwork painted cream; internal partitions, hollow blocks and brick.

INTERNAL FINISHES—Floors: hall and principal rooms, oak blocks; kitchen and pantry, rubber composition on concrete; landing and principal first floor rooms, oak boards; maids' rooms, Oregon pine boards; bathrooms and boxroom, rubber composition on deal boards. Principal walls and ceilings, Keene's cement finished with egg-shell paint, one neutral colour scheme being adopted throughout; woodwork, painted gloss finish; oak flush doors waxed. Staircase: waxed oak with built-up balustrade finished on the inside with oak plywood and on the outside with plaster to form a part of the general wall treatment; circular angles at quarter-landings, with illuminated niches. Bathrooms: tiled to full height in 4 in. by 4 in. coloured egg-shell tiles to simple decorative designs, with built-in cabinets and fittings. Kitchen and pantry: cream tiles nearly to ceiling, with built-in cabinets to match.



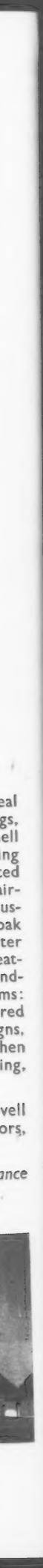
FIRST FLOOR PLAN



GROUND FLOOR PLAN

The general contractors were Y. J. Lovell and Sons, Ltd. For list of sub-contractors, see page xxii.

Above and below : Two views of the entrance front.



43A

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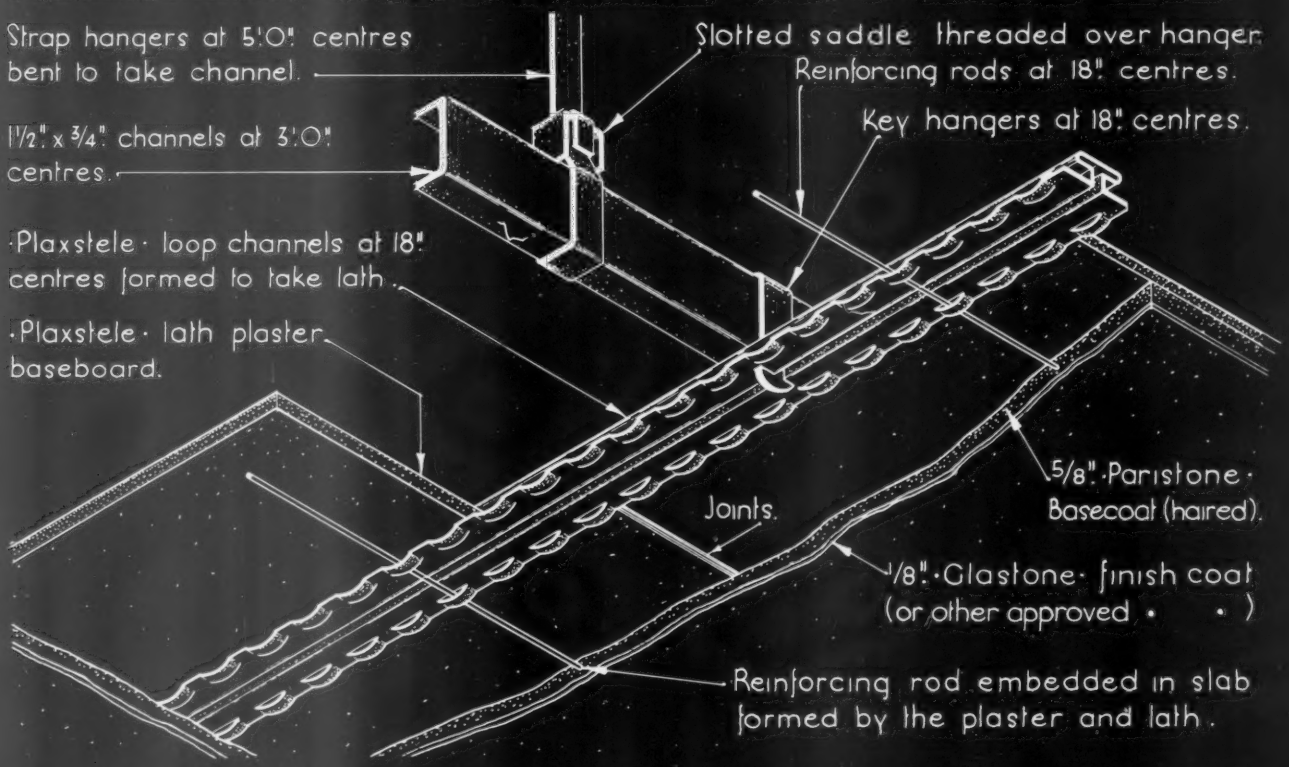
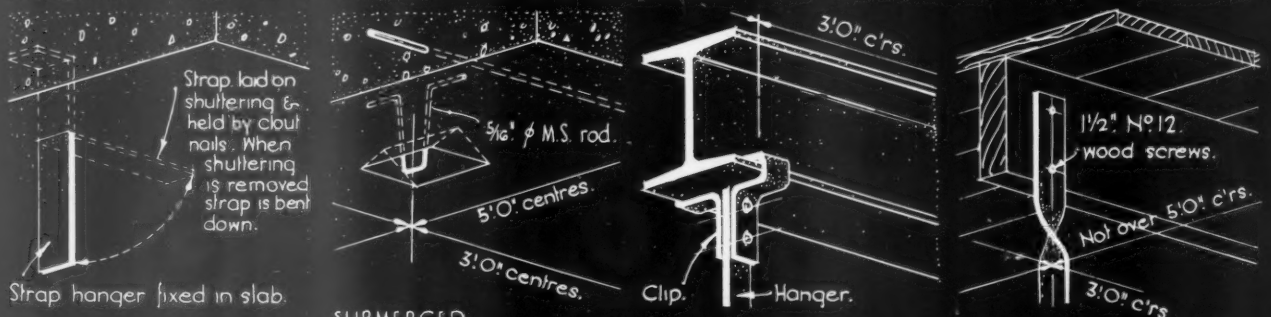
CONSTRUCTIONAL DETAILS OF THE ·PLAXSTELE· SYSTEM OF SUSPENDED CEILINGS:

