F.A. 12

THE ARCHITECTS' JOURNAL

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

THURSDAY, December 9, 1937. NUMBER 2238 : VOLUME 86

PRINCIPAL CONTENTS

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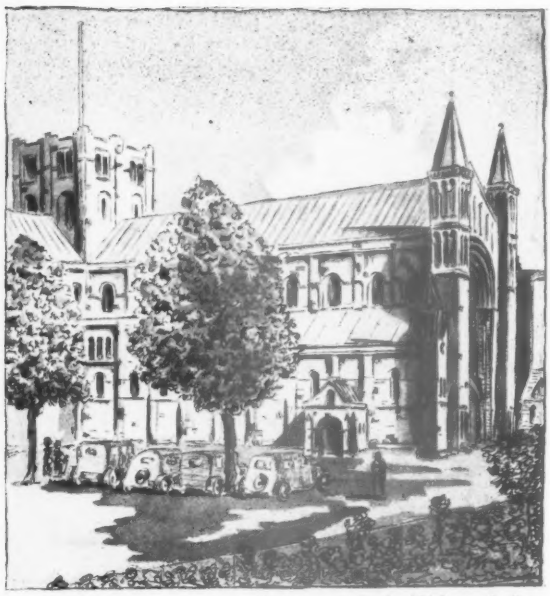

Buckfast Abbey. *Architects :* F. A. Walters & Son.

"Atlas White"
Portland Cement

BUCKFAST ABBEY, on Dartmoor, which is nearing completion, is a remarkable work. It has been rebuilt over a period of twenty-five years on foundations put in by the Cistercians in the 12th Century, the whole construction being carried out by a small band of Benedictine monks. The walls are formed of random-coursed local limestone with "Atlas White" Portland cement joints.

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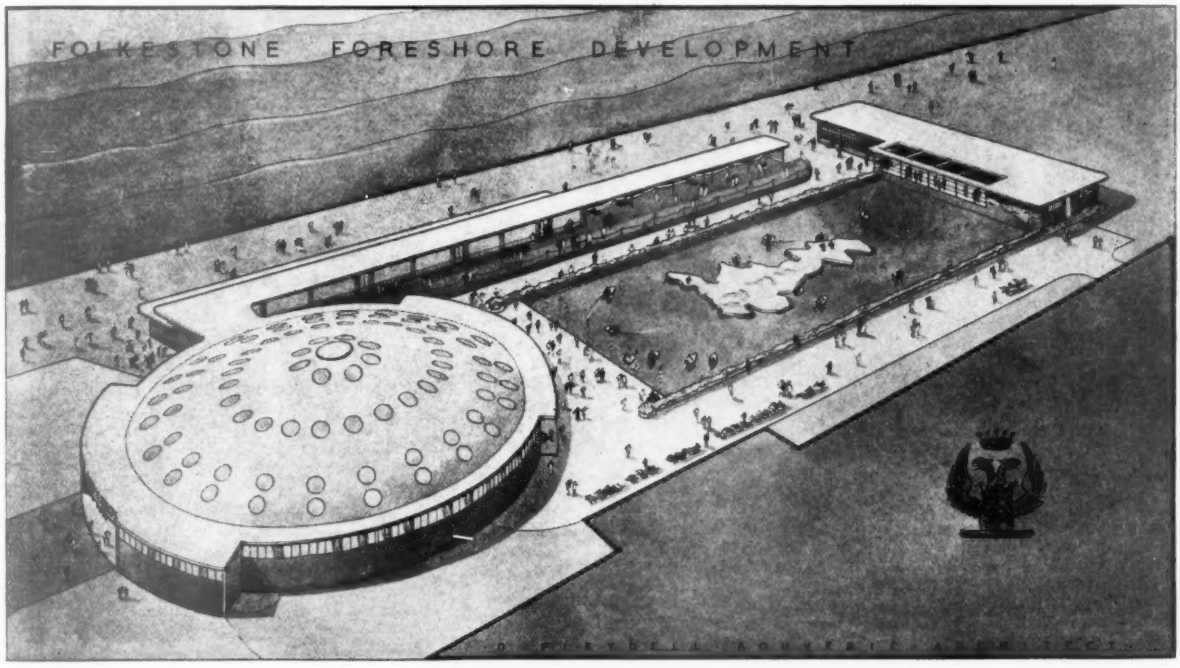
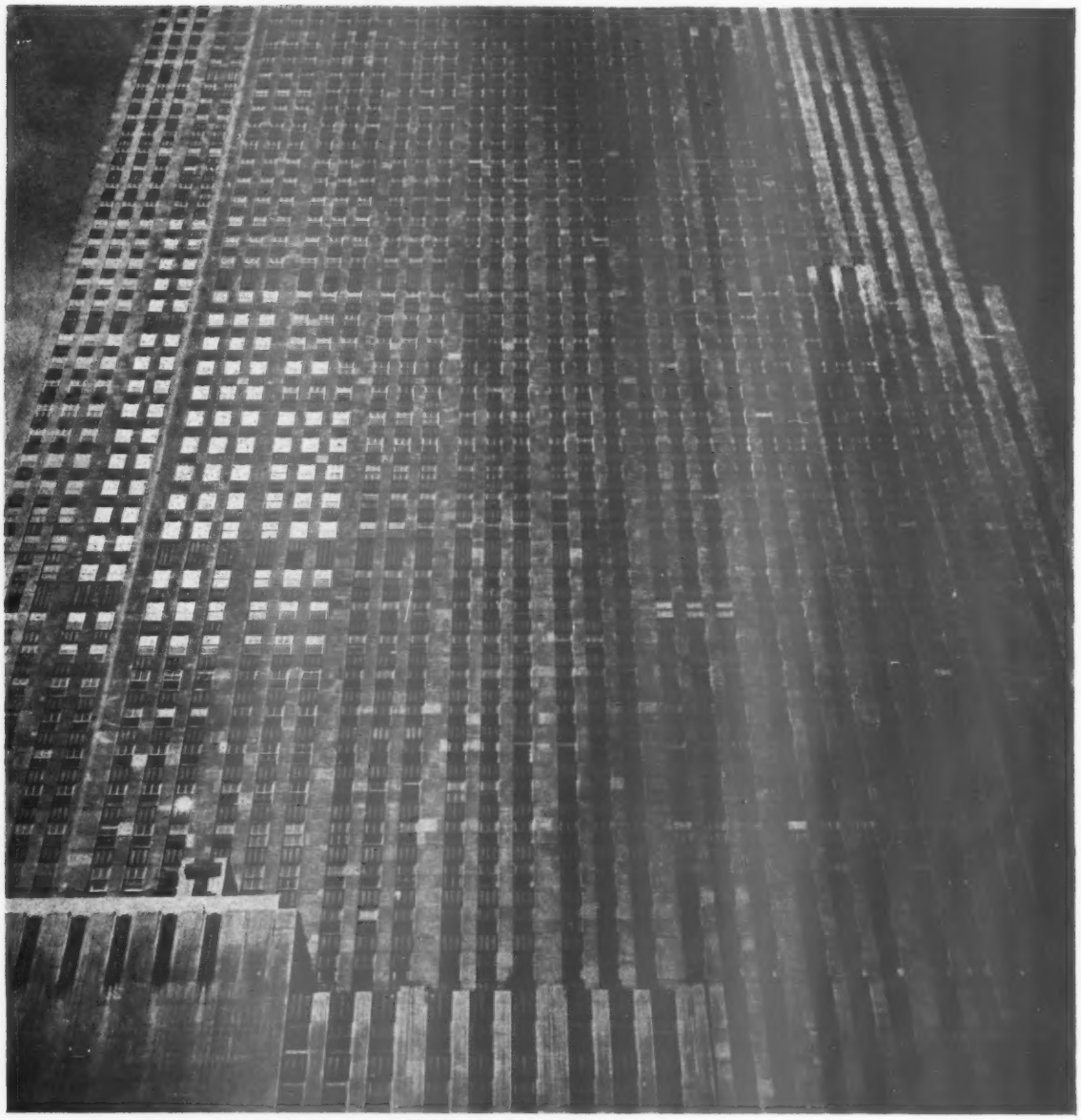
AMUSEMENT CENTRE AT FOLKESTONE

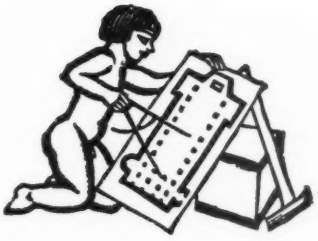


A PERSPECTIVE.—New buildings now near completion on the front at Folkestone. On the left is the rotunda containing amusement arcade ; the wing along the promenade contains kiosks and shelters ; on the right is the restaurant. The map of Britain in the boating pool is being omitted in the final scheme. The architect is D. Pleydell Bouverie, R. D. Knott, assistant.



DETAIL IN MANHATTAN

An illustration of two necessities in skyscraper design: a new sense of scale and a robust faith in the effective life of a steel frame. A photograph of the Rockefeller centre, New York, taken on a recent visit by Marcel Breuer, who has just accepted an appointment at Harvard.



YES OR *NO* TO REGISTRATION

THE JOURNAL asks every architect — whether principal or assistant, official, private or student— to realize the importance of the Architects Registration Bill which will come up for Second Reading in the House of Commons on December 17 at 11 a.m., and to do everything in his or her power to secure its passing.

Lots of architects, possibly most architects, may feel a little tired of Registration by this time. They may feel that they registered years ago and that nothing has happened since except a dog fight—and so on the whole they would not care much if they heard no more about it.

In the JOURNAL'S view it is just this apathy which has caused the delay. This country, architects may have forgotten, is a democracy. Its Government where a profession is unanimous is usually prepared to give it what it wants providing the public is safeguarded. But where a profession is divided—and in this case it is divided in the proportions of about 12 to 1 — the House of Commons demands a scrupulous enquiry into the minority's views and, wherever possible, suggests compromises. This is what has happened to architectural registration. And while the minority's claims have been studied, and the minority has done all it can to increase its claims and obstruct the Bill, the majority has become bored—has been so certain that the Commons could not possibly disagree with it that it has made no effort to convince them.

On December 17 the matter comes to a head. If the Bill does not pass then the JOURNAL believes architecture will be a second-rate profession for at least a generation. The raising of architectural standards generally, proper status and salaries for official architects, and the creation of wider opportunities for architectural services—all these are impossible while qualified architects do not enjoy the protection which medicine and the law achieved many years ago. Every profession and trade today is finding the need for a measure of combination in order to enforce minimum standards.

In the years since the Act of 1931 architects may have got out of touch with what is being done to make Registration effective. The JOURNAL has not. We have studied every view and every objection, and we are convinced not only that the present Bill ought to be passed but that until it *is* passed nothing effective can be done to raise architectural standards, to ensure a reasonable livelihood for architects, or to ensure competent architectural services for the public.

The present Bill could not be shorter. It aims to restrict the title of architect to those architects who are now Registered Architects, to those now practising as architects who become Registered Architects in the next two years, and *in the future* to those who pass one of the examinations recognized by the Registration Council. It inflicts no hardships on those who now earn their living as architects. What it *does* do is to ensure that all the men who become architects after the next two years will have to show, by examination, that they have reached a certain minimum standard.

Why does the I.A.A.S. oppose the Bill? The answer is that it does not, cannot—in principle. It says, "Yes, this is a good and necessary Bill—BUT . . ." and then it goes on to list the things that ought to be put right first and to make charges against the methods of the Registration Council.

The JOURNAL has studied all the alleged faults in the Registration Council (they have varied from year to year) which it is suggested ought to be put right before the Bill passes: both studied and summarized them in its columns. And for only two of them can it be claimed with justice that they ought to be considered before the Bill passes. Both have been considered *ad nauseam*, but at this important moment let us reconsider them.

It is maintained that the R.I.B.A. seeks by the present Bill to monopolize the profession. The JOURNAL, which tries to represent all architects, has differed from the R.I.B.A. in the past and may again. But concerning the R.I.B.A. and the present Bill we say that the position of the R.I.B.A. is such that where it takes part in any architectural question it must necessarily take a leading part. This, together with the fact that there is no obligation upon an architect who passes any qualifying exam. (including the R.I.B.A.'s own) to join the R.I.B.A., answers the first charge.

The second charge is that the R.I.B.A., through some league with big architectural schools, is seeking to compel all future architects to attend those schools and thus make architecture a "snob" profession. In investigating this matter the JOURNAL has examined the figures of those who have become A.R.I.B.A.'s since the War—that is, those whom the Institute could most easily influence. We find that in each year about one half of the Associates have qualified by the Final and one half by School Exemption. Minor fluctuations occur in both directions but the ratio remains constant over any period of several years. Furthermore, of those who qualified by the Final about 60 per cent. attended evening or other part-time schools which are very cheap and the other 40 per cent. studied by themselves. There is no sign here of a drive for a "class" monopoly.

Such is the Bill and such the objections to it.

Before December 17 each architect must prove to Members of the Commons that he wants the Bill, by writing to his M.P. and asking him to vote for it.

If this is done, the Bill will pass.

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NOTES & TOPICS

THE BILL

FRIDAY, December 17, at 11 a.m. That is the moment when the Architects Registration Bill will come before the Commons for Second Reading. By what we do—by what *you* do—between now and then will decide to a great extent what architecture will be like for a generation.

*

There is no exaggeration in this. If you are interested enough to tell your M.P., any M.P., that the Bill has your support and to ask him to attend the debate and remain to vote, the Bill will pass. If you just nod, murmur "Registration again?" and let the matter slide, it may not. The difference to us all will be considerable.

Let us consider. What, to begin with, is the Bill?

ITS TEXT

The important parts of the text run:

Be it enacted by . . . . as follows:

1. A person, not being a registered person within the meaning of the principal Act, who after the expiration of two years from the commencement of this Act, shall take or use the name, style or title of "Architect" or any name, style or title containing the word "Architect" shall be deemed to have committed an offence under section ten of the principal Act and the provisions of the said section including the provisos thereto shall apply accordingly:

Provided that nothing in this section shall affect the use of the designation "Naval architect," "Landscape architect" or "Golf-course architect."

2. Notwithstanding anything in the principal Act, a person shall, on application made to the Council in the prescribed manner and on payment of the prescribed fee, be entitled to be registered under the principal Act, if the Council are satisfied on a report of the Admission Committee that his application for registration was made within two years after the commencement of this Act and that at the commencement of this Act he was or had been practising as an architect in the United Kingdom:

Provided that any person aggrieved by the refusal or failure of the Council to cause his name to be entered on the Register on an application made by him under this section shall be entitled to appeal to a Tribunal to be constituted for the purpose of this Act consisting of three persons, not being members of the Council, to be appointed from time to time. . . .

WHAT IT MEANS

The Bill, a model of brevity, aims to restrict the use of the title "architect" to: (1) Architects who are now Registered Architects; (2) those who register within two years; and, *after the two years' period elapses*, to (3) those who pass a qualifying examination approved by the Registration Council.

*

Who can quarrel with such a Bill? No existing architect nor architect who is at present an assistant will be injuriously affected, while in the future standards of training will be thoroughly safeguarded.

WHY IT SHOULD PASS

And yet there are still some architects who maintain, now that the public has begun to discern between the architect and the pseudo-architect, it is silly to introduce a Bill which appears to all on the same level.

*

This attitude is wrong. It forgets that the public does not discriminate; it forgets that architecture in the last five years *has begun to pay*. All sorts of authorities, all kinds of people have begun to employ architects who never did so before. . . . Factory owners, housing estate promoters, exhibition promoters, and the £1,000 house owner. To these people an architect is an architect and to the nearest man they go.

*

The result? Estate agents, engineers, company promoters—what you will—have said to each other: "These people want an architect. Well, it's a free country—let's make George the architect." And on a huge scale George is becoming the architect.

*

It is naturally only the less desirable members of these callings who have done this. But the results for architects and architecture have been bad and will continue to be bad while the title architect means nothing. For years the majority of architects, aided by their societies, have been creating public goodwill for themselves by their steady and often meagrely rewarded efforts to give clients what they want, decently designed, for the amount they want to pay.

*

Now, when an enviable reputation has been achieved, it is being as rapidly dispersed by people who call themselves architects, because times are good for architects, on qualifications consisting of sales talk.

*

This tendency—which jeopardizes architectural design, public confidence, and architects' livelihood—is the reason why the Bill should pass. Why should the public have to distinguish between architect and architect; and why on earth should you allow them to have to continue to do so?

*

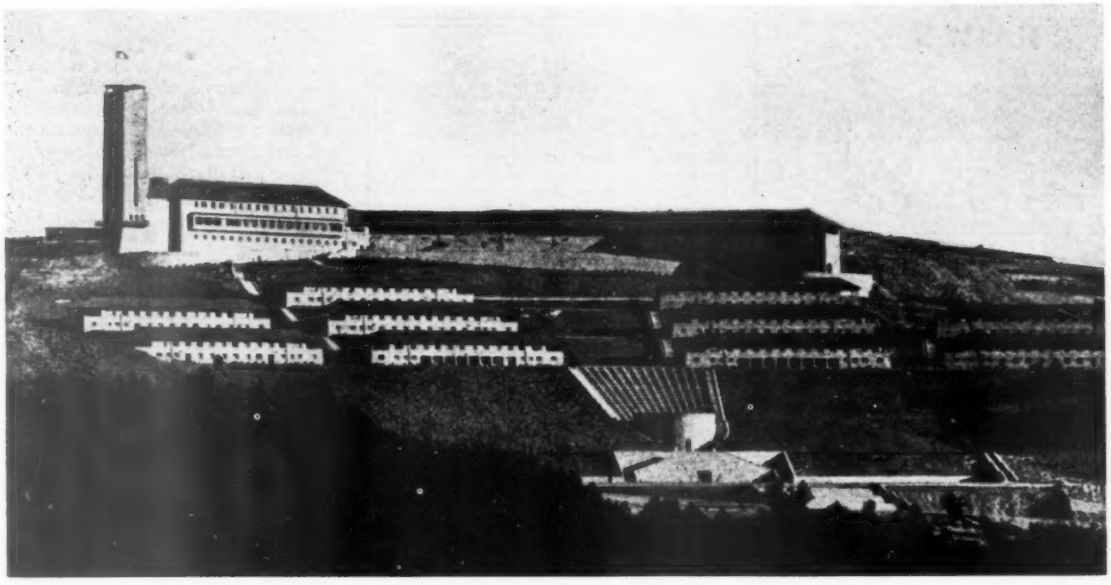
The Bill will not cure everything at once. That is the penalty of our delay. But it will, at the end of two years, prevent those who have not previously called themselves, and practised as, architects from cashing in on a good thing. And it will prevent those who run architecture as a nice intermittent little side-line from continuing to do so.

WHO OBJECTS TO IT

With things like this it is difficult to believe that any architect can be found to object to the Bill. But because a small society, partially architectural, does object, it ought to be understood why they object.

*

This Society, the Incorporated Association of Architects and Surveyors, does not object to the Bill in principle. Indeed, how could it? Its opposition is more subtle. It says, "Yes—this is a good Bill, but all sorts of things are wrong



Vogelsang, one of the new German "Leader Schools," each for about a thousand young men, which are now being completed. The internal decoration is of the "blood-and-Wotan" type, but the external massing in sandstone and dark tiles shows the same ability which was seen in the setting for the Olympic Games.

with the Registration Council (who in the future will control Registration) which ought to be put right before the Bill passes."

*

Its complaints of what is wrong have varied from just stopping short of charges of misapplication of scholarship funds (last year) to (this year) the reported statement to the Press that if this Bill passes no young man who wants to become an architect will be able to do so unless he can afford £1,000 for fees at a big architectural school.

*

Architects may feel somehow that behind opposition so relentless there must be something that matters a lot—matters more than just the principle of justice—to the Society concerned.

*

There is. The examination of the I.A.A.S. has not been recognized by the Registration Council as qualifying for admission to the Register. It is considered too low in standard.

*

But why should not the I.A.A.S. collect a dozen papers set in exams. already recognized and raise its standard? Why not, indeed.

*

Suppose, reader, you were a young man in five years' time wanting to be an architect and you felt ready to sit for a qualifying exam. And supposing you had decided that after passing this exam. you wanted to join an architectural society. (There is, of course, no *need*, even now, for anybody passing any qualifying exam. to join a society. Nor does anyone try to persuade him to do so. But it is natural to want to.)

*

Supposing this, which of two societies would you imagine the young architect would want to join—a large, world-famous and powerful society already containing nine out of ten of the ablest architects in the country, *or* a small, not wholly architectural society, possibly containing the odd one able architect in ten? The fees are the same, the exams. the same standard, and each, while qualifying for Registration, also entitles to membership of one society. Which would you choose?

*

Exactly. It is thus permissible to suppose that the I.A.A.S. knows that if the Bill passes its examination must be raised to qualifying standard or its architectural membership will decline. But it is also permissible to suppose that the I.A.A.S. fears that if the Bill passes its architectural membership will decline *even if it does raise its standard.*

*

What then can it try to do? Two things. One, blocking the Bill as long as possible on any and every ground. Two, try to get its own exam. recognized *at its present lower standard* as the price of withdrawing opposition. