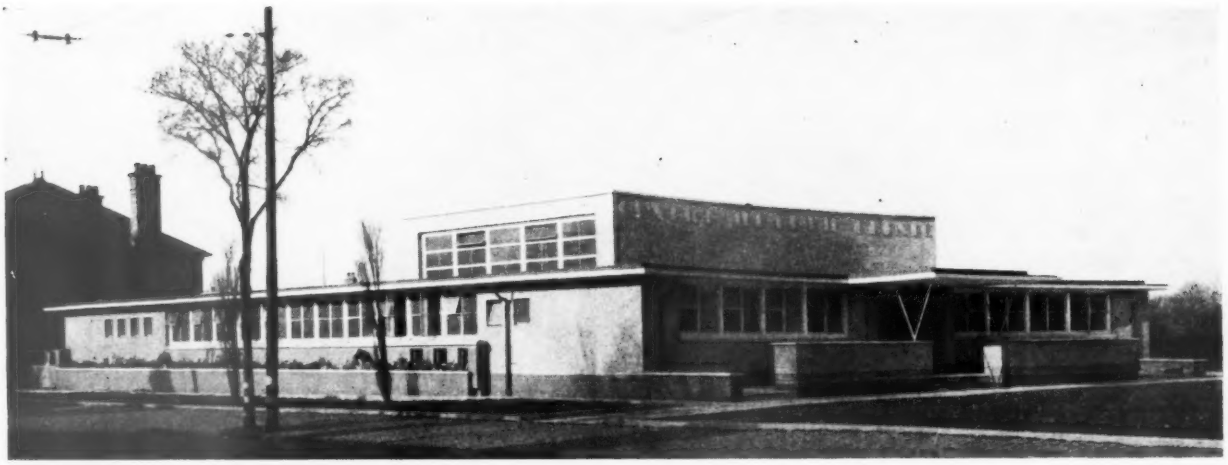


Centre Health Clinic, Bilston

BEACON
METAL WINDOWS

Beacon Metal Windows are an important feature of the New Centre Health Clinic at Bilston, where clean, fresh air and maximum natural light are so desirable. Whatever the type or size of building, Beacon Metal Windows can be specified with absolute confidence.

JOHN THOMPSON **BEACON** WINDOWS LTD.
BEACON WORKS
TELEPHONE BILSTON 41293 (3 LINES)
WOLVERHAMPTON
TELEGRAMS: WINDOWS, WOLVERHAMPTON

B47

THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL WITH WHICH IS INCORPORATED THE BUILDERS' JOURNAL AND THE ARCHITECTURAL ENGINEER IS PUBLISHED EVERY THURSDAY BY THE ARCHITECTURAL PRESS (PUBLISHERS OF THE ARCHITECTS' JOURNAL, THE ARCHITECTURAL REVIEW, SPECIFICATION, AND WHO'S WHO IN ARCHITECTURE) FROM 45 THE AVENUE, CHEAM, SURREY.

*

THE ANNUAL SUBSCRIPTION RATES ARE AS FOLLOWS :
BY POST IN THE UNITED KINGDOM.... £1 3 10
BY POST TO CANADA £1 3 10
BY POST ELSEWHERE ABROAD..... £1 8 6
SPECIAL COMBINED RATE FOR SUBSCRIBERS TAKING BOTH THE ARCHITECTURAL REVIEW AND THE ARCHITECTS' JOURNAL : INLAND £2 6s. ; ABROAD £2 10s.
SUBSCRIPTIONS MAY BE BOOKED AT ALL NEWSAGENTS

*

SINGLE COPIES, SIXPENCE ; POST FREE, EIGHTPENCE. SPECIAL NUMBERS ARE INCLUDED IN SUBSCRIPTION ; SINGLE COPIES, ONE SHILLING ; POST FREE, 1S. 3D. BACK NUMBERS MORE THAN TWELVE MONTHS OLD (WHEN AVAILABLE), DOUBLE PRICE.

*

SUBSCRIBERS CAN HAVE THEIR VOLUMES BOUND COMPLETE WITH INDEX, IN CLOTH CASES, AT A COST OF 10S. EACH. CARRIAGE 1S. EXTRA.

*

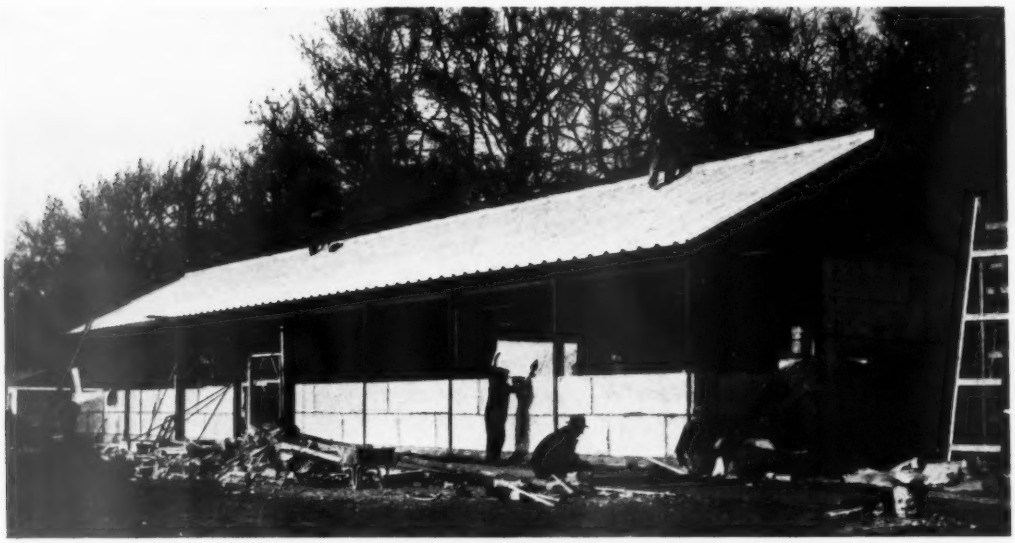
45 The Avenue, Cheam, Surrey
TELEPHONE : VIGILANT 0087-9 (3 LINES)

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, MARCH 14, 1940. NUMBER 2356 : VOLUME 91

PRINCIPAL CONTENTS

CANTEEN FOR FORCES IN HYDE PARK



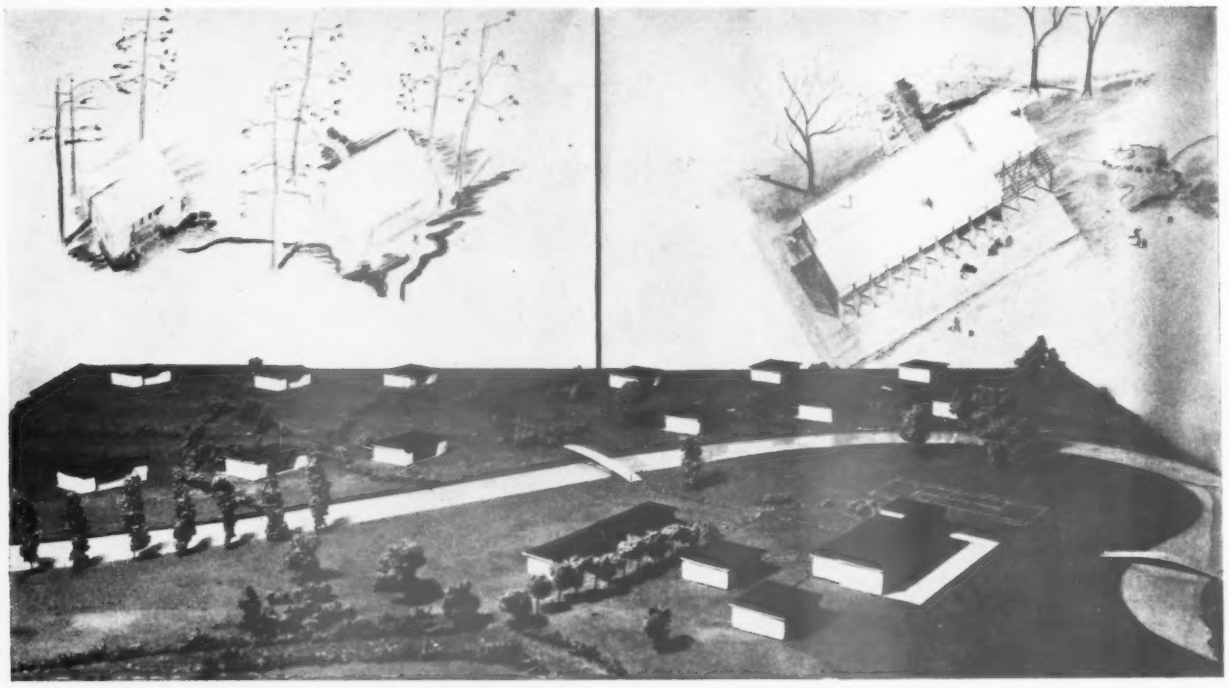
A canteen for members of H.M. Forces is now nearing completion on a site in Hyde Park; the site was used for a timber hut for the troops in the last war. It is to be known as the "Wilson-Carlisle Hut," and is the first of many to be erected by the Church Army.

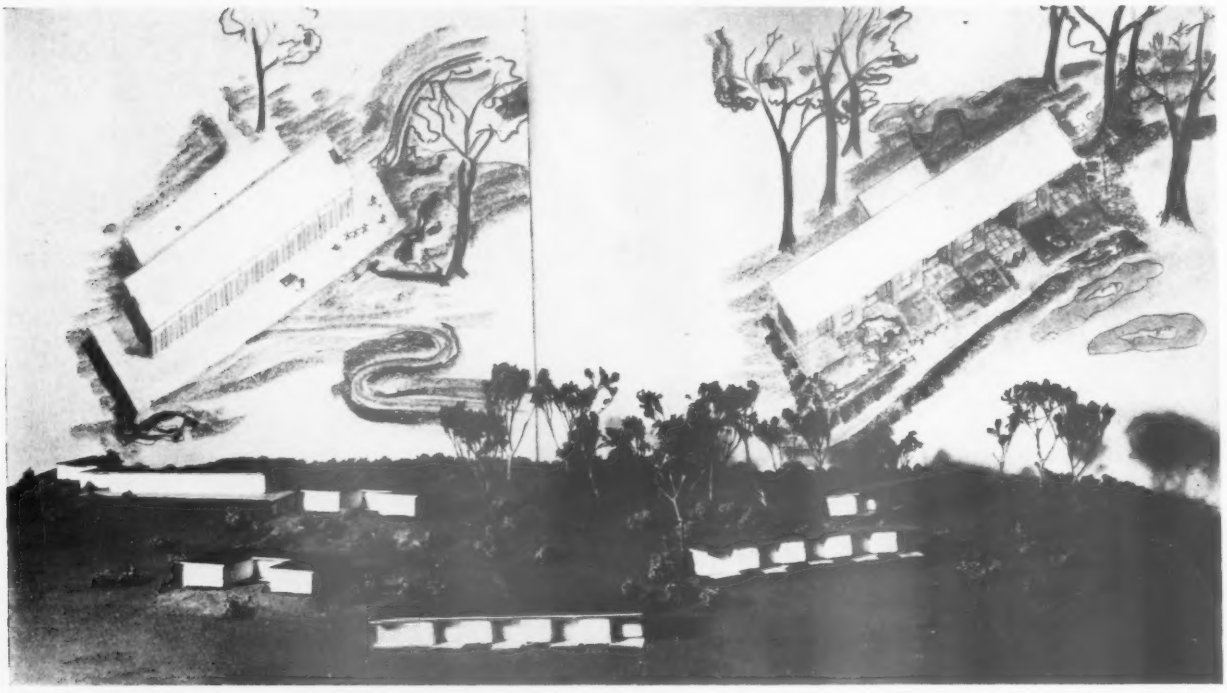
The building's lightly constructed, portable steel frame will be cloaked in panels of special featherweight concrete and roofed with asbestos cement. The exterior will be coloured light cream.

When the war is over the Church Army propose to take advantage of the portability of this type of hut, by transplanting all in their possession into housing areas for use as church halls.

The architects are Messrs. Hastie, Winch and Kelly, Consulting Architects to the Church Army.

Above, progress photograph; right, one of the concrete panels being placed in position.



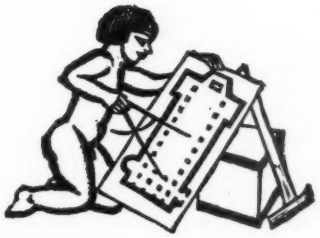


HOLIDAY AND EVACUATION CAMPS

An exhibition (sponsored by the A.A.S.T.A.) of schemes for holiday and evacuation camps is now being held at 94 Wimpole Street, W.1. Two alternative examples are shown in the above models, with varying accommodation for small groups of about a dozen families.

Scheme 1 (top) has self-contained family bungalows, with a central club containing a dining room, a recreation room for adults, and a playroom for children.

Scheme 2 (bottom) has small terrace blocks with bed-sitting rooms for the adults, and dormitories, each for six or eight children, under the supervision of a helper.



SUGGESTIONS WANTED

ON February 29 a meeting took place at the House of Commons between M.P.s and the Building Industries National Council. This meeting was arranged by Mr. Alfred Bossom, and its results were described in a letter from Mr. Bossom which we published last week.

The meeting showed that a number of M.P.s realize how bad is the present situation of the building industry, and that they are anxious to help. And B.I.N.C. and Mr. Bossom have persuaded them to hold a second meeting in some weeks' time at which they will consider what remedies they can recommend to the Government.

But in spite of these signs of sympathy, the industry will probably feel disappointment that, after six months of war, nothing more tangible has been achieved. That it should have been decided at the meeting to ask all sections of the industry to send to B.I.N.C. suggestions on (1) how the industry can do its utmost to help win the war, and (2) how this can be done cheaply, quickly and with least injury to the industry's post-war power of recovery—conveys to the uninstructed the clear impression that, during six months of increasing distress, the industry had not managed to come to any opinion on these points; whereas, in fact, over three months ago there was complete agreement in the industry on the fundamental requirements for an efficient wartime building organization.*

Since suggestions have been asked for, the JOURNAL hopes that architects as well as all other sections of the industry will send to B.I.N.C.† considered answers to the two questions—as the JOURNAL itself has done. For if B.I.N.C. can show to the Government that there is unanimity within the industry on the essentials of efficient war organization, there is greater likelihood of the Government's accepting the industry's advice.

But we believe that as architects, builders and manufacturers think over their answers to these two questions, they will come more and more firmly to the conclusion that the efficient use of the industry in war depends on the three points which have so often been put forward : the preparation of an approximate programme of all war building works for a year ahead ; the establishment of a single distributing house for all these works ; and joint discussion by the Government and the industry of how much of the remainder of the industry, which cannot be employed by the programme, should be kept going to deal with incalculable or unforeseen demands.

On these points an ordered use of the industry depends. During the rest of this year, for instance, it is obvious that many light factories and camps, some housing and some heavier works will be needed. But unless these works are gathered in a single list and examined from the point of view of distribution and relative urgency, no balanced use can be made of available building materials.

Acceptance by the Government of these three suggestions must therefore be the first aim of the industry in the immediate future.

But the industry must be careful to see that the urgency of this first aim does not banish for the duration the consideration of its own internal organization of which we wrote last week. It is tempting to decide that war is no time for reform, and flattering to decide that only outside obstruction prevents a vast industry from functioning to perfection.

All sections of the industry, however, know that new materials and new methods have since 1919 changed the importance of trades and relations between the industry's components. All feel that the strains and overlapping responsibilities caused by these developments should be remedied—sometime ; and that it is within the industry's power to do so.

In a study of the industry called THE NEXT YEARS, which the JOURNAL will begin to publish on April 4, Mr. Howard Robertson considers these problems and possible remedies. And the JOURNAL believes Mr. Robertson's articles will both help the industry to find a starting point for the internal adjustments which it should, and could, carry out, and convince all its members of the need for doing so now.

* For instance, of the four principal points of the industry's representations to the Government (summarized in the current *Building Industries Survey*), three were included in the "Essential Steps" put forward by this JOURNAL on November 23. This proves that these main points were clear at a very early stage even to those without special knowledge.

† Suggestions should be sent to Mr. H. B. Bryant, The Building Industries National Council, 85 Gloucester Place, W.1.

The Architects' Journal
45 The Avenue, Cheam, Surrey
Telephone: Vigilant 0087-9.

NOTES & TOPICS

OUR FUTURE

THE reply of the Minister of Health to Sir Patrick Hannon, who had written to him about the difficulties of the building industry, has been carefully examined for hints of the Government's general attitude towards building and the war. And while it is possible by diligent burnishing to produce from the reply a ray or two of hope, its general message is NOTHING TO REPORT.

*

War building will, we are told, increase. Private building will stop. Local authorities who are now completing housing schemes will be allowed to build further houses which are urgently needed. There is enquiry going on concerning methods of house construction which will use all normal materials save timber. Preparation of plans for future schemes is not officially encouraged.

*

There is no indication of the volume which the war building programme is expected to attain, or hint that it has been made anybody's business to estimate that volume. There is no sign that the mobilization of the nation's brains which was promised in September is going to go further in building than handing out contracts two months before the buildings are needed to such firms as still survive after each successive half-year of war.

*

The simplicity of this method is a great advantage, but it cannot be said to lead to the efficient use of materials or to the efficient use of the industry.

BETTER AND BETTER BETJEMAN

Under the title of *Old Lights for New Chancels*,* Mr. John Betjeman, the critic, poet and ecclesiastical expert, has published a new collection of verses. This is an important event, for Mr. Betjeman is unrivalled as a writer of representational (or, as he would say, topographical) verse, and in this new work his backgrounds are built up with all his familiar skill and affection.

*

Mr. Betjeman is well known to the architectural profession as a critic and propagandist. To the public—or to that section of it which reads the Beaverbrook press—he has a slight reputation for eccentricity. He is known, for instance, to drive around the countryside in a high-wheeled buggy behind a white Arab steed—and this before the days of petrol rationing. He is said also to compose his verses while lying on the top of a haystack to which a telephone is connected. Above all, because he is interested in the ordinary and often affects a facetious manner in describing it, he is widely thought of as "a funny man." Nothing could be more misleading. Mr. Betjeman should be taken seriously.

*

His verses deal with the banal, but they are not indignant, nor, more important still, do they snigger in the fashionable manner of the day. They record. The poet's aim, as he says in his preface, is "to catch the atmosphere of places and times," not to be funny about them. His success is largely due to the genuine affection he feels for the world he so accurately portrays.

*

It is a queer world, dimly lit by flaring gas-jets or the angry glow of Surrey sunsets. His characters, the gym mistress, the ageing don, the provincial churchwarden, are sharply but fondly drawn against a background of pine trees and Bodley brickwork, of stained marble, varnished pitchpine, encaustic tiles and peeling stucco. Mr. Betjeman is intensely architecture-conscious.† It is perhaps no accident that the very title and solemn format of the book itself call instantly to mind the varnished rack of missionary pamphlets in a draughty porch. Even the pages, thin and rather spotty, distil a sharp cold smell of stone, ivy and lamp-oil. And yet there is no savour of precocity, no attempt to be "*amusing*." His feeling for background is unerring, his phrasing photographically precise.

*

Words live by the weight that lies behind them and Mr. Betjeman packs each one tight with meaning . . . "The stuccoed afternoon" for Cheltenham in July—"Hot summer silence over Holloway" . . . "soaked carrara-covered earth" . . . "conifer county of Surrey" . . . and for North Oxford "dead laburnum shedding an Anglo-Jackson shade."

*

At the same time the rhythm is kept as easy and regular as a school song. Listen to this (from an amatory poem "Myfanwy"):

> Smooth down the Avenue glitters the bicycle,
> Black-stockinged legs under navy-blue serge,
> Home and Colonial, Star, International,
> Balancing bicycle leant on the verge.

or to this (from "Group life, Letchworth"):

> Wittle-tittle, wittle-tittle,
> Toodle-oodle ducky birds,
> What a lot my dicky-chicky
> Tiny tots have done.
> Wouldn't it be jolly now
> To take our Aertex panters off
> And have a jolly tumble in
> The jolly jolly sun?

or to this first verse of "On Seeing an Old Poet in the Café Royal":

> I saw him in the Café Royal,
> Very old and very grand.
> Modernistic shone the lamplight
> There in London's fairy-land.
> Devilled chicken. Devilled whitebait.
> Devil if I understand.

*

It is almost as if the words ran on ball-bearings, clicking merrily behind the chain-guard of one of Mr. Betjeman's favourite bicycles.

---

* *Old Lights for New Chancels*. Topographical and Amatory Verses, by John Betjeman. John Murray. Price 5s.

† He was at one time Assistant Editor of *The Architectural Review*.

Fifty Years Old.

MR. RODNEY TATCHELL

This week Mr. Rodney Tatchell, a member of the firm of Tatchell and Wilson, left England on an expedition which will carry with it the good wishes and interest of all architects.

*

Mr. Tatchell and seven other carefully chosen and trained members of London Fire Service have gone to Finland, and will be the first British fire-fighting crew to join the Finnish brigades in their endless job.

*

The crew and their personal equipment have gone by air. Their engine is going by sea, having been specially built to fit Finnish conditions—both climatic and technical.

*

The first object of the expedition is, of course, to help the Finns. But when the crew's services are no longer needed, or when it has been relieved, London will have eight instructors who know exactly what strains bombing throws on a fire service and how they can best be met.

LONDONDERRY HOUSE

Londonderry House, Park Lane, is to be closed up because of high rates. It is a building whose distinctions are more social than architectural, but its closing is notable because it means the disappearance of one more of the few remaining great houses of Mayfair. Dorchester House, Grosvenor House, Chesterfield House, Norfolk House, and Lansdowne House are already gone. Apsley House has at least looked unused for years, and Crewe House has been turned (most successfully) into offices. The fate of Wimborne House is still undecided.

*

It will be a pity if not one is left as an example to future generations of how a great family town house was planned and furnished—marble staircases, mirrored vestibules, cavernous pantries, ranks of coiled-spring bells, echoing attics and all.

*

Political receptions, literary salons and great hostesses may be things of the past, but must we also lose the backgrounds against which these romantic scenes were set? "Oh for the palms and the parquet," as the poet nostalgically wrote, "Oh for the lack of fresh air." Alas, soon they will be found only on the premises of professional caterers.

*

I understand that the rating officer refused to consider the several tons of statuary which clutter the hall of Londonderry House as fixtures, and they are therefore to be removed with the furniture. Sculpture must always be something of a problem to its patrons, usually needing for proper appreciation special stands, special lighting, and sometimes even special floor strengthening. This rating decision will be yet another drawback to those who wish to buy large symbolic marbles of Innocence at the knee of Experience, or Federal Union escaping from the coils of Totalitarianism.

*

Lambkins in glazed pottery are not the only small-scale alternatives obtainable. How about the exquisite, wire-strung bone shapes recently exhibited by Mr. Henry Moore at the Leicester Galleries, or the balanced tinklings of Alexander Calder?

THE FORTH BRIDGE

The Forth Bridge has reached its first half-century. Built by the companies which are now the L.N.E.R. and L.M.S., it was designed by John Fowler and Benjamin Baker and opened by the Prince of Wales on March 4, 1890. The bridge has for me—to use Mr. Betjeman's word—powerful topographical associations. It recalls a bitter, misty moonlight with snow flopping from the bridge into the water. And, even more strongly, a school gym with ropes looped up, a smell of soft soap, swaying electric lamps and a lecturer with a pair of whiskers nicely calculated to strain school discipline.

*

Besides painters always painting and expansion taken up by rollers, that lecturer talked of the first design for the bridge, which was prepared by the designer of the former Tay Bridge; and of how everything was ready to go ahead when the Tay Bridge disaster smashed a reputation overnight and gave the job to Fowler and Baker.

*

It is a story which has probably been touched up down the years. But even in these days of factors of safety, L.C.C. regulations and so on, very few architects can recall it without a small, fleeting twinge of uneasiness. These queer things . . . do happen.

STAY-AT-HOME IDEAL HOME EXHIBITION

Because of A.R.P. difficulties there is to be no Ideal Home Exhibition this year. Instead, Olympia will be brought to your fireside in the unfamiliar but more convenient shape of the "*Daily Mail* Ideal Homes Annual."

*

This will be not unwelcome news to many pairs of reminiscently weary feet and to eyes surfeited in memory with gazing at colour organs, mincing mannequins, concrete gnomes, gimcrack labour-saving devices, and new and more-fibrous-than-ever breakfast foods. All exhibitions in retrospect seem to be largely composed of such irrelevancies, which tend to obscure, even at the time, those ideas and exhibits which are worthy of serious attention. The search for the significant will be a less exhausting business among the pages of the proposed Annual (whose Technical Editor will be the experienced Mr. Ian Jeffcott) than along the crowded aisles of Olympia.

*

It has always seemed to me a great pity that the R.I.B.A., through its Public Relations Committee, has never taken a stand at this and similar shows, and tried to put over some discreet propaganda for architects by means of plans and photographs—a potted version perhaps of the Small House Exhibition or a few photos of Mrs. Borders' house as a warning against second-rate building.

ASTRAGAL

NEWS

MR. MARSHALL JOINS R.A.F.

Mr. C. Beresford Marshall, F.R.I.B.A., has joined the Royal Air Force as a pilot-officer. He served in France in the last war with the Royal Flying Corps.

The practice of Messrs. Marshall and Tweedy is being carried on by Mr. Marshall's partner, Mr. Lionel H. Fewster, L.R.I.B.A., at 41 Chagford Street, Dorset Square, N.W.1.

FILMS AT THE BUILDING CENTRE

Mr. T. E. Scott, F.R.I.B.A., will preside, and Mr. Eric Bird, A.R.I.B.A., now of the Ministry of Home Security, A.R.P. Department, will speak at the Building Centre, 158 New Bond Street, W.1, on Tuesday, March 19, when films will be shown dealing with the resistance of asphalt, glass and concrete to incendiary bombs, and the resistance of concrete to high explosive. Films will be shown at 4.30 and 6.30 p.m., and tea will be served in the interval. Architects, builders, local government and A.R.P. officials are invited to apply to the Building Centre for tickets.

HOUSING IN SCOTLAND

A demand is to be made for an early meeting with the Secretary for Scotland and other appropriate Ministers to discuss ways and means of mitigating the serious situation in the building trade. This was the decision reached last week at a conference representative of the national organizations and professions of the building industry in Scotland.

TRADE UNIONS IN WARTIME

The first of three broadcast talks on "Trade Unions in Wartime" was given on March 11 by Mr. G. Hicks, M.P., President of the Amalgamated Union of Building Trade Workers. On March 25, at 9.20 p.m., the speaker will be Mr. W. Holmes, Chairman of the T.U.C., and on April 8, at the same time, Sir Walter Citrine, General Secretary of the T.U.C. and President of the International Federation of Trade Unions, will give the third and last talk. All three speakers are members of the Anglo-French Trade Union Council, which has been set up for duration of the war.

As a result of the necessity of economizing paper in war-time, newsagents are unable to keep a stock of journals and periodicals for casual sale. If you wish to make sure of receiving your copy of this JOURNAL *in future, you should either place a definite order with your newsagent or subscribe direct to*

THE PUBLISHER, 45 THE AVENUE, CHEAM.

Annual subscription rates £1 3s. 10d. inland; £1 8s. 6d. abroad.

R.I.B.A.

Following are the results of the 1939-40 competition for the R.I.B.A. prizes for public and secondary schools :—

(*a*) *Prize for Essays.*

A prize of £4 4s. has been awarded to B. M. Lott, of Bancroft's School, Woodford Green, for his essay on "Broxbourne Church, Herts."

(*b*) *Prizes for Sketches.*

(1) A prize of £3 3s. has been awarded to C. J. Parton, of the Grammar School, Dudley, for his miscellaneous sketches.

(2) A prize of £3 3s. has been awarded to R. W. P. Gregory, of the Brighton, Hove and Sussex Grammar School, for his measured drawings of The Church of St. Wilfrid, Brighton.

TIMBER CONTROL

Negotiations for transport of British Columbian timbers by rail to Atlantic ports have made sufficient progress to enable arrangements to be set in hand for the first cargo to be handled in this manner. The railroad rates which are being paid, 75 cents to the St. Lawrence ports per 100 lb. and 82 cents to St. John and Halifax, will add to the cost of timber, but the saving in length of voyage and increased amount of tonnage thereby made available will enable a larger quantity to be imported than would otherwise be the case.

THE NEXT YEARS

IN six months building works needed for war have only employed a small part of the building industry and its professions. But although building volumes in war can never approach those of peacetime, it is probable that a much larger programme of work will be asked from the industry as the war continues.

There is, therefore, good reason for the industry's using the present lull to examine the efficiency of its organization—not only for war, but for peace. No different preparation is needed for the two purposes; efficiency in wartime building means efficiency in peacetime building.

But efficiency is not merely good business organization; it is also the result of well-being—of full understanding and reliance between all components—within the industry.

To find where well-being is lacking in the industry, and where the understanding between its components could be improved, Mr. Howard Robertson has made a study of the whole architectural and building field for this JOURNAL.

Mr. Robertson's views are personal, but when he considers reforms and the means by which they might be achieved, it will not be forgotten that he is both a Vice-President of the R.I.B.A. and a member of the War Committee of B.I.N.C. In short, he is one of those who must carry out reforms if the industry thinks reforms are needed.

The JOURNAL *will begin to publish* THE NEXT YEARS *shortly.*

OBITUARY

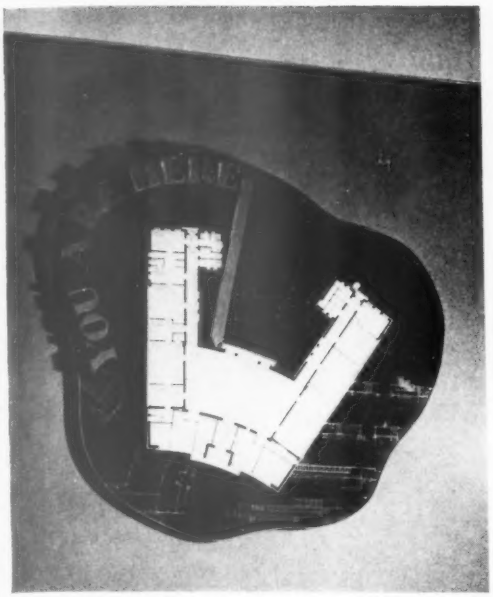
LORD CRAWFORD AND BALCARRES

BY Lord Crawford's death architecture has lost a good and noble friend who was always ready to serve her in all the places open to him, from an R.I.B.A. banquet to the House of Lords. He was the perfect example of that rare and valuable kind of aristocrat who takes art seriously—but, as it is hardly necessary to add for any who ever heard him speak—not so "seriously" that his geniality and sense of humour were ever submerged. At times it seemed that he could pull the leg of meetings in danger of becoming too pompous, as he shocked the Frank Lloyd Wright devotees by telling one of his popular but completely irrelevant funny stories when he took the chair at one of Mr. Lloyd Wright's lectures last spring.

During his parliamentary career he filled several ministerial posts, and in 1921 and 1922 was First Commissioner of Works, a position which in some more ideal state than ours might have given him the finest possible chance to exercise his talents. But whatever interest he may have found in the duties, they seem to have destroyed his desire to take office again, and after 1922 almost all his public activity was in fostering the arts in a more free-lance way. In another century he would probably have indulged his talents by the exercise of personal bounty or have been a drawing room man-of-taste, but in this he was Chairman of the Royal Fine Art Commission, Trustee of the British Museum and the National Gallery, Chairman of the C.P.R.E., and patron or honorary member of numberless learned societies.

He was sure to be found wherever in the art world there was any conceivable service that he could render, and architects certainly have reason to be grateful for the constant interest he showed in their profession and his willingness to work through and for the R.I.B.A. for the benefit of architecture. He handled the Registration Bills in the House of Lords and did far more than just stand as their formal proposer. By the obvious enthusiasm, knowledgeableness, and sincerity of his advocacy he did an incalculable amount to obtain the Bills' passage.

Lord Crawford's death is perhaps symbolic of the passing of the age in which his genius could operate freely. His knowledge of art, which far exceeded that possessed by many who wear their scholarship more heavily, was of a kind which for good or ill is a bit uneasy in the modern world. It was tinged with nostalgia for a new renaissance in terms modern architecture knows nothing of: it was a little nervous of the future and mistrustful of youth. Architects will be additionally grateful to him in that, despite this uneasiness, he was always ready to help the profession and always to help hardest when help was most needed.

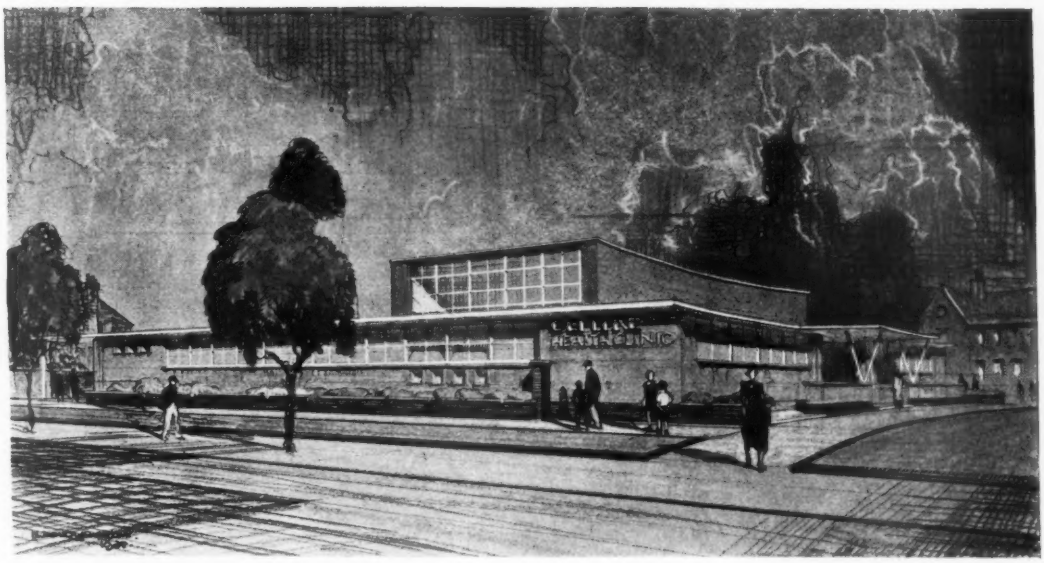


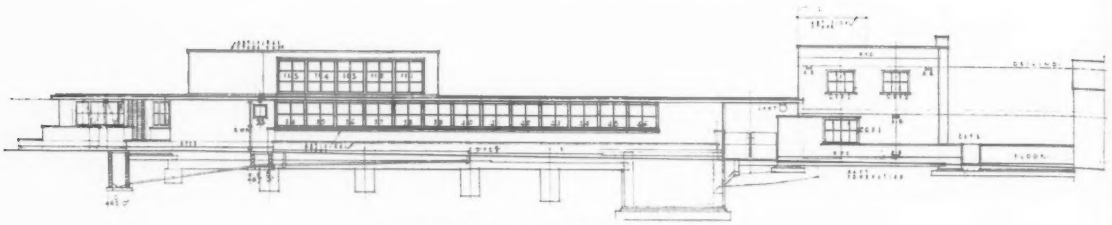
HEALTH CLINIC, BILSTON

DESIGNED BY LYONS, ISRAEL AND ELSOM

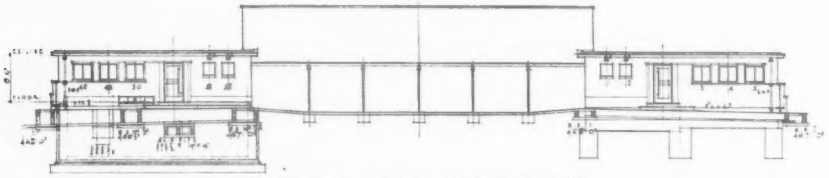
GENERAL AND SITE—Clinic for ante- and post-natal treatment and child welfare up to school-leaving age. The building is the outcome of an open competition held in 1937. Site is triangular in shape. Forecourts have been developed as formal gardens and lawns ; central courtyard within the building has been laid out in a similar manner and will be provided with play pens for the use of toddlers in the summer months. Caretaker's house is at the north-west corner of the site.

Left, reference plan in the waiting hall; it is of block board covered with black-and-white prints of the working drawings, on which is superimposed the ground floor plan. Below, perspective from the south, which was hung in the R.A. Exhibition in 1938, and a general view of the building from the same viewpoint.

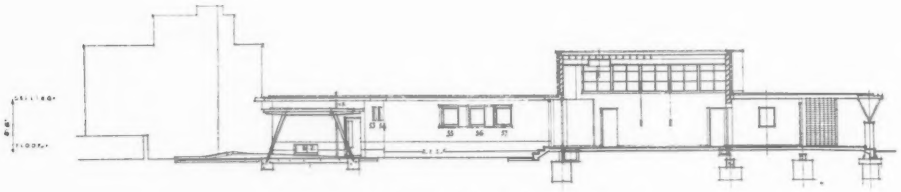




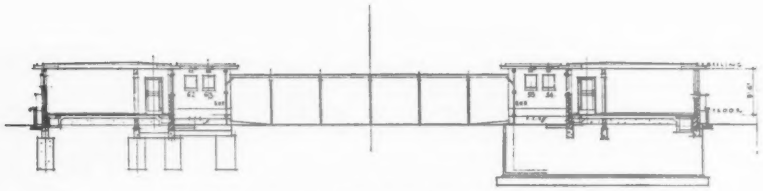
NORTH-EAST ELEVATION



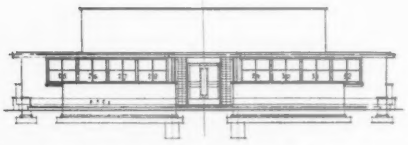
NORTH-WEST ELEVATION



SECTIONAL ELEVATION C–D



SECTIONAL ELEVATION E–F

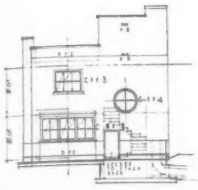


SOUTH-EAST ELEVATION

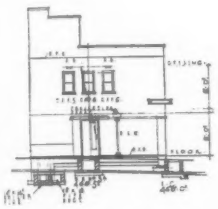
CONSTRUCTION AND EXTERNAL FINISHES—External walls up to window cill height are 15½-in. cavity walls, on which rests a continuous window framing with expansion joints. Wood window frames are bolted to the framing and are strapped back to the internal brick partitions. Roofs are of timber formed with 8 in. by 2 in. joists and boarding, covered with special felt, finished with patent spar, and insulated against heat loss with ¾-in. fibre board. Hood over the main entrance is carried partly by cantilever from the main roof and partly by the V-shaped struts built into the dwarf forecourt walls. External walls are of selected hand-made facing bricks, flush pointed, with recesses to receive flower boxes at cill level. Reveals and walls of the windows above the cill level of the ground floor are faced with turquoise blue faience tiles. Soffite of the overhanging wood cornice is cement rendered and painted.

Left, the pram shelter on the north-west side of the internal courtyard.

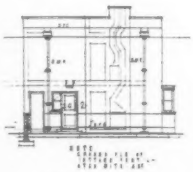
HEALTH CLINIC, BILSTON • DESIGNED



SOUTH-WEST ELEVATION

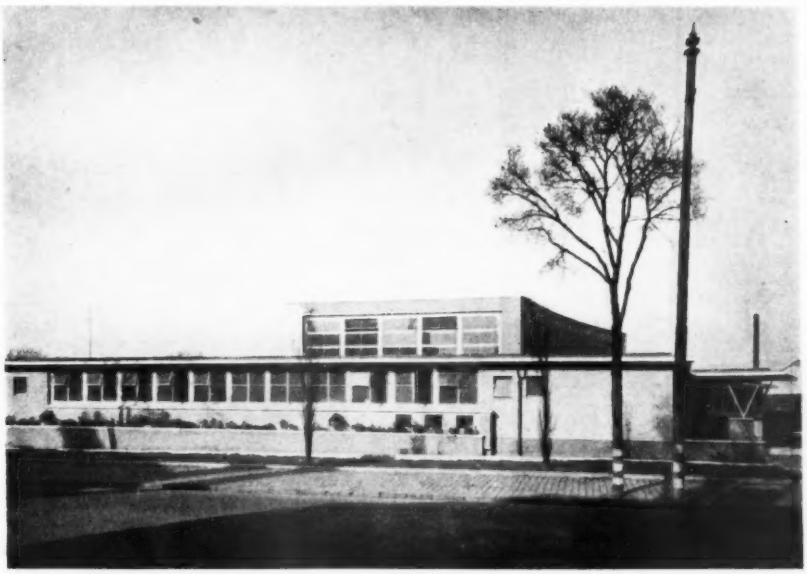


SOUTH-EAST ELEVATION



SECTION

CARETAKER'S COTTAGE



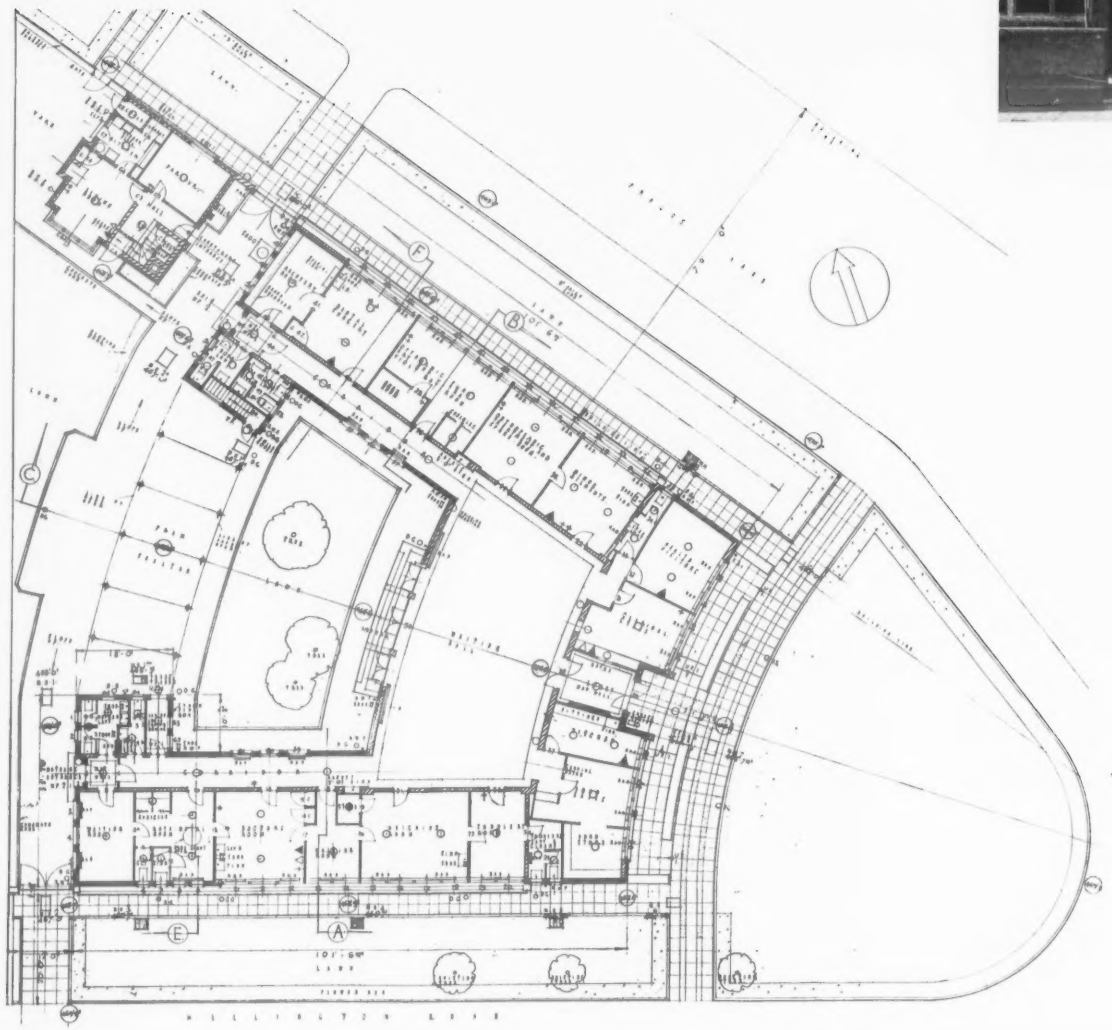
Top, south-west front : centre and right, two views of the main entrance.

BY LYONS, ISRAEL AND ELSOM

HEALTH CLINIC, BILSTON • DESIGNED BY LYONS, ISRAEL AND ELSOM

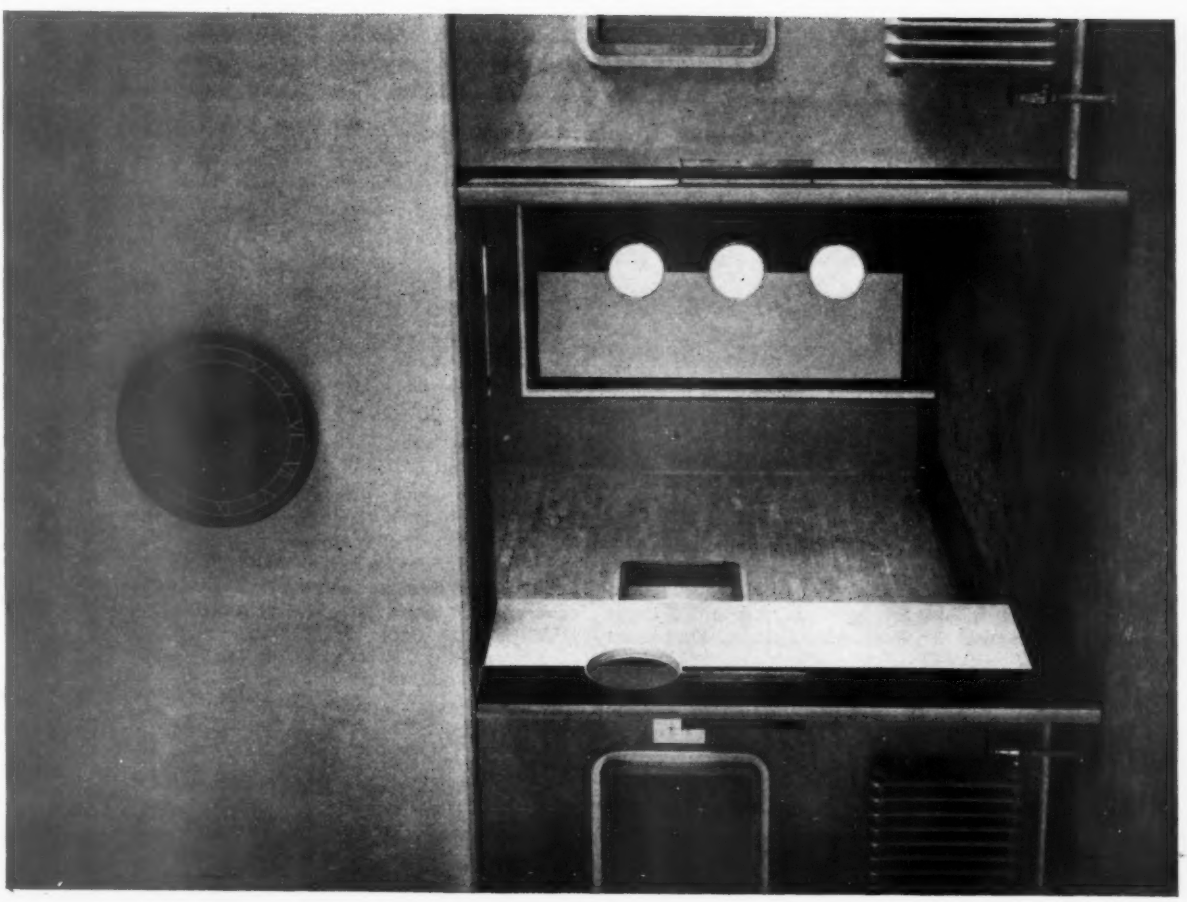
Main entrance.

Waiting hall.

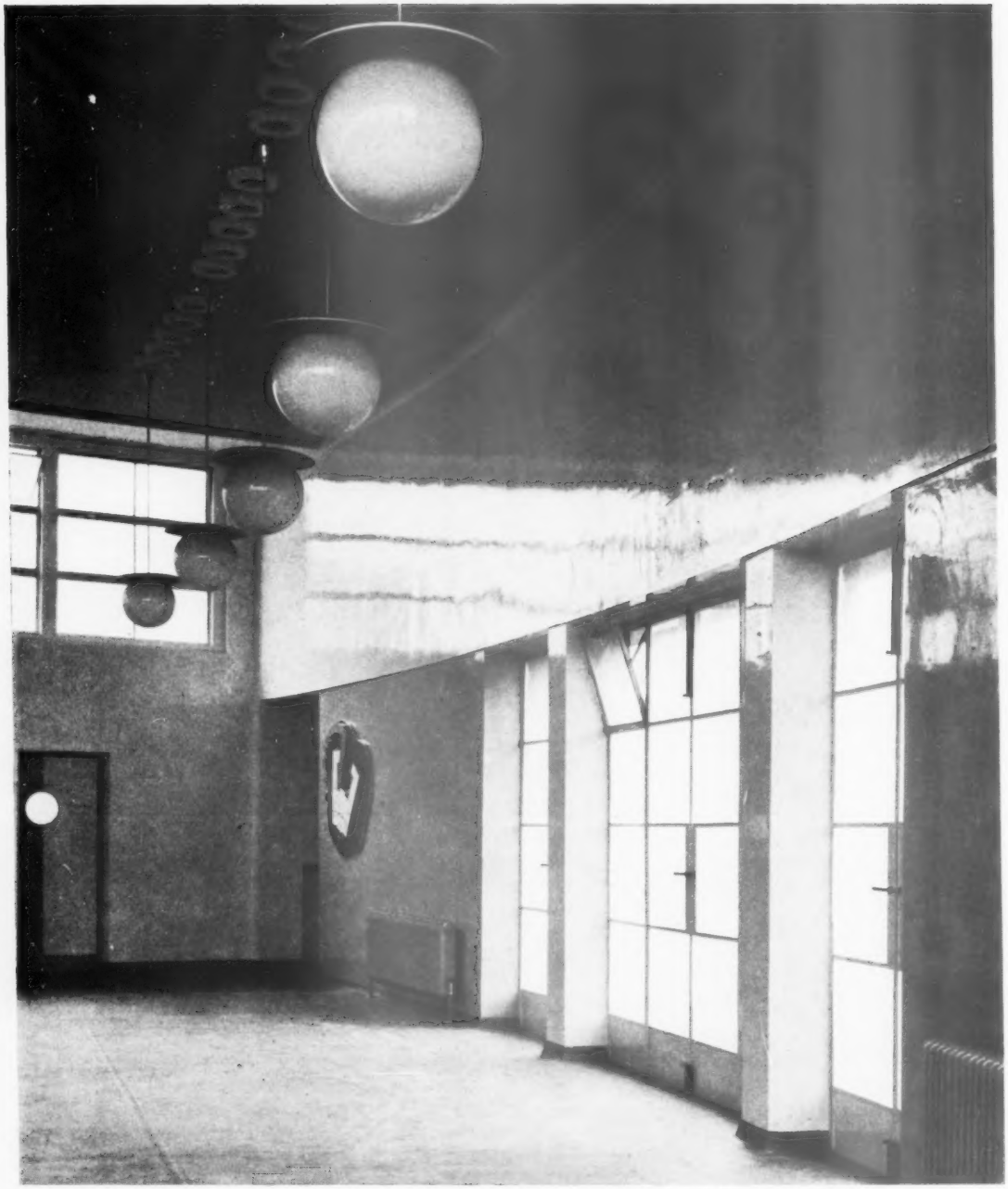


PLAN—Plan shape dictated by site conditions only. Inter-relations of the various rooms were arrived at by the architects after consultation with Dr. C. B. Halen, of the Ministry of Health.

INTERNAL FINISHES AND EQUIPMENT—Floors and skirtings throughout are of composition flooring containing a high percentage of natural asphalt. Walls to all rooms are in hard plaster finished generally with high gloss paint. Joinery is of deal except the external doors, which are covered with galvanized zinc casing finished with cellulose paint ; much of the built-in furniture is in hardwood.



Two views of the entrance doors from the waiting hall to the lobby. The side walls of the lobby are in primrose facings and the end walls plastered; lobby skirting and surround are of terrazzo.



Waiting hall, showing doors leading to internal courtyard, and beyond, the "You are Here" reference plan, a detail of which is reproduced on page 277.

INTERNAL FINISHES (*contd.*)—In the toddlers' room is a series of fourteen mural decorative motifs designed and executed by Mr. E. D. Lyons. Ironmongery, generally, is in bronze, except in the lavatories and kitchen, where it is chromium plate.

A feature of the waiting hall is the "You are Here" board (shown in the photograph on this page). It is constructed of block board covered with black-and-white prints of the working drawings, on which is super-imposed the ground floor plan. The surround is of metal.

HEALTH CLINIC, BILSTON • DESIGNED BY

Toddlers' room (top) and dental surgery.

SERVICES—Low-pressure hot-water system ; two boilers, one for the domestic hot water, the other for heating radiators which are hospital type.

General contractors were W. Kendrick and Sons ; for list of sub-contractors, see page xxxii.

BY LYONS, ISRAEL AND ELSOM

LETTERS

Building Films

SIR,—There are many people in the building industry who are interested in the making of films very largely for their own amusement. Many of them film manufacturing processes in their own branch of the industry, building methods and so on. I know that most of them like criticism and " back chat " with other people who are doing the same sort of thing.

As a result of discussion with one or two of these amateur film fans, I am writing to say that we are forming, not another society, but an informal club at the Building Centre, so that all those film makers in the architectural world and building industry can meet.

Roughly, the suggestion is possibly a fortnightly meeting with projector available, when films made by members, either old or new, could be shown. It may be that eventually a Library of Movies may be formed, which would be of real value to students of building and others interested in building processes.

Will any of your readers who are interested kindly communicate with me ?

F. R. YERBURY
Director, Building Centre
158 New Bond Street, W.1.

Timber Shortage

SIR,—The Building Industries National Council is anxious to collect data with a view to a fuller examination of the position regarding the release of timber for civil building, provided that this can be done without detriment to the war effort.

Everyone interested in the building industry is asked to help by furnishing any relevant information and particularly as to :

(1) Specific cases of building work held up or in abeyance due to inability to obtain the necessary timber.

(2) Cases of inappropriate use of timber, including A.R.P., particularly since January 1, 1940.

(3) Examples of difficulties in obtaining timber retained in stock for unspecified purposes, especially when required for building or general joinery work.

It is requested that replies should be sent as early as possible, and the sources of information will in no case be disclosed without the sanction of the writers.

H. B. BRYANT, Secretary, B.I.N.C.
Gloucester Place, W.1.

National Planning Council

SIR,—It seems imperative that no time should be lost in formulating a working scheme for the new National Planning

Council, and I am very disturbed that so far nothing seems to be moving.

Money must be gained for initial working expenses at least, and a sound way of raising funds would appear to me to be the drawing up of a report consisting, briefly, of a description of the difficulties to be tackled; what, in an ideal sense, one would like to do for the solution of the problems; and, thirdly, what the Council feels it is practical to do at the present time.

Armed with such a tangible programme there would be the best chance of obtaining financial assistance—*and* of enlisting useful sympathy in other directions.

Without a report of this nature, it will be difficult to gain an initial impetus.

The conference did not afford one the opportunity of expressing these observations. If you can make use of them, I think you will be rendering a service.

GUY METCALF

London, E.C 3.

A Coming Meeting

Sir,—I regret that I shall be unable to attend the Informal General Meeting on April 2 at the R.I.B.A. on "The Building Industry Now." I write to you about it because I believe it possible that in spite of the non-committal nature of the title, the intense respectability of the speakers, and the depressing war-time atmosphere at the R.I.B.A., something valuable may come out of the meeting.

No doubt the eminent speakers know many facts about the condition of the industry—though if previous meetings at Portland Place are a precedent they will be wrapped in secrecy—but it is doubtful whether they have such a genuine appreciation of the position as the ordinary assistant who doesn't know where next month's pay is coming from. The grandiose schemes for post-war reconstruction which, we understand, are so earnestly discussed by the R.I.B.A. "Inner Cabinet" seem somewhat remote to the majority of the profession.

What the Institute must do is to come down to reality and start a broad propaganda campaign to show the necessity of civil building to the welfare of the whole population, and to give up the hopeless task of trying to persuade the Government that architects could prosecute the war more efficiently if they were given the chance.

COLIN PENN

Haverstock Hill, N.W.3.

Post-war Paradises

Sir,—While defending himself in his second note on "post-war paradises," Astragal seems at pains to prove that he really agreed with me all the time.

But now he maintains that his complaint was against the prevalence of "wishful thinking of the vague and grandiose kind." This is something that does not interest me. My quarrel with Astragal was that he took a sneering, cynical attitude to the first big effort of the R.I.B.A. to make headway in studying the essential problem—far from "vague and grandiose"—of social replanning after the war.

Obviously the National Planning Council is not mad enough to imagine that it can solve the problem of re-planning *in toto*, even if it had the willing help of all government departments. But it can very well establish relevant statistics, formulate guiding principles, work out ways and means, and clear away the mists of vague notions which blur the basic idea of National Planning. Is this programme "plainly beyond their powers"? If so, we may as well throw up the sponge and go home to the fun and games of *laissez-faire*.

It was Astragal's *weary, cynical attitude* that disturbed me. I have noticed that he believes in the principle of National Planning, but nothing could be worse publicity for the cause, nothing could be better calculated to encourage public and professional apathy, than his cynical commentary on the Housing Centre and R.I.B.A. initiative.

Cynicism is a deadly dangerous weapon of propaganda. It must not be misused to destroy a commonly shared and growing faith.

R. GARDNER-MEDWIN

Old Coulsdon.

EXHIBITIONS

WE seem to have very few sculptors in England, and most of them either cling with unfortunate tenacity to the Mestrovic-Gill school of thought, or hurry to stick entirely unco-ordinated blocks of irrelevant carving, like postage stamps, on the faces of our more important civic buildings. And really those groups representing industrial or military achievements were done so very nicely at the foot of the Albert Memorial—or for that matter in Babylon—must we still think of sculpture simply in terms of applied anecdotal ornament? There are, mercifully, a few sculptors in this country who do not, and Henry Moore's exhibition of recent work at the Leicester Galleries should do much to prove—if it needs proving—that sculpture has other and more important functions. But it is far from easy either immediately to comprehend or to discuss his work. And the trouble, I think, for most people lies in the fact that this sculpture that is so nearly abstract is based on recognizable organic forms, so that they are distracted, by thinking of the distortion, from full appreciation of Mr. Moore's astonishing plastic rhythms.

In his latest work he has made the fullest use of a combination of abstract and natural forms, contriving remarkably harmonious compositions out of the contrast of biomorphic solids and the tension of stretched cords. This motif is not entirely new to Mr. Moore, but he has now explored it very fully, and it seems to derive naturally from his final analysis of the reclining figure which he is also showing in this exhibition. His drawings for sculpture, in which he dissects many problems, are very lovely and form an important part of the exhibition.

Ivon Hitchens' painting, at the same gallery, is an excellent counterpart to Henry Moore's sculpture. His work, which also verges on abstraction, is similarly based on recognizable natural forms—in this case those of trees and landscape. Some years ago, it seemed, for a moment, that Mr. Hitchens might become so dazzled by his brilliant use of colour that he would use it for its decorative qualities alone. But it soon became very evident that he was a serious painter, profoundly interested in exploring the possibilities of design through colour organization. The work in his present exhibition is better than anything he has previously shown, as fresh and sensitive in colour as ever, but defining a greater depth and perspective. He is undoubtedly one of the most lyrical of English painters.

BUILDING CONTRACTS

The outbreak of war has given rise to certain questions, as between building owner and contractor, in the case of uncompleted building contracts which were entered into prior to the war and contain no provision for the adjustment of variations in the cost of labour and materials. Many members of the Chartered Surveyors' Institution (states the Secretary) asked for guidance as to whether the legal liabilities of the parties to a building contract were altered or modified by the fact of hostilities, and it was considered that the question was of sufficiently wide concern to members engaged in the building side of the profession to justify the taking of counsel's opinion. The case submitted to counsel and his opinion thereon were printed in the November, 1939-January, 1940, issue of the Institution's Journal, but owing to the number of requests received for copies, the case and opinion have been reprinted in the form of a separate pamphlet. Copies are obtainable from The Acting Secretary, The Chartered Surveyors' Institution, 12 Great George Street, Westminster, S.W.1. (Price 6d.)

GLASGOW SCHOOL OF ARCHITECTURE

The following awards have been made in the Glasgow School of Architecture :—

Diplomas—Robert Aitchison (Glasgow), James Black (Airdrie), James M. Cowie (Wishaw), Robert J. Forsyth (Stranraer), John G. Hird (Glasgow), Robert F. Kennedy (Harthill), Archibald T. Lindsay (Greenock), John T. Reid (Kilmarnock), James R. C. Rowell (Prestwick)

Certificates—Robert R. Jack (West Kilbride), David G. Keir (Glasgow), David Sherret (Glasgow), James H. Sinclair (Clarkston), Alexander Strang (Falkirk), Robert G. H. Turnbull (Glasgow), Laurence H. Twigg (Alloa), Thomas H. Wallace (Troon), Andrew C. Wilson (Paisley).

A. Leslie Hamilton Memorial Studentship and Medal—Alexander S. Todd (Coatbridge).

Bourdon Memorial Studentship—Robert F. Kennedy (Harthill).

Glasgow Institute of Architects' Prizes—Design—Alexander Strang (Falkirk). Measured Drawings—Laurence H Twigg (Alloa). Freehand Drawing—James R. C. Rowell (Prestwick).

J. B. Wilson Prize—Thomas A. B. Dempster (Kilmarnock).

T. L. Watson Memorial Prize—David Sherret (Glasgow) and Elizabeth Spittal (Glasgow).

Minor Travelling Studentships—Hugh S. Robertson (Coatbridge), Harry A. Wheeler (Stranraer).

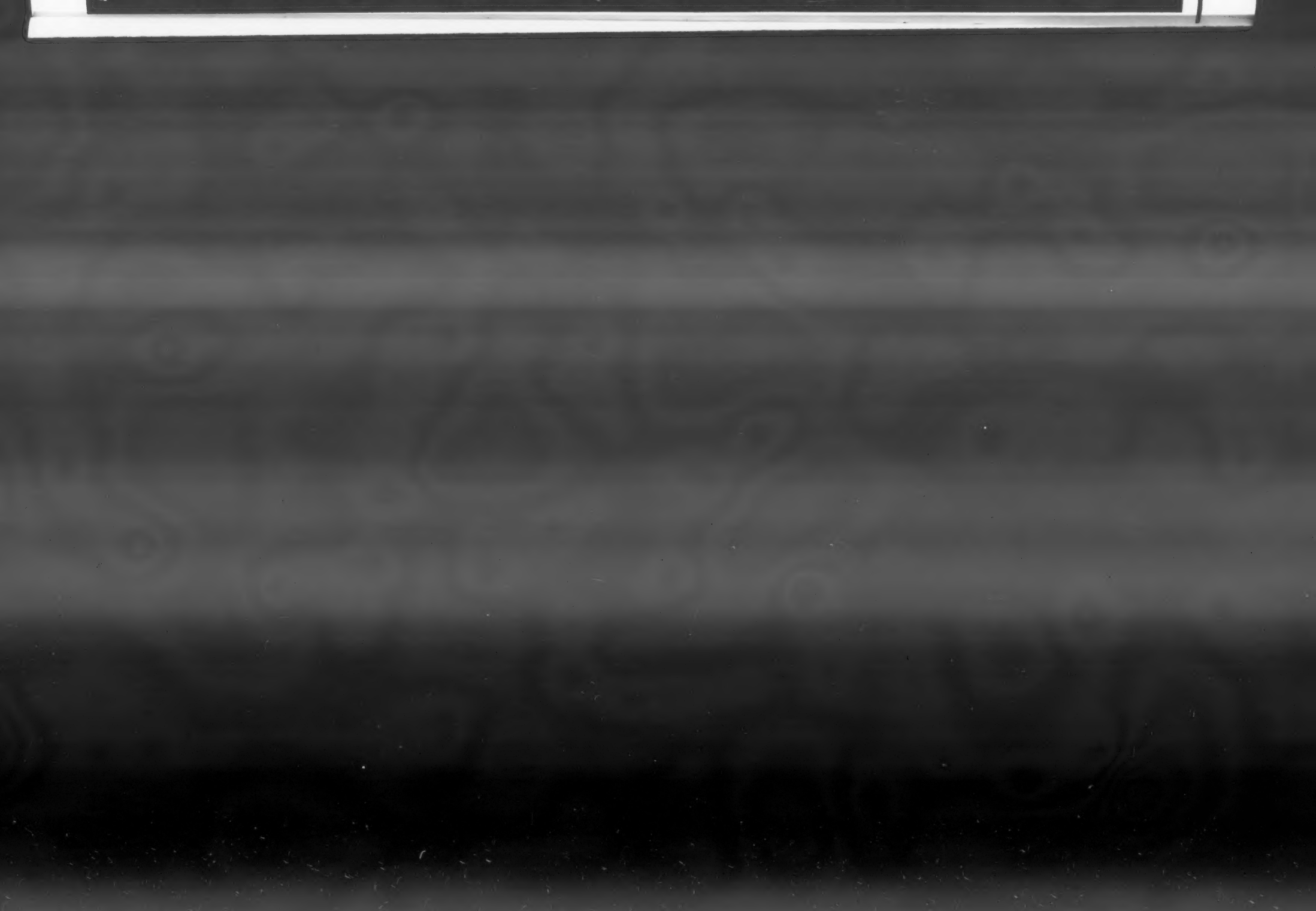
Whitelaw Silver Medallion—Thomas Cowan (Glenboig).

Whitelaw Bronze Medallion—Robert W. K. C. Rogerson (Glasgow).

Gilt Medallions—John E. Murray (Ayr), Laurence H. Twigg (Alloa).

Silver Medallions—James Docherty (Glasgow), Alexander S. A. Watson (Dalmuir).

Bronze Medallions—Alan J. Burnett (Auchterarder), Alastair A. Taylor (Motherwell), Ronald G. Thomson (Dennyloanhead), John H. Young (East Kilbride).

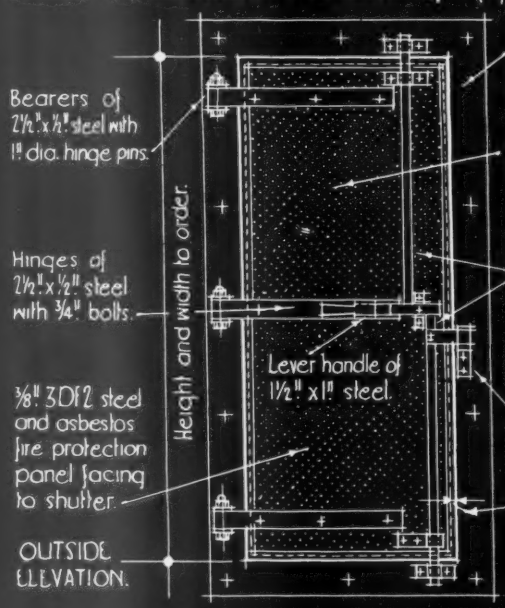


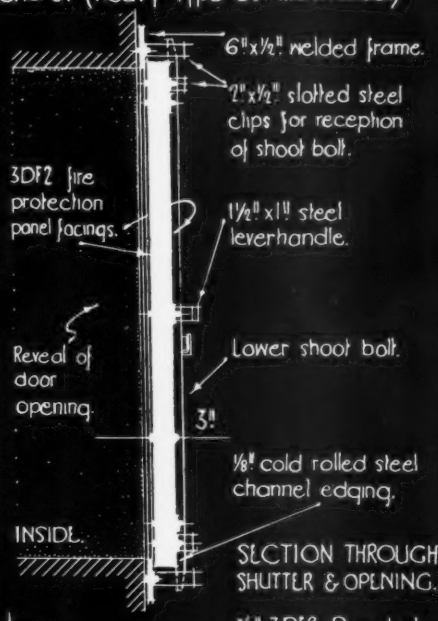
830A.

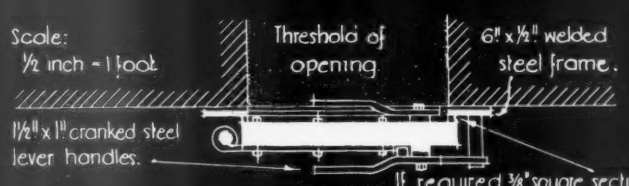
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

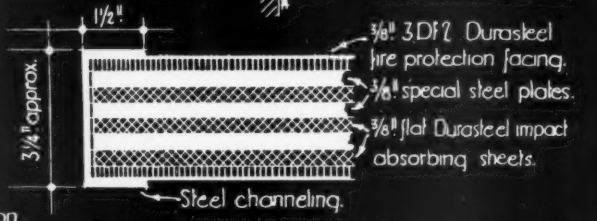
TYPICAL DETAILS OF DURASTEEL COMPOSITE SPLINTER PROOF SHUTTERS AND DOORS.

Shutters are available in thicknesses of 1" (Type B), 1½" (Type C), and 3" (Heavy type as illustrated.)



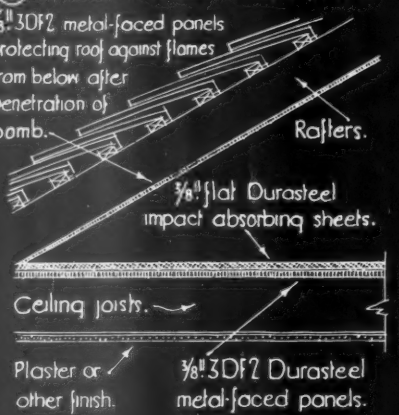






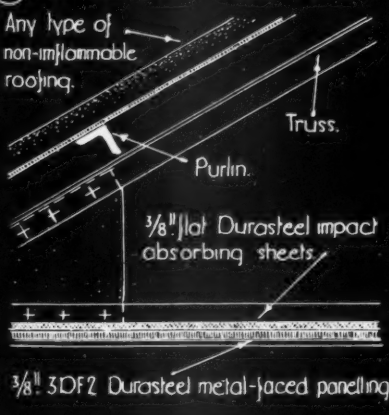
PRECAUTIONS AGAINST LIGHT INCENDIARY BOMB ACTION IN NEW AND EXISTING ROOFS :

(1) EXISTING PITCHED TIMBER ROOFS.



The light sheeting beneath the rafters is intended not to stop, but to retard the fall of 1-kilo (2¼ lb.) incendiary bombs.

(2) EXISTING STEEL TRUSS ROOFS.



Although this construction is effective against 1-kilo bombs, the stronger the existing roofing material, the greater is the factor of safety.

(3) NEW STEEL TRUSS CONSTRUCTION.

DURASTEEL TRIPLE COMPOSITE ROOFING:

This construction is intended for stopping 1-kilo incendiary bombs before penetration is effected. A similar arrangement may be superimposed on skylights for protection & light obscuration.

Information from Durasteel Roofs Ltd.

INFORMATION SHEET : A.R.P. : SHUTTERS, DOORS AND ROOF LININGS.

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

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 779 •

(Superseding No. 667)

A.R.P.

Subject : Composite Steel and Asbestos Protective Shutters and Fire-resisting Roof Linings

General :

The details given on this Sheet show some applications of two patent materials for Air Raid Precautions work.

The materials are :

(*a*) Durasteel Patent 3DF2 Fire Protection panelling, which consists of two light gauge steel facings keyed to a compressed asbestos composition core. This material possesses a very high fire resistance, withstanding direct flame temperatures up to 1,000° C. without disintegration. The steel facings on each side give it considerable strength.

(*b*) Durasteel Impact Absorbing Sheet, a sheet of highly compressed fibrous composition, which has a high fire resistance and is capable of absorbing shock.

Fire Resisting Roof and Ceiling Linings :

The protective linings shown in the details in this sheet are designed :

(*a*) To break the velocity of falling incendiary bombs.

(*b*) To provide a fire-resisting surface on which the bomb, if it explodes, will burn itself out relatively harmlessly.

No exact standards exist by which relative protective values (resistance to penetration) can be given, but Durasteel has been extensively tested, against impact and fire effect of Thermit and Elektron incendiary agents, and as a general guide it can be stated that each construction shown will stop a 1 kilogram bomb at a terminal velocity of 450 ft. per second.

The resistance to impact afforded to each type of construction is more than sufficient to arrest bombs (weight and velocity as above) on top of the lower 3DF2 Sheet, where if they ignite they will burn out relatively harmlessly.

Detail No. 1 :

This method of protection is applicable to existing pitched wooden roofs, in which the tiles or slates are fixed to the battens in the usual way. Rafters should be spaced at not more than 14 in. centre to centre, and are lined on the underside with Durasteel 3DF2 sheeting $\frac{1}{8}$ in. thick, skew nailed or screwed into position.

This sheeting is intended only to retard the fall of the bomb, and to protect the rafters and other roof members from a bomb burning itself out on the ceiling lining below.

An Impact Absorbing Sheet and a sheet of 3DF2 are provided on top of the ceiling joists (which should not be spaced at more than 14 in. centre to centre), and the surface thus provided is intended finally to check the fall of the bomb so that, if it bursts, it will burn itself out on the fire-resisting sheet, which will resist incendiary action of 4 lb. of Thermit in any one spot.

Details Nos. 2 and 3 :

These details show the application of the same methods to steel roof construction, in which it is intended to resist 1 kilogram or modern light type bombs. In the case of the existing construction shown in detail No. 2, the protection given is effective against the 1 kilogram bomb, even if the roofing material offers very low resistance to penetration. The stronger the existing roofing material, the greater the factor of safety.

Durasteel Composite Shutters and Doors:

These are faced with Durasteel 3DF2 Fire Protection panelling, and have a core composed of mild steel plates and Impact Absorbing sheets. All shutters are purpose made to site requirements, and can be varied to meet the degree of resistance required. There are three types commonly called for :

Type B.—1 in. in overall thickness, giving a high resistance to fire and a certain degree of resistance to blast.

Type C.—$1\frac{1}{2}$ in. in overall thickness giving blast and splinter protection equal to a $\frac{5}{8}$ in. M.S. plate, as well as a high fire resistance.

Heavy Type.—3 in. in overall thickness as shown on this Sheet, having protective properties equal to 14 in. brickwork, and capable of resisting flying splinters resulting from the explosion of a 500 lb. G.P. bomb at a distance of 50 ft.

Fixing :

Typical fixing details are shown in the drawings.

Gas Proofing :

All shutters can be made gas proof with suitable jamb linings and rubber cushion strips. Triple action locking gear is standard, and the tapered bolts control compression of the rubber gasket.

Tests :

Full details and photographic records of tests carried out on Durasteel products and various types of construction incorporating Durasteel may be inspected on application to the Company.

Prices :

Owing to rising cost of raw materials, the following approximate prices only are given, as a rough guide for estimating :

1. *Durasteel 3DF2 Fire Protection Panelling.*—From 1/- to 1/7 per sq. ft. according to thickness and finish (i.e. black steel, aluminium painted or galvanized, in $\frac{1}{8}$ in., $\frac{1}{4}$ in., or $\frac{3}{8}$ in. thickness).

2. *Impact Absorbing Sheet.*—Approximately 6d. per sq. ft. (nominal thickness $\frac{3}{8}$ in.).

3. *Corrugated Durasteel Steel-cored Asbestos Roofing.*—2 ft. 3 in. wide overall, supplied in lengths up to 8 ft. at 9d. per sq. ft., representing 11d. per sq. ft. as laid with normal laps.

Manufacturers : Durasteel Roofs, Ltd.
Address : Oldfield Lane, Greenford, Middlesex
Telephone : Waxlow 1051/2
Telegrams : Endurafire 'Phone, London

HOSTEL FOR GIRLS

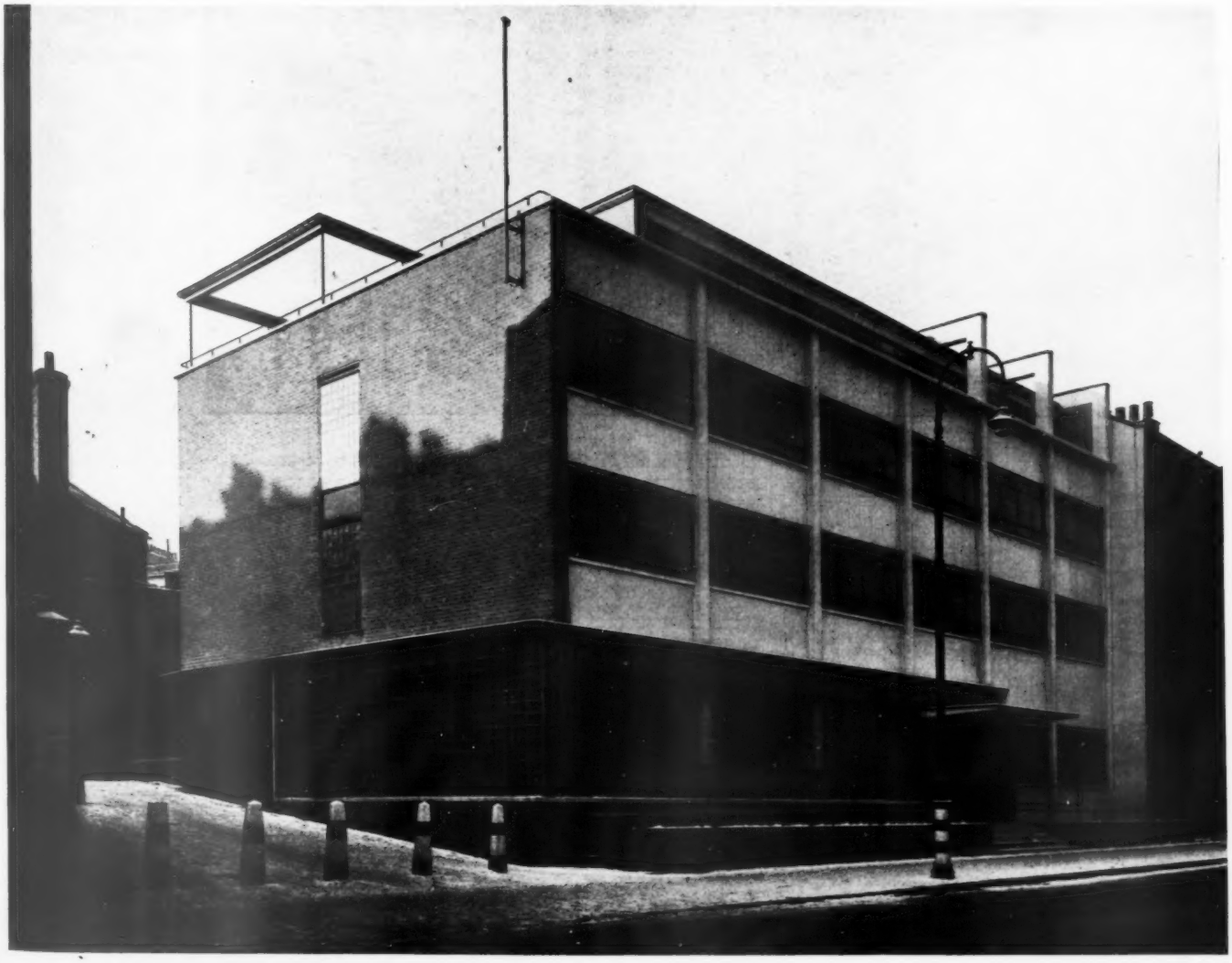
GOWER STREET, LONDON, W.C.

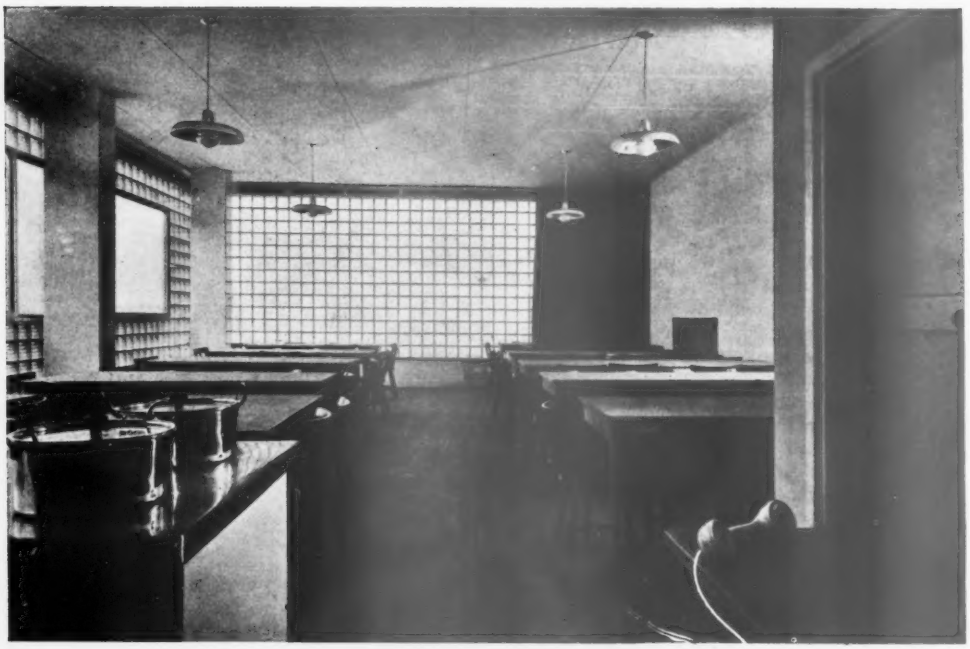
DESIGNED BY E. MAXWELL FRY

GENERAL—This hostel or residential club has been founded by Mrs. Cecil Chesterton, in an attempt to solve the problem of providing working girls with living accommodation within their means. The money to put up the building has been raised by public subscription, but the hostel itself is intended to be self-supporting. The economics of the scheme have been calculated on a basis of fourteen shillings and sixpence per week for each girl. This is the total amount she will pay for board, lodging, etc.—the board including breakfast and supper only during the week (as it is assumed that the girls must lunch near their work) and all meals at week-ends. Incorporated in the building at ground floor level, but disconnected from the hostel and with its own entrance, are the new offices for Cecil Houses Inc. From these offices all the hostels and lodging houses run by this philanthropic organization will be administered. (For the present the building is being used by Canadian troops on leave.)

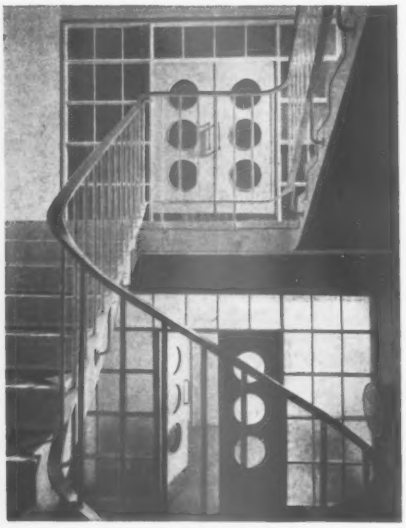
CONSTRUCTION—R.C. frame construction, the spacing of the stanchions being based on a grid determined by the size of the standard dormitory unit. Partition walls are isolated from the structural columns and beams. Floors are insulated with glass silk quilting covered with a cement screed reinforced with chicken wire. Linoleum is laid direct on the screed. Roof is covered with ¾-in. asphalt, which is also used for flashings. The portion of the roof intended as a promenade is finished with cement screeded asphalt. All windows are metal, the sliding windows in the dormitories having specially designed extruded bronze head and cill tracks. All copings and shelves above radiators are in slate.

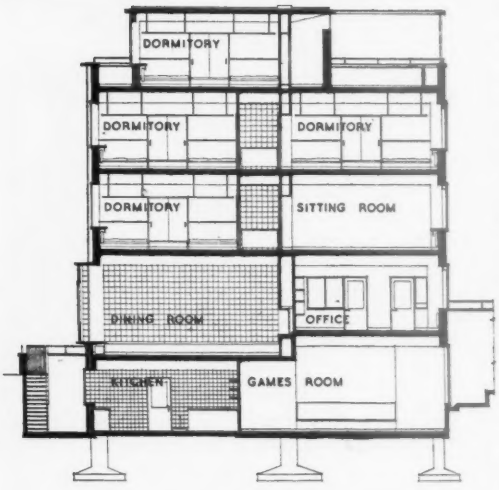
Above, rear elevation, showing the entrance to the offices of Cecil Houses Inc. Below, the Gower Street front.





Facing page, main entrance doors ; On the left, the restaurant ; below, the entrance hall and staircase.



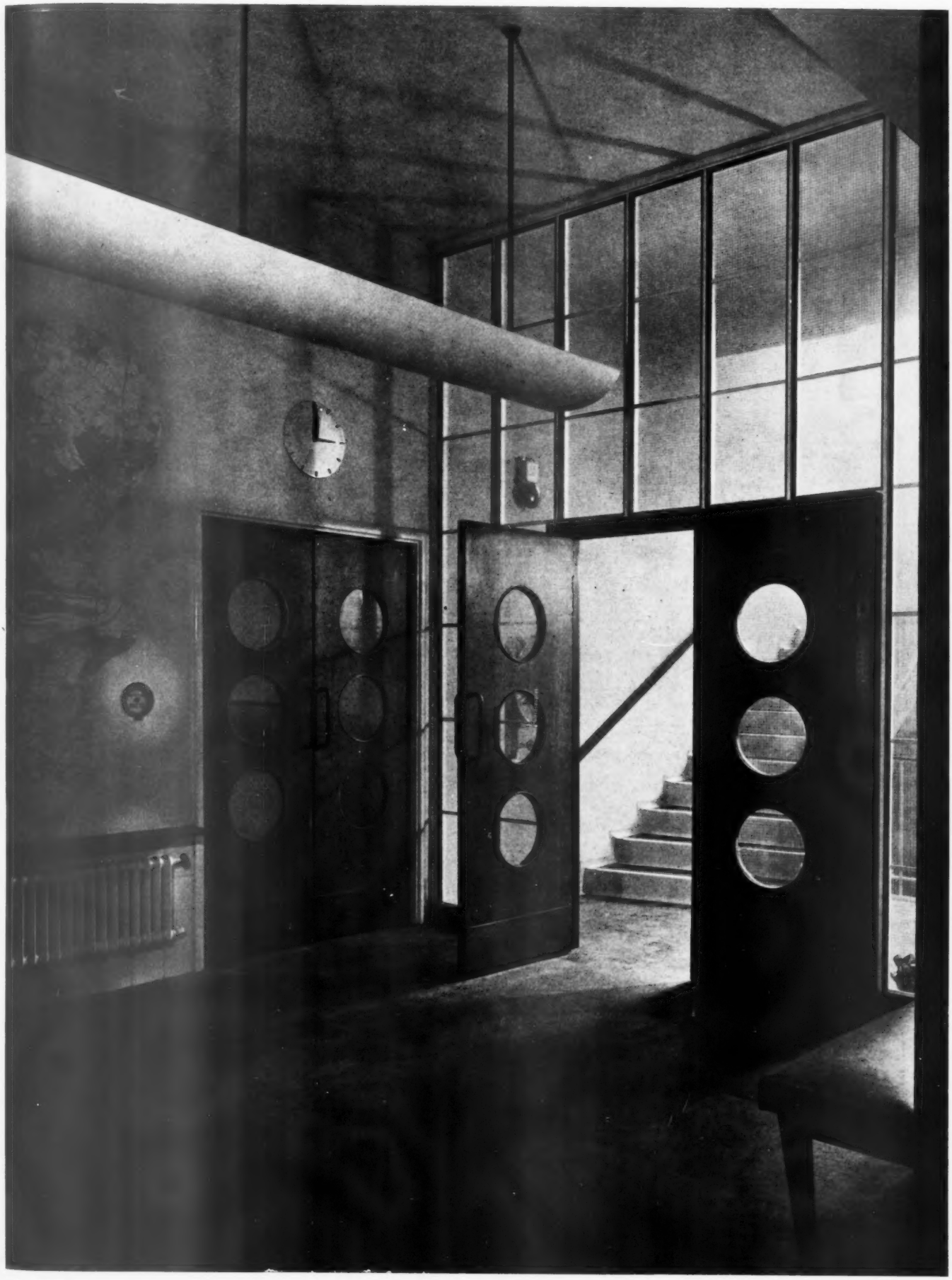


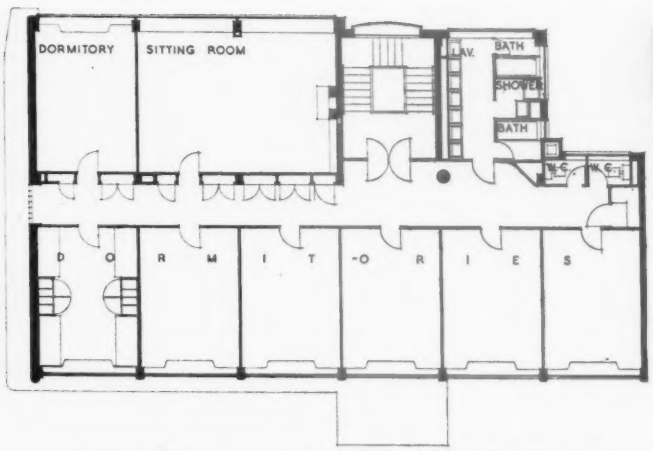
EXTERNAL FINISHES—Wall surface between concrete ribs is of cream-coloured opaque glass panels. On the ground floor is a continuous glass-brick window, with a base of dark brown brick. Main entrance doors, of clear plate glass, have a surround and reveals of bright blue tiles. Metalwork of the windows is blue-grey. The end wall of the building, which is seen in the approach up Gower Street, is faced in brick of an intense red colour.

PLAN—It was found that the most economical planning arrangement was to standardize a dormitory unit holding four girls, and there are eighteen of these dormitories on the three upper floors, so the hostel houses seventy-two girls in all. Although this grouping of girls four to a room was necessary economically, their desire for privacy has been catered for by a system of curtains on suspended overhead rails which partition off the space round each bed to form a small cubicle. Each dormitory floor is self-contained, having its own bath and lavatory accommodation, and its own storage space for linen and blankets and for the girls' suitcases, etc.

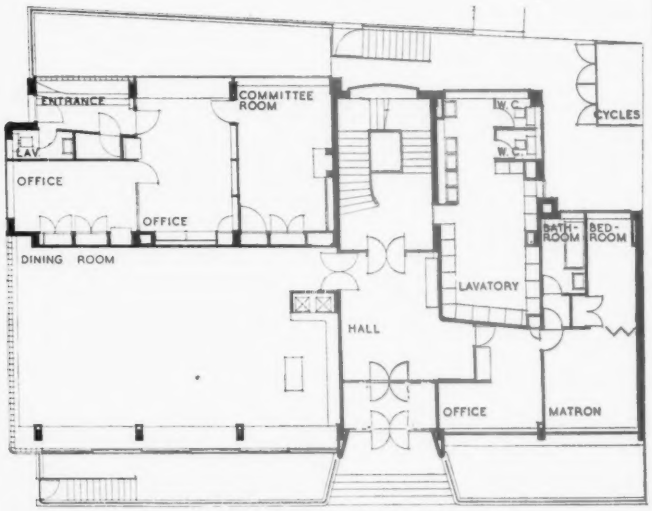
Besides the restaurant on the ground floor, there is a lounge and reading-room on the first floor, with a subscription library, and a games room in the basement where dances will be held. The matron in charge occupies a self-contained flat in a central position adjoining the main entrance hall ; other staff bedrooms are on the top floor together with a sickroom.

HOSTEL FOR GIRLS, GOWER STREET, W.C. • DESIGNED BY E. MAXWELL FRY

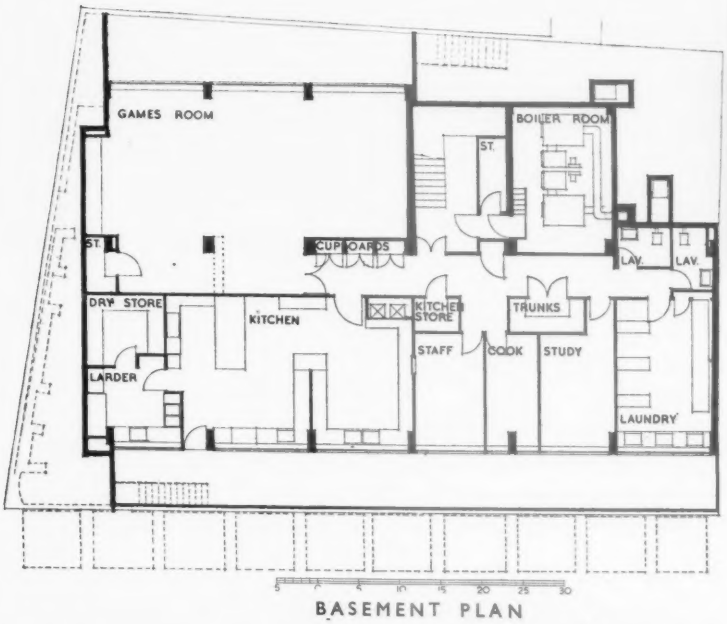




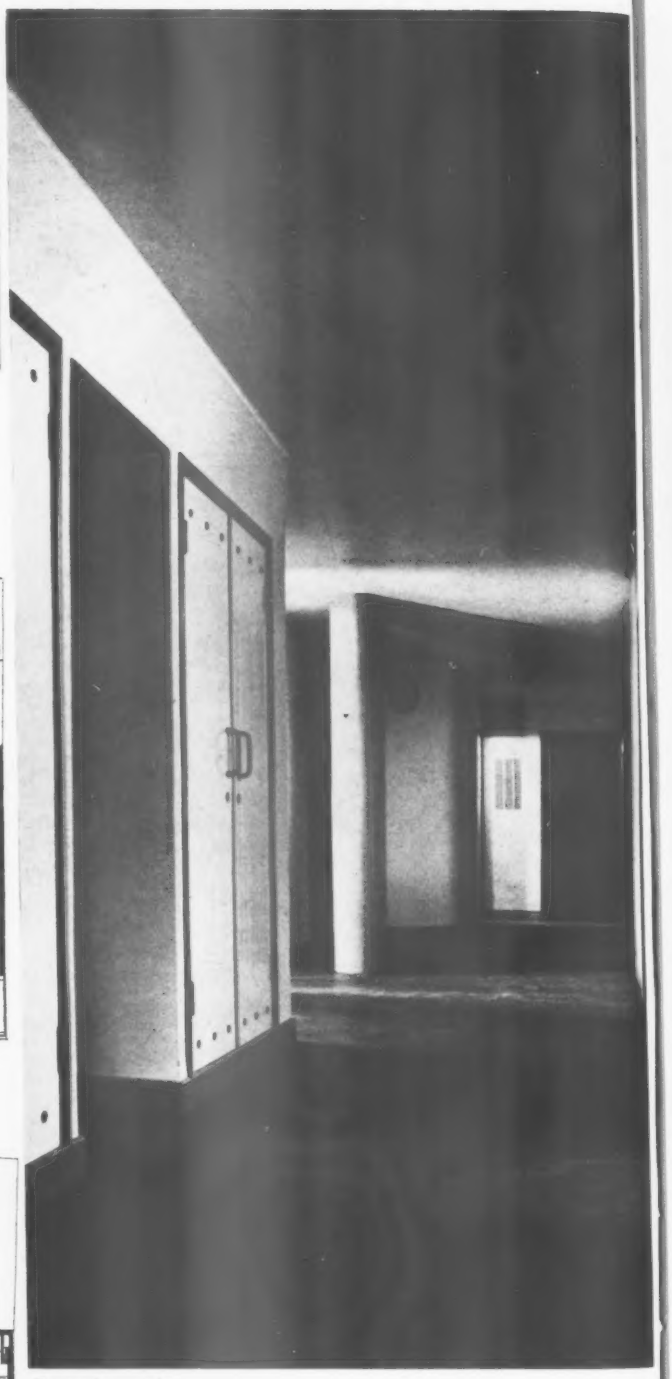
FIRST FLOOR PLAN: THE SECOND FLOOR IS THE SAME, WITH TWO DORMITORIES REPLACING THE SITTING-ROOM



GROUND FLOOR PLAN



BASEMENT PLAN



Typical corridor

INTERNAL FINISHES AND EQUIPMENT—Entrance hall has an Ordnance map of the centre of London as mural decoration; doors are natural beech and the floor cork. Restaurant is lighted by a glass-brick wall on two sides and has a beech strip floor, a yellow ceiling, grey and white walls and brown curtains; tables have tops of blue linoleum. Kitchen (planned in consultation with Miss N. B. Robinson): paintwork is white and cream and the floor is covered with red tesselated tiles. Corridors have white walls and red linoleum floors; columns are cellulosed yellow; cupboard doors along the corridor walls

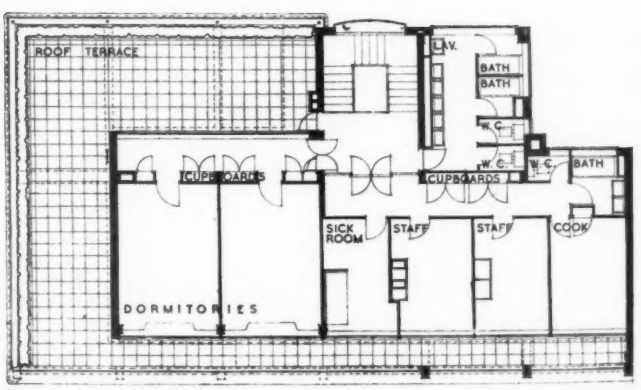
HOSTEL FOR GIRLS, GOWER STREET, W.C. • DESIGNED

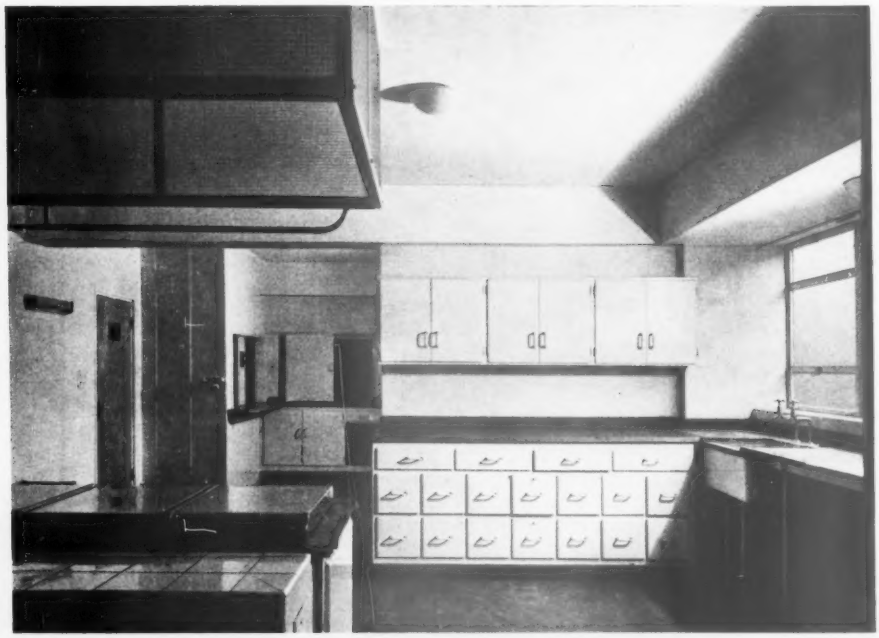
Dormitory corridor on the first floor.

are painted white and their frames and handles bright red. In the staircases the treads are also red linoleum, but the risers and skirtings are cream terrazzo : the balustrade is white and its handrail scarlet plastic. Each dormitory holds four girls ; one bed is placed in each corner of the room and in the middle of each side is a pair of wardrobes, one for each girl. Curtains on suspended rails form a private cubicle round each bed, the end of each cubicle being screened by the open wardrobe door, which contains a mirror ; to facilitate bed-making the built-in bed frames slide out 4 in. from the wall.

BY E. MAXWELL FRY

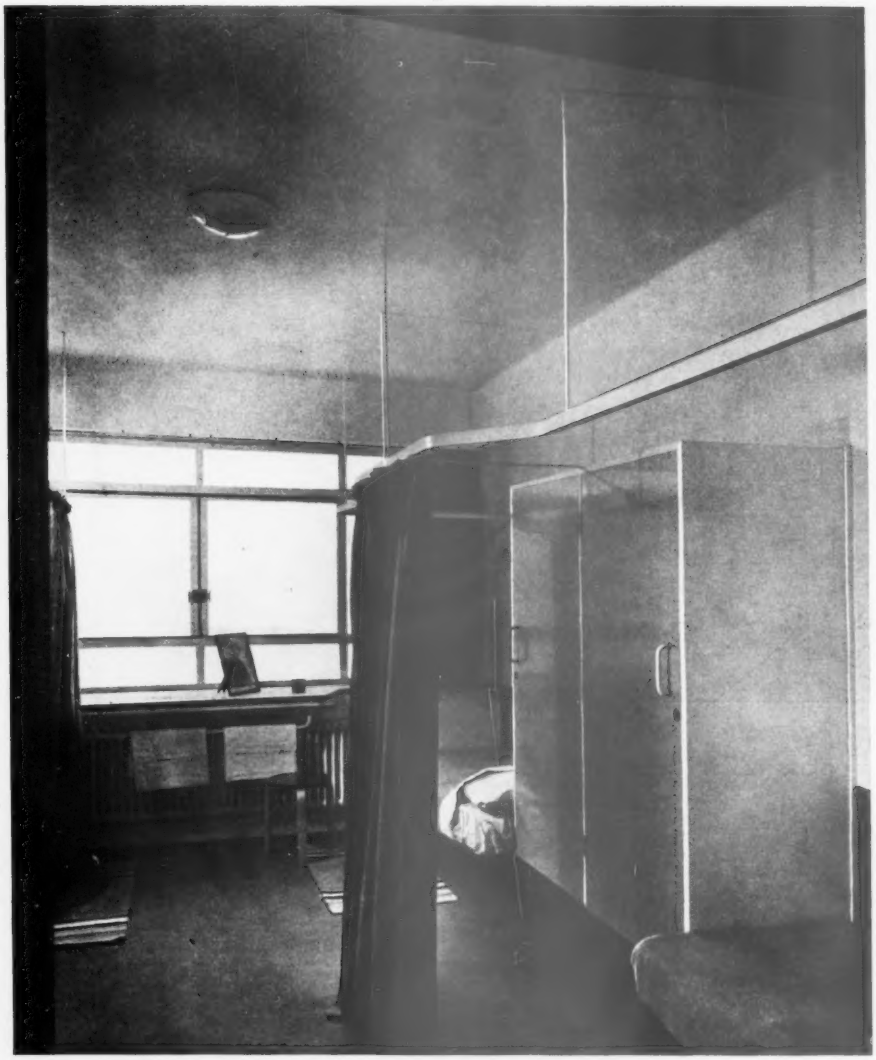
THIRD FLOOR PLAN

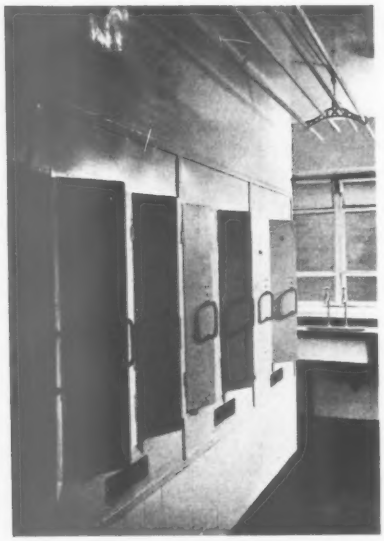




SERVICES—Plumbing is on the one-pipe system only where this is the most economical. Boilers are heated by two coal burners fed by gravity from a hopper and operated by electric time switches controlling each circuit. Aga cookers are installed in the kitchen.
General contractors were C. Miskin and Sons, Ltd.; for list of sub-contractors see page xxxii.

Left, kitchen; below, left and bottom, two views in a typical dormitory. Other view is of the laundry.





HOSTEL FOR GIRLS, GOWER STREET. W.C. • DESIGNED BY E. MAXWELL FRY

SOME QUESTIONS ANSWERED THIS WEEK:

★ *WHERE can I obtain a knowledge of the calculations involved in the design of a Diagrid concrete structure?* - - - - - - - - Q207

★ *WHAT are the comparable rates for gas and electricity for heating of domestic premises?* - Q211

★ *WHAT firms supply pressure relief equipment for flood water in A.R.P. shelters?* - - - - Q213

★ *WHAT is the best finishing for dados in a boys' school?* - - - - - - Q215

THE ARCHITECTS' JOURNAL

INFORMATION CENTRE

THE JOURNAL's Information Centre was started soon after war began to deal with A.R.P. and Emergency problems. But since conditions became more settled the questions, far from falling off in numbers, have increased and widened in scope until they covered all aspects of building and architectural practice. It is clear there is a real demand for a Centre to answer these general questions, and the JOURNAL has made preparations to help in any difficulty encountered by any member of the building industry or its professions. Some questions already answered are:

What is the definition of a light-proof material? What publications are available on farm buildings? What reduction in rates can be obtained if only part of a house is used? How can wood floors be protected against mustard gas? How can one reduce high temperatures in a beer cellar? Who makes concrete blocks for silos?

If you want an answer to any question about building or architecture, send it to:

THE ARCHITECTS' JOURNAL INFORMATION CENTRE,
45 THE AVENUE, CHEAM, SURREY.
Telephone: *VIGILANT 0087*

or ring the Architects' Journal Information Centre at

R E G E N T 6 8 8 8

Q 206 ARCHITECTS' DEPARTMENT, MULTIPLE STORE.—*In two of our provincial stores housed in adapted buildings* ***FIRE IN*** *the* ***STOCKROOMS*** *has caused considerable damage to lower selling floors. In buildings of this type it is usual to house the stockroom in the topmost floor, and in both cases the floor construction was of timber joist and boarding and steel ceiling underneath. Without great disturbance of the floor structure what additional provision could be made to increase the fire-resisting qualities of these floors?*

The best precaution will be to prevent the flames attacking the timber joists of the stockroom floors. It can be assumed also that any protection introduced must not add too great a load to the floor structure. Materials which in themselves are non-combustible and possess great heat insulating properties should be chosen. Protection could be given by the use of an asbestos blanket, say, ½ in. to 1 in. thick, laid on top of the present boarding, and further floor boarding laid down. But for full protection it will be necessary to lift and afterwards relay the floor boarding. The space between the joists could be filled with thicknesses of glass silk, slag wool or rock wool blanket right up to the underside of the boards. Or an

asbestos spray may be used to build up a ½-in. or ¾-in. layer of asbestos on the steel ceiling and on the exposed surface of the joists. Both methods would be efficacious. The resistance of the floor boarding to impact of burning debris could be increased by providing a thickness of Durasteel fire protection panel* over the whole of the area before relaying the boarding. The perforated steel surface of this sheet would allow nailing of the boarding.

Q207 ARCHITECT, LONDON.—*Where can I obtain a knowledge of the calculations involved in the design of a DIAGRID concrete STRUCTURE?*

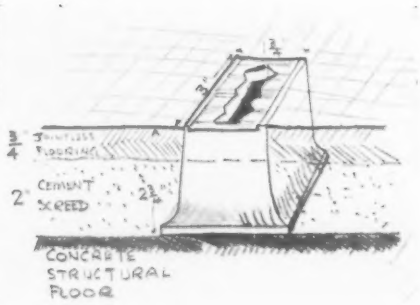
This system is a patented form of construction, and the firm given below† are the patentees and consultants in the design of structures on the Diagrid principle.

Q208 ARCHITECT TO LONDON PROPERTY COMPANY.—*In sandbagging built to my instructions, the FRAYED EDGES OF the SANDBAGS appear on the outside. Have the bags been used inside out?*

It appears that the bags have been used inside out. Apart from worse appearance of the finished work, the main point is whether the life of the bags is decreased by such use. Enquiries show a general opinion that the frayed edge, when on the inside, prevents—to some degree—small particles of filling from prising open or cutting the stitching, and therefore the full life of the bags is threatened by using the bags inside out.

Q209 ARCHITECTS, LONDON. — *We are continuing with the building of a SHOE-MAKING FACTORY where it was intended to use wood strip flooring, an underfloor of heavy deal, covered with strip maple. To this FLOORING it was intended that all forms of light machinery should be fixed direct. But it has been found impossible to procure the wood flooring. What other form of flooring could be used which will provide comfortable conditions underfoot and in itself be sufficiently strong to take the fixing of these machines?*

None of the alternatives available fulfil your requirements. Since machines of this type are fixed in line it would be possible to complete the work using the Ah-Set* fixing devices embedded in a cement screeding and the upper surface left sufficiently proud to finish flush with a superimposed jointless or magnesite floor which could be used as a floor surface. On the Continent jointless floors have had widespread and successful use in factory work. There the technique of laying adopted as standard is similar to the "earth dry" and ramming technique advocated in the "Code of Laying Practice for Magnesium Oxychloride Jointless Floors," as issued by the Building Industries National Council, 85 Gloucester Place, London, W.1, price 1s. 3d. A diagram of the construction suggested is shown below.



Q210 MANY CLIENTS AND ARCHITECTS THROUGHOUT BRITAIN.—*Before and after the outbreak of war a great number of architects, engineers and surveyors were asked to build underground, or partially underground, A.R.P. shelters for private persons and commercial firms. Utmost speed and least cost were always the first requirements of these commissions, which allowed no time for examining site conditions. The Information Centre is now having referred to it an increasing number of the problems which are bound to result from work so executed. Clients are complaining throughout the country of CONDENSATION and FLOODING IN their A.R.P. SHELTERS.*

Most of the designers are naturally concerned with the legal aspect of their failure to provide watertight and condensation-free shelters. But was this a condition, either expressed or implied, of their commission to construct these shelters? In most cases the amount of grant under the Civil Defence Act formed the limit of expense to be incurred in the construction of these works and, while the grant may have been sufficient to provide bare shelter, it was totally inadequate to provide construction normally used to protect against flooding. One other important feature was the siting of the shelter. More often than not the position of the shelter was dictated by the employer and determined by its unsuitability for any civil purpose. Nor was there time to determine by trial holes and other expedients the permanent water level in the ground. Moreover, most of the work was done at a period when this water level was at its lowest. Now conditions are different. Ground is not frozen and water is finding its way to the low ground where most shelters are situated. Asphalt tanking backed up by structural walls forms the normal precaution against water pressure. In underground shelters we have merely a formwork to give an empty space under feet of earth. The formwork was placed hurriedly, and consisted often of a thin steel unit or precast concrete unit or tube.

What can be done now to achieve watertightness? Where it is possible, of course, the ground surrounding the shelter could be excavated, and the outer surface of the shelter asphalted. But doing this might easily incur a cost equal to the initial cost of the shelter. Where the shelters are of preformed units, much of the trouble being experienced may be by seepage of water through the joints. The caulking up of these joints with one of the permanently elastic mastics should alleviate the trouble. In cases where the trouble is just simple percolation through the body of the concrete walling units, the only possible remedies would be by tanking in some form or another, either by asphalt or two layers of bituminous sheetings applied with a hot bitumen adhesive. Or the work could be rendered with a mix consisting of equal proportions of bitumen emulsion, cement and fine sand. There are also various firms who will undertake to carry out internal cement rendering incorporating some proprietary form of waterproofing admixture. Most specialist firms engaged in this sort of work are prepared to give some form of guarantee as to the efficacy of their treatment. Another idea is detaching the inmates from the dampness of the shelter by the use of an impervious independent lining such as would be provided by the dovetailed pattern bitumen sheeting known formerly as "Newtonite," but now renamed "Stronghold,"* by affixing this sheeting by means of wire ties grouted into the joints between the shelter units. The joint between the floor and the walling unit is also a source of weakness. Similar types of precaution could be used for the floor, care being taken to form an upstand or apron beyond the height of any present flooding. In cases of flooding it is most imperative, however, to

* *Durasteel Roofs, Ltd., Oldfield Lane, Greenford, Middlesex.*
† *Diagrid Structures, Ltd., Horseferry House, Horseferry Road, London, S.W.1.*

* *The Dudley Foundry Co., Ltd., Moor Lane Foundry, Brierley Hill, Staffs.*

* *The Stronghold Co., Ltd., 10 Victoria Street, London, S.W.1.*

arrange for a sump under the floor level in which water will collect and, either by the simple bucket method or hand pump or more costly automatic pump or release valve, to arrange for the disposal of this water down the nearest main drain. Much of the discomfort from dripping water from the ceiling could be overcome. This is largely the result of condensation. Little used, unheated, and often inadequately ventilated premises with cold hard surfaces just form the ideal conditions for condensation. Only by adequate heating and proper ventilation could this trouble be cured. But on the surface of any wall which is to a large extent dry, a brush coating of a gypsum plaster slurry could be applied and when dry and set, will be sufficiently absorbent to take up any normal condensation, and so prevent dripping. Alternatively, cork-filled paints* may be used, as they are for this purpose on the steel plates of ships. But it will be useless to apply these mediums to walls or ceilings already waterlogged; these will quickly absorb their fill of moisture, and condensation will take place just as readily as before.

Q211 ARCHITECTS, LONDON.—*What are the comparable rates for GAS AND ELECTRICITY FOR HEATING of domestic premises?*

For approximate calculations the following may be taken as a fair guide: 1s. per therm for gas is equal to 1½d. per unit for electricity. But standing charges and the percentage efficiency of the apparatus intended to be used must also be taken into consideration.

Q212 ARCHITECT, NOTTINGHAM.—*Can you give me any details of the process of MANUFACTURE OF CELLULAR CONCRETE?*

Most forms of cellular concrete are made up under secret formulæ or under patents. Generally speaking, the cellular structure is formed either by chemical additions, these additions causing interactions with the cement and resulting in gas, most of which is trapped within the mix during the setting of the cement, and so giving the cellular structure; or this cellular structure may be obtained by incorporating into the mix what is known technically as a stable froth, each little apparent "soap bubble" again being entrapped in the mix during setting of the cement. The Aerocrete† material belongs to the former group, and the Cell* concrete to the latter. With a straight mix of the cellular-causing ingredient and cement, the set material is extremely light and has high thermal insulating qualities. This suffers, however, from appreciable movement under varying moisture and temperature conditions, so that for practical purposes a proportion of sand is always added to the mix. This sand, of course, greatly increases the weight per cu. ft. of the set mix, and at the same time reduces the thermal insulation qualities, but it has the effect of stabilizing this movement or change of size due to varying temperature and moisture conditions.

* *Thos. Parsons and Sons, Ltd., 315 Oxford Street, London, W.1. Walpamur Co., Ltd., Walpamur House, 35 Rathbone Place, London, W.1.*
† *Aerocrete (Scotland), Ltd., Gartlea Works, Victoria Road, Airdrie, near Glasgow.*

Q213 ARCHITECTS, GLOUCESTER. — *What firms supply pressure relief equipment for flood WATER IN A.R.P. SHELTERS?*

Three firms† market automatic valves for this purpose.

Q214 ARCHITECTS, LONDON.—*What is probable COST OF 400 yards of ELECTRIC CABLE to enable power to be taken to hutments from a neighbouring mains supply?*

It is regretted that it is impossible to give the information desired. The cost will be a matter for negotiation with the Supply Authority concerned and will be dependent upon various conditions, all outside the scope of material and labour charges. In assessing the cost a Supply Authority will take into consideration such matters as minimum guarantee of current to be consumed, whether existing mains will have to be altered to convey the additional load, the possibilities of other users being served from the new cable extension, and also purely local details of carrying in the cable, whether overhead or underground, and the obtaining and payment of any necessary wayleaves.

Q215 ARCHITECT, ESSEX.—*What material would you suggest for use on the DADOS of corridors IN A building now used as a BOYS' SCHOOL? Glazed tiling I have found too expensive, paint has been considered unsuitable and plywood is unobtainable. Please give approximate costs of the materials suggested.*

As an alternative to tiling, *in situ* applied cold cement glaze could be considered. The prices for this material vary from 6s. 6d. to 12s. 6d. per square yard; but the price is inclusive of all coatings from the brickwork outwards. From enquiries from merchant firms, it would appear that hard pressed wood fibre boards are still available from stock; and since hard use is to be expected these are admirable for the purpose. The boards are available in a range of light shades. The price supplied would be about 6d. per sq. ft., and fixed on battens, say, 9s. per sq. yd. Alternative suggestions would be the use of thin linoleum specially prepared for wall linings and, in quantity, this could be fixed complete about 6s. 6d. per sq. yd. Or a Lancaster cloth or Rexine material could be used and the cost fixed would be from 6s. 6d. sq. yd. upwards. With hardboard, linoleum or cloth surfacing, the provision of a lightly waxed surface would give some protection against minor marks.

* *Christiani and Nielsen, Ltd., Romney House, Tufton Street, London, S.W.1.*
† *W. H. Willcox & Co., Ltd., 38 Southwark Street, London, S.E.1. Rhodes, Brydon and Youatt, Ltd., 28 Victoria Street, London, S.W.1. Dyson, Nott and Partners, Ltd., 17 King Street, London, S.W.1.*

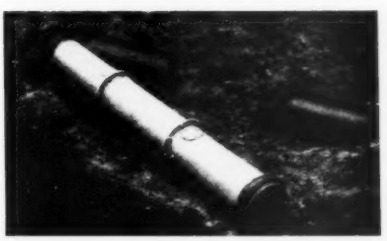
REFERENCE BACK

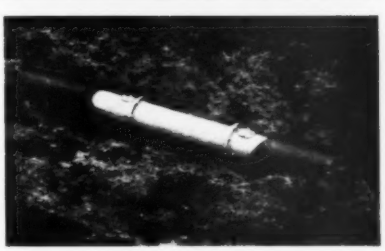
[This section deals with previous questions and answers.]

Q187. *February 29, 1940*

Methods of quick repair of gas and water mains fractured by bombs.

A company, Horseley Bridge and Thos. Piggott, Ltd., of Tipton, Staffs, have brought to our notice a further system especially designed for use with gas mains (*see* photographs below). A bladder is first put in each broken end of the main and inflated. The repair pipe is then inserted, bolted up, and the rubber rings inflated from the nipple visible in upper photograph near inspection plate. The plates are then taken off, the bladders deflated and pulled out and the plates replaced.





INFORMATION CENTRE

TRADE NOTES

[*By PHILIP SCHOLBERG*]

Factory Lighting

THE increased production of wartime has led many factories to work three shifts, and as the black-out restrictions are operative for about twelve or thirteen hours a day it is often simpler to arrange a permanent black-out and work through the twenty-four hours in nothing but artificial light. Unfortunate, no doubt, for all the manufacturers who have spent a lot of time evolving removable panelling, but the fact remains that many works have given up the unequal struggle and will not face the nuisance of blacking-out in the middle of a shift.

•

Under these circumstances the question of adequate artificial lighting becomes more important than ever, and a recent publication* by the Better Light Committee of the Electrical Development Association provides plenty of useful data. The book covers pretty well the whole of the problem—the function of lighting, legislation, the choice of light sources, the design of installations and a number of special lighting problems are also discussed, while there is a final chapter on lighting in wartime. Most of the suggestions made in the book are pretty reasonable, and it seems that the lamp manufacturers as a whole take a more reasonable view of the amount of illumination suitable. It is not so very long since, I was told in the Lighting Service Bureau, that the ideal illumination was only obtained in the open air on a light sunny day, whereas the standard now put forward is "in the open on an overcast day"—a much more reasonable standard, even if it is unlikely that it will ever be in common use. Dr. Lythgoe's 1932 report shows, however, that there is an increase in visual acuity up to 1,275 foot candles—275 more than the overcast sky standard of E.D.A., so that the present standards of illumination may possibly suffer revision as time goes on.

•

As a reference book this should be useful to the architect or the more intelligent business man (the lighting specialist should know it all already), for it explains quite clearly and shows with excellent photographs why different types as well as different intensities of illumination are necessary for different processes; directional light from an acute angle, for instance, being necessary for showing up pleats and ridges, or indirect in a food factory for preventing glare from the polished metal caps of tins. The wartime chapter has some sensible suggestions for light locks, but the statement that ultra-violet light can be used for illuminating fluorescent signs requires modification. Internally it is quite permissible, but for external use it is frowned upon by the Home Office (or is it Home Security now?) because creosote, largely used for ground camouflage, is also fluorescent, and it is thought inadvisable to illuminate the camouflage as well as the signs. Copies of the book can be obtained from *2 Savoy Hill, London, W.C.2.*

Glass for Shop Windows

Pilkingtons have just introduced two new glasses which have been specially designed for use in shop windows. As most architects know, plate glass has a slightly greenish tinge, and this apparently detracts a certain amount from the goods displayed in the shop window. I should have thought that, by this time, the eye almost automatically made allowances for the slight colour change, but it is presumably the ambition of the shopkeeper to sell things that people do not really want. Hence the artificial lighting in so many shop windows to whack up the red a little and make the goods look better. The new glass, which is known as Spectralite, has no green in it, and, while it in no way reduces the daylight transmission, it has a colour tone in harmony with the goods displayed. So far two types are available. Type A is described as "a benevolent neutral," which is in fact very slightly pink in its reflection, though to the ordinary eye it appears quite clear and white. It is intended to be used with goods sold by the chemist, stationer, furrier, milliner, grocer, confectioner—in fact, almost any goods which are in fairly light shades. Type B is a slightly deeper pink, and is intended for goods which are mainly in pinks, reds, browns and yellows—butchers, pastrycooks, florists and fruiterers.

•

This is roughly the complete story. About the ethics of it I am less certain, for it is one thing to go about wearing rose-tinted spectacles and quite another when the shopkeeper holds them up in front of you. Shrewd restaurant proprietors have for years been inducing a feeling of well-being in their customers by the judicious use of peach mirrors, and the good old pink lamp shade has for decades been a best seller among the not so lovely. And nobody seems to complain very much. For my part I find pastrycooks' displays look quite synthetic enough as it is; but if Spectralite B will make those tired-looking strawberry tarts more real it will be something of an achievement. No doubt the shopkeeper will fall for it in a big way, for even if it does not stimulate sales it will at least save lighting bills. Stocks are already available through the usual trade channels; for insurance purposes it comes in the same category as ordinary plate glass.—(*Pilkington Brothers, Ltd., St. Helens, Lancs.*)

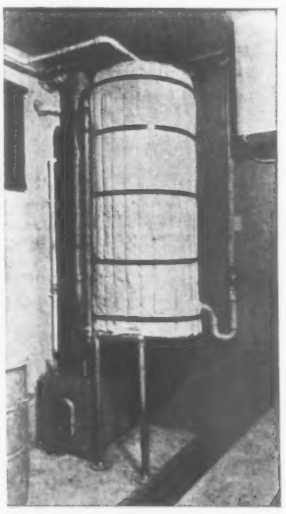
Manufacturers' Items

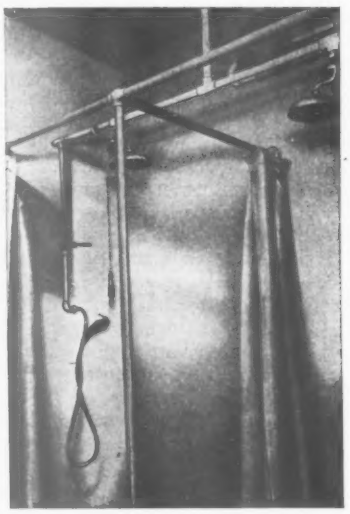
Bakelite, Ltd., have acquired the works and business of Warerite, Ltd., of Ware, Herts. Warerite, Ltd., have been engaged in the manufacture of synthetic resin laminated sheet materials. This acquisition will assist Bakelite, Ltd., to meet the growing demands for Bakelite laminated.

A.R.P.: A Job for the Gas Industry is the title of a booklet just issued by the British Commercial Gas Association, of 1 Grosvenor Place, S.W.1. The foreword states:

"The present war has given birth to a defence organization unknown in previous wars—the Air Raid Precautions services. Measures to safeguard the civilian population in the event of enemy air attack and to deal with casualties and damage to property are now a most important part of the country's defences. Among the organizations set up under the National scheme of Air Raid Precautions are the Auxiliary Fire Service; Casualty Clearing Stations, First Aid, Stretcher Bearers and Ambulance services; the Air Raid Wardens' Organization; Decontamination and Cleansing services for use in any gas attacks; Rescue, Road Repair and Demolition parties to deal with damage to property and roads. In satisfying the fuel requirements of various A.R.P. premises, it is natural that local authorities (who are responsible for the working of the scheme in their own areas) should have called largely on the services of the gas industry. The flexibility of gas and the fact that it can be quickly adapted to deal with a big job or a small one; the automatic working of gas-fired apparatus for water heating, central heating and other purposes; its ease of control and consequent economy both in fuel and in supervisory labour; and its elimination of transport difficulties (for gas is brought right up to the point of use): these are advantages which local authorities cannot ignore in deciding on the fuel to be used in A.R.P. premises."

This booklet—there are approximately





Plant for providing hot water showers for a decontamination squad consisting of 18 men. From "A.R.P.: A Job for the Gas Industry."

* *Modern Factory Lighting.* Price 8s. 6d.

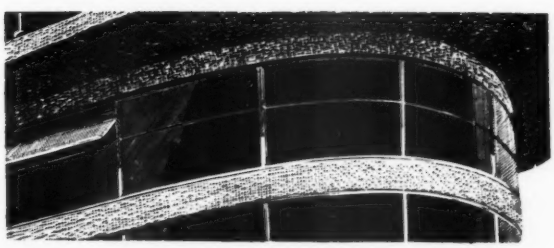
CONTROLLING *the* WEATHER

It has been said that if the British could control their own weather, they would have lost their chief topic of conversation. But failure to control the fickleness of British weather has resulted in a new form of control for the metal-incidentals of Architecture . . . . in other words — self-control against atmospheric influences.

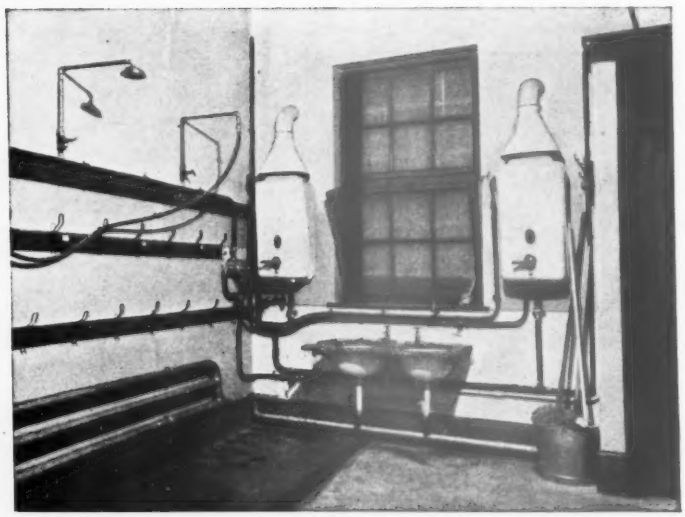
Aluminium Alloy Sections for Window Construction — Aluminium Alloy Sheet and Strip for facias have, thanks to Reynolds, assumed a new status of independence against the worst weather by reason of their non-corrosive properties and their complete inability to stain the pristine complexion of stone work.

"For the duration" REYNOLDS "Hiduminium" Alloy Components are devoted to "weathering the storms" emanating from a CERTAIN COUNTRY by reason of their value to Aeronautical "Architecture", but our Technical Staff is still "on earth" — anxious and ready to advise Architects on their plans for "the building of the future"

Reynolds TUBES • RODS • SECTIONS • SHEET • STRIP IN "HIDUMINIUM" ALUMINIUM ALLOYS



REYNOLDS TUBE CO. LTD.,"[&
REYNOLDS ROLLING MILLS LTD.,
TYSELEY, BIRMINGHAM



Instantaneous gas water heaters in a public Cleansing Depot. From "A.R.P.: A Job for the Gas Industry."

50 illustrations—shows some of the work that has already been done and is being done.

THE BUILDINGS ILLUSTRATED

HEALTH CLINIC, WELLINGTON ROAD, BILSTON (pages 277-283). Architects, E. D. Lyons, L. Israel and C. H. Elsom. General contractors were W. Kendrick and Sons, who were also responsible for the excavation, foundations, reinforced concrete, structural steel, glass, plumbing, iron staircases, plaster, joinery, shrubs and trees. Sub-contractors and suppliers included: Ragusa Asphalte Co., Ltd., damp-courses and asphalt; Himley Brick Co., Ltd., and London Brick Co., Ltd., bricks; Tarmac Co., Ltd., artificial stone; Ruberoid Co., Ltd., special roofing and roofing felt; Building and Insulating Co., Bimol blocks; Haywards, Ltd., domelight; Marbolith Flooring Co., patent flooring; G. N. Haden and Sons, central heating and water supply; Bilston Gas Light and Coke Co., stoves; Claco & Co., grates; Troughton and Young, Ltd., electric wiring and electric light fixtures, bells and house phones; Dent and Hellyer, Ltd., sanitary fittings; N. F. Ramsey & Co., door furniture; John Thompson Beacon Windows, Ltd., casements and window furniture; Gardiner, Sons & Co., Ltd., folding gates and metalwork; J. Avery & Co., dark blinds; Rippers, Ltd., joinery; Roberts, Adlard & Co., Ltd., tiling; Kingfisher & Co., furniture and office fittings; G. H. Turner, clocks; H. N. Barnes, Ltd., signs; Yorkshire Copper Works, Ltd., "Yorkshire" fittings for hot and cold water services.

HOSTEL FOR GIRLS, GOWER STREET (pages 285–290). Architect, E. Maxwell Fry. General contractors were C. Miskin and Sons, Ltd. Sub-contractors and suppliers included: Coles Demolition and Excavation Co., Ltd., demolition; White Bays and White, Ltd., heating; Pulver & Co., Ltd., electrical work; Williams and Williams, Ltd., metal windows; George Simpson & Co., internal plumbing; John Bolding and Sons, Ltd., sanitary fittings; C. A. and A. W. Haward, Ltd., and J. Starkie Gardner, Ltd., metalwork; Plaster Decoration Co., plastering; D. W. Price & Co., Ltd., tiling and glass bricks; Decorative Tile Co., Ltd., tiling; Decorative Painting Contractors, painting; N. F. Ramsey & Co., Ltd., ironmongery; Sydney A. Hunter, Ltd., Hunziker and Tondu facing bricks; Frazzi, Ltd., Paropa roof paving; Horsley Smith & Co., asphalt floor tiles; Figg Floorings, Ltd., cork flooring; Hollis Bros. & Co., Ltd., beech strip flooring; Cellulin Flooring Co., Ltd., linoleum; Art Pavements and Decorations, Ltd., staircase terrazzo; Slate Slab Products, Ltd., copings; J. B. Robinson, glazing; J. Avery & Co., Ltd., sunblinds; Vernon Flooring Co., Ltd., Rexine dado; Pugh Bros., Ltd., Vitrolite; Staines Kitchen Equipment Co., Ltd., kitchen equipment; Aga Heat, Ltd., kitchen cookers; Merchant Trading Co., Ltd., flush doors; Vono, Ltd., dormitory beds; New Light Fittings, Ltd., light fittings; Gent & Co., Ltd., clocks; Merchant Adventurers of London, Ltd., dart board light fittings; Turners Asbestos Cement Co., flower boxes; Bennie Lifts, Ltd., kitchen lift; Antifyre, Ltd., hose reels; Leslie Bilsby, Ltd., and Finmar, Ltd., furniture and fitments; H. A. Oakeshott, fire surrounds; Bright's Asphalte Co., Ltd., asphalt; J. W. Gray & Son, Ltd., flagmast; Alfred A. Odoni & Co., cycle shed.