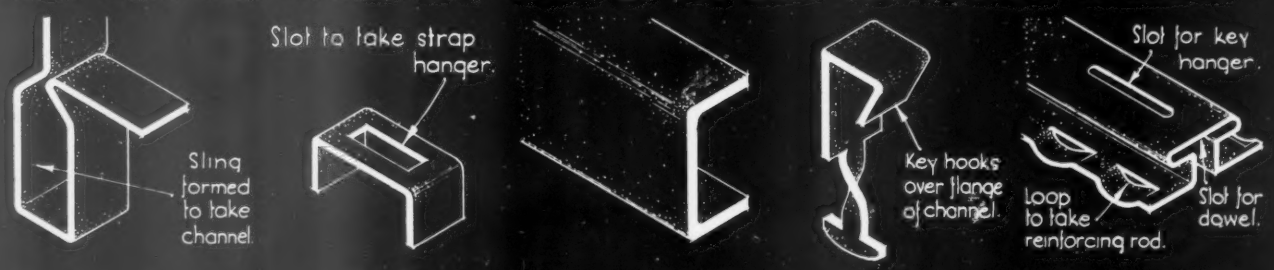


DIAGRAMMATIC VIEW FROM BELOW OF ·PLAXSTELE· SUSPENDED CEILING.

ISOMETRIC VIEWS OF TYPICAL CEILING ANCHORS FOR DIFFERENT TYPES OF FLOOR:



HALF FULL SIZE ISOMETRIC VIEWS OF THE MAIN SUSPENSION MEMBERS:



Information from Gyproc Products Limited.

INFORMATION SHEET: THE SUSPENSION OF UNIT CONSTRUCTION CEILINGS.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1.

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INFORMATION SHEET

• 825 •

(689 Revised)

SUSPENDED CEILINGS

Product : Plaxstele System of Suspended Ceilings

NOTE.—This sheet supercedes No. 689, published December, 1938, which is now cancelled.

General :

This Sheet deals with the Plaxstele system of suspending ceilings of unit construction. The system consists of a series of patent components which, when erected, form a rigid grid carrying a ceiling of plaster board with finishing coats of plaster. Erection can be carried out entirely by the plasterer since only the minimum of simple tools are required.

Uses :

This system has been designed primarily for use where concealment of ducts, conduits, pipes or beams is required. It can be hung from any type of construction, and where unusual shapes are to be ceiled—e.g., curved roofs in cinema auditoria—special fittings can be supplied.

Special details are available for suspended ceilings when heating coils are embedded and insulated in the ceiling.

Anchors :

The type of anchor used varies with the construction of the floor from which the ceiling is to be hung, and provisions are made for suspensions from any type of floor.

Generally, the spacing of anchors is at 3 ft. by 5 ft. centres, but this may be varied slightly to suit structural conditions.

Protection :

All metal parts that come into contact with plaster are subjected to a rust-resisting treatment to prevent corrosion.

Plastering :

Plastering is simplified by this system in that it allows the construction of large areas of ceiling unbroken by beams, girders, etc., which eliminates the plaster on the sides of the beams and saves the time required for forming angles and corners.

A brief specification for plastering recommended for use with the Plaxstele system is as follows:

First or Rendering Coat :

Apply a rendering $\frac{1}{4}$ in. thick composed of 1 part of Paristone Hardwall Browning (Haired) plaster to 2 parts of clean sharp sand by weight. (This is equivalent to 1:1 by volume).

Scratch this coat well with an undercut key and allow to set. When it has set and is nearly dry, apply the second or Floating Coat.

Second or Floating Coat :

Apply this second coat $\frac{1}{4}$ in. thick composed of 1 part of Paristone Hardwall Browning (Haired) plaster to 3 parts of sand by weight. (This is equivalent to 1:1$\frac{1}{2}$ by volume).

Straighten in the usual manner and leave well scratched to receive the finishing coat.

Finishing Coat:

Apply not less than $\frac{1}{8}$ in. thickness of Glastone Finishing Plaster and trowel well to a smooth, even surface.

Alternative Finish :

Substitute Glastone Finishing Plaster with Paristone Finishing Plaster, or Lime putty gauged with Unhaired Paristone and trowel well to a smooth, even surface.

Note :

Lime or Portland cement should never be applied directly to Plaxstele lath board, neither is moistening before plastering desirable.

Strength :

The reinforcing rods and loop channels form a two-way mat of reinforcement which is embedded in a slab formed by the plaster and the lath.

Slab anchors, unless otherwise arranged, are supplied and fixed by the contractor.

Erection :

Mild steel strap hangers are supplied to the length and shape specified. After anchoring the strap hanger a special saddle is threaded on to it. The end of the hanger is bent round a rolled steel channel, and then bent over so that the saddle is forced down on to the top of the channel. A twisted key hanger slipped over the top flange allows a loop channel to be hung from the key when the nib at its lower end is slipped into narrow slots provided in the top of the loop channel. The nib at the lower end of the key is then twisted at right angles to the slot, fixing the loop channel and forming a rigid grid. Plaxstele lath plaster baseboards 17$\frac{5}{8}$ in. by 36 in. by $\frac{3}{8}$ in. thick are inserted in the grooves of the loop channel, and small reinforcing rods are run through the loops at 18 in. centres—i.e., at right angles to the loop channels themselves. The surface is then ready for plastering.

Joints :

Where loop channels are joined end to end, special flat dowels are fitted into the slots formed on cross-section.

Fire Resistance :

The system is designed to form the foundation for a 1 in. ceiling slab of cementitious material having a high resistance to fire penetration.

Issued by : Gyproc Products Limited (Incorporating the Building Materials Division of Honeywill and Stein, Ltd.)

Address : Great Burgh, Epsom, Surrey

Telegrams : Gyproc c/o Research, Epsom

Telephones : Burgh Heath 742-3—3470-6

Glasgow, Scotland :
Gyproc Wharf, Shield Hall, Glasgow, S.W.1.

Telegrams : Gyproc, Glasgow

Telephones : Govan 614

SOME QUESTIONS ANSWERED THIS WEEK:

★ *CAN I follow my profession in any branch of the Services as an architect and surveyor?* Q687

★ *COULD you supply the approximate percentage increase each month in cost of building and low pressure hot-water heating since outbreak of war?* - - - - - - Q689

★ *CAN you give me any particulars of a cheap fire-proof covering for flat-roof buildings?* - Q690

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. Samples and descriptive literature sent to the Information Centre by manufacturers for the use of a particular enquirer are forwarded whenever the director of the Centre considers them likely to be of use.

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.

Q687

ARCHITECT'S PUPIL, MIDDLESEX.—*I am eighteen years old and have been a pupil in an architect's and surveyor's office for two years, during the first year of which I took the First Year Course for the R.I.B.A. Exam. at the Regent Street Polytechnic.*

Can you please tell me if it is possible, within my limited experience, to follow the profession, or near to it, in any branch of the Services when I am called up later this year? Otherwise, for the period of the war, I shall be at a complete standstill with regard to becoming qualified, if not put back several years.

It is unlikely that you will be able to work on architecture in any form, but you should be able to gain good knowledge of surveying if you join either the Artillery or the Engineers.

Q688

MANUFACTURERS, NOTTINGHAM.—*We are at present preparing a SPECIAL DESIGN suitable FOR the CONSTRUCTION OF HOUSES, and we should be glad if you could inform us if it will be possible to register a*

design of this type or to protect it by patent.

In the construction we are using standard precast concrete units together with specially designed units, and if you consider that this design could be protected perhaps you would put us in touch with patent agents who could look after our interests.

In the absence of full particulars it is impossible for us to state whether you would be able to obtain a patent or not, and this question should be discussed with a patent agent.

Mr. Herbert G. W. Wildbore, of 101, Leadenhall Street, London, E.C. 3, is a patent agent who has had some experience of concrete units, but any experienced patent agent should be able to help you, and would no doubt give you a preliminary opinion at a small charge.

Q689

ARCHITECT, BELFAST.—*I should be glad to know if you could supply the following information.*

The approximate percentage INCREASE each month since the commencement of war IN COST OF BUILDING and cost of Low Pressure Hot WATER HEATING.

We regret that we cannot give you the answers you require.

The increased cost of building is the average increased cost of labour, materials, transport, overheads and profit, and the following may help you to understand the difficulty in arriving at an average.

1. The increased cost of wages can be ascertained, and in fact they have been published regularly in the JOURNAL. At the end of 1940 wages had risen by approximately 11 per cent. In order to calculate the effect of this, labour may be considered to constitute half the cost of building; but this is only approximate, and would certainly not be true in the case of prefabricated or partly prefabricated buildings.

2. The increased cost of materials, including transport, is a much more difficult matter as, unfortunately, all materials have not risen to the same extent. It would be possible to give you monthly prices for basic materials (in the London Area), but it is probably sufficient to mention the following approximate increases in prices at the end of 1940.

	Per Cent.
Portland cement ...	20·7
Ballast	47·8
Fletton bricks	11·8
Steel joists	47·5
Iron rainwater and soil goods	18·0

This example should persuade you that it is impossible to state the average increased cost of materials except in relation to a definite building. Building in concrete, particularly with wood (for formwork), at its present price has obviously increased much more than building in brickwork.

Again, there is the cost of transport, which is a considerable factor today and which, of course, varies according to the site.

3. Overhead charges and profit can normally be estimated reasonably accurately, but today work may be plentiful in one district and scarce in another. Builders of some standing may have as much Government work as they can do, whereas smaller builders in country districts may have little to keep them employed.

These factors, and the difficulty of getting good labour in certain districts, makes keenness in tendering a very variable factor.

As far as Belfast is concerned, we cannot help you at all, but *The Architect and Building News*, published, with their issue of 17.1.41, a chart showing building costs since 1914. According to this chart building costs rose by about 17 per cent. between September, 1939, and the end of 1940. It must be stressed, however, that this is only intended to show the trend of building costs. We have seen it stated elsewhere that costs have increased by 25 per cent. and more, which may be equally true of certain classes of building.

In the same way we cannot state the increased cost of heating installations, although we could probably ascertain the cost of pipes, fittings, radiators and boilers at any particular time.

Q690

ARCHITECT, LONDON.—*I am dealing with fairly extensive buildings of a semi-permanent nature which are to have flat roofs and I am rather concerned about the FINISH TO the ROOFS. The ordinary types of felt roofing are not proof against burning by incendiary bombs and I believe that supplies are limited. Asphalt, the usual alternative, is too expensive for this class of work.*

I should be glad to know if there have been any developments, since the war, which might be of interest.

"Asphalteen" is a comparatively new product which should fulfil your requirements, and we would advise you to get in touch with the General Asphalt Co. Ltd., of Hope House, 41-49, Great Peter Street, London, S.W. 1, who will forward you all particulars.

Prices vary with the locality and the area to be laid, so it is impossible for us to give a direct comparison with other materials, but we understand from the manufacturers that it is slightly less expensive than normal two-layer felt roofing.

"Asphalteen" is laid in one layer, and therefore can be laid at a great speed; also it is claimed to be highly resistant to incendiary bombs.

As the product is comparatively new we cannot give any details of its lasting qualities, but we understand that the General Asphalt Co. Ltd. have already laid very considerable areas for Government departments.

Q691

ENQUIRER, DERBY.—*I should be most grateful if, through your Information Centre, you could refer me to any book or paper dealing in detail with the MANUFACTURE OF ASBESTOS CEMENT SHEETS AND also of insulating WALL BOARDS other than corkboard. I am anxious to learn all I can about the respective properties and of any cement suitable for cementing Asbestos Sheets together and Insulating Boards together.*

We regret that we do not know of any books dealing with the subject in detail, but the references to articles in various journals, given below, may be of some assistance. Alternatively, if you are interested in furthering the use of these materials or of finding new uses, we feel sure that the manufacturers themselves would be pleased to help you. We will send you a list of manufacturers if required.

The Architects' Journal, Special Issue on Asbestos Cement Products.

Building, 1937, vol. 12, pp. 169-73. Article on Wallboard

Cement, Lime and Gravel, 1939, vol. 13, pp. 146-51. Article on the Manufacture of Fireproof Wallboard.

Industrial and Engineering Chemistry, 1935, vol. 27, pp. 896-8. Article on Fibre Building Board.

AMERICAN.

Iowa State College of Agricultural and Mechanic Art.

Iowa Engineering Experiments Station, Bulletins 136 and 137.

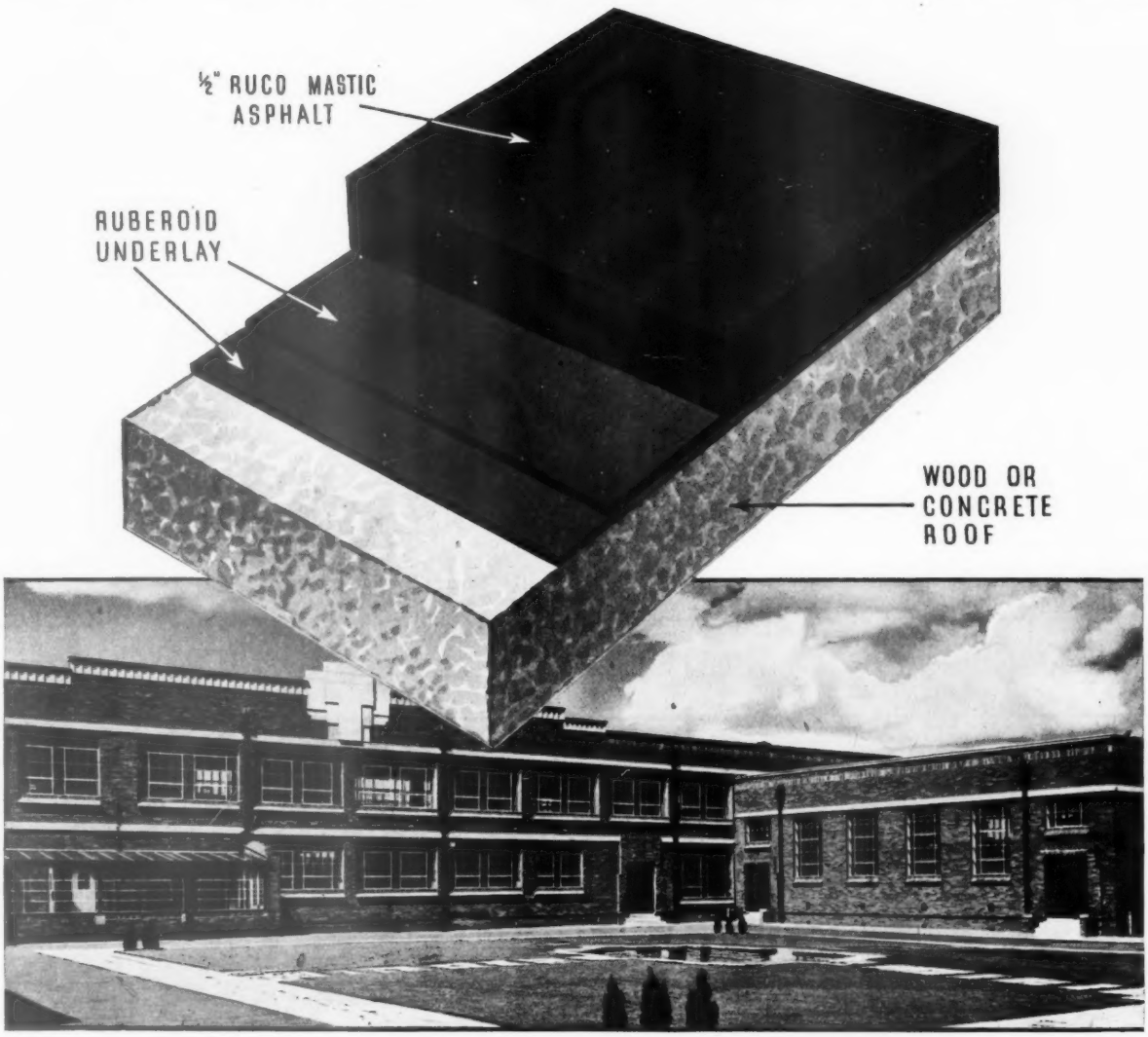
1. Studies on the Manufacture of Insulating Board.

2. Cornstalk Acoustical Board.

U.S. Department of Commerce. Miscellaneous Publication M.112: The Manufacture of Insulating Board from Cornstalk.

These American publications will probably be difficult to obtain, but it might be possible to consult them at the Patent Office.

The Ruco Ruberoid Roof

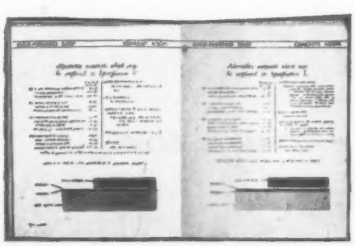


Grammar School, Mansfield.
Architects :
Messrs. Cook, Howard & Lane, Mansfield.

The Ruco Ruberoid Roof consists of two or more layers of Ruberoid Underlay surfaced with ½" Ruco Mastic Asphalt. This is one of the most frequently specified Ruberoid Roofs, because of its excellent wearing properties and exceptionally low cost per year of service. The specification is suitable for all types of flat concrete or boarded roofs, particularly where the surface is to be used for foot traffic

Ruberoid Contract Departments located in London, Birmingham, Manchester, Newcastle, Edinburgh, Dublin and Belfast, promptly undertake work on any scale and in any part of the country. Estimates sent on receipt of plans

RUBEROID ROOFING



As our industry is controlled and priority has to be given to Government work, our ability to execute orders is subject to the regulations imposed on our industry by the Ministry of Works and Buildings.

THE RUBEROID CO., LTD.,

1, MEADOW MILLS, STONEHOUSE, GLOUCESTERSHIRE

Architects and Engineers are invited to write for a copy of this Ruberoid Publication No. 326 entitled "Standard Specifications for Ruberoid Roofs."

TRADE NOTES

Hope's Steel Ladders

The average roof is not readily accessible, and in factories and office premises where roof-spotters and fire-watchers have regular duties to perform extra access ladders are being installed. A simple and adaptable type of vertical steel ladder is now being manufactured by Henry Hope and Sons, Ltd. It is made in standard units 9 ft. long and supplied complete with Rawlbolts and brackets for fixing. The ladder stringers are of mild steel H section, and the steel rungs are $\frac{5}{8}$ in. diameter at 9 in. centres with shouldered ends welded in. The tops of the ladders are carried up 2 ft. 6 in. above the parapet or eaves level. Full details and price particulars may be obtained from the manufacturers' head office at Smethwick, Birmingham, or from their London office at 17, Berners Street, W.1.

Rawlbolts for Wartime Construction

Architects and engineers engaged on war-time construction will be finding many new uses for Rawlbolts, and will be interested to know that a new reference chart has recently been issued bringing the range of available sizes and types right up to date. It is not surprising to learn that the increase in Rawlbolt sales since the beginning of the war is over 300 per cent., the simplified types of construction being generally adopted, and the greater use of standard and pre-cast building units and standard component parts having necessitated a much wider use of simply operated fixing and connecting devices.

Copies of the Rawlbolt reference chart may be obtained from the Rawlplug Company Ltd., Cromwell Road, London, S.W. 7.

The Airscrew Company

The Airscrew Company, Limited, in order to cope with the increasing demand for their axial flow fans, have appointed several additional district sales engineers. In London and the adjacent counties north of the Thames Mr. E. C. F. Pash will function, whilst the south of the Thames to the coast will be dealt with by Mr. W. Rothwell.

In Lancashire Mr. J. B. Chadwick is resident engineer (Telephone, Rusholme 4028), whilst the Midlands sales engineer is Mr. J. W. S. Cove (Telephone, Edgbaston 0059). All these engineers have specialized for many years in fan engineering, and their intimate knowledge of fan applications should prove of service to Airscrew fan customers.

THE BUILDINGS ILLUSTRATED

CHURCH OF ST. OSWALD, GLOUCESTER (pages 259-263). Architect: W. E. Ellery Anderson, L.R.I.B.A. The General Contractors were William T. Nicholls, Ltd. Sub-contractors and suppliers included: Piling and Construction Co., Ltd., foundations; Smith's Fireproof Floors, floors; Bristol Stone and Concrete Co., laid Smith's fireproof floors; Coleford Brick and Tile Co., Ltd., facing bricks; Stonehouse Brick and Tile Co., Ltd., flettons; R. L. Boulton and Son, stone and furniture; Gloucester Stone Co., Ltd., artificial stone and flooring; Colthurst Symonds and Co., Ltd., tiles; Weston and Bolton, tiling contractors; Frazzi, Ltd., flat roof; Ruberoid Co., Ltd., roofing felt; John Pye, Ltd., patent glazing and casements; Stevens and Adams, Ltd., woodblock flooring; Chase and Co., Ltd., central heating; Mitchell and Co., electric wiring; K. S. Neale, door furniture; M. Perkins and Son, materials for frontals and hangings; Western Forestry Co., shrubs and trees; Boosey and Hawkes, Ltd., Hammond organ; W. Frank Knight, cross and candlesticks.

"ST. MICHAEL'S," GERRARD'S CROSS (page 264). Architect: Frank T. Winter, F.R.I.B.A. The general contractors were Y. J. Lovell and Sons, Ltd. Subcontractors and suppliers included: Salter Edwards and Co., Ltd., asphalt; Himley Brick Co., Ltd., bricks; Fosalsil Partition Blocks, Moler Products, Ltd., partitions; Luxfer, Ltd., patent glazing; Vigers Bros., Ltd., woodblock and oak strip flooring; Ruboleum Flooring Co., ruboleum flooring; B. Holden and Co., patent flooring; Kerner-Greenwood and Co., Ltd., pudlo in boiler room; T. S. Knight and Sons, Ltd., central heating; Aga Heat, Ltd., cooker; Bratt Colbran, Ltd., grates; T. and E. Hammond, electric wiring; Cashmore Art Workers, electric light porch fitting; Osler and Faraday, Ltd., internal electric light fittings; Ideal Boilers and Radiators, Ltd., sanitary fittings; Spiers and Co., door furniture; G.P.O., telephones; D. Sebel and Co., Ltd., wrought iron entrance gates; Carter and Co., Ltd., tiling; Shorters Construction Co., Ltd., shrubs and trees; O.C.P. Marketing Co., water-softening plant; Stanley Jones and Co., Ltd., cocktail cabinet; Tuke and Bell, Ltd., sewage purification plant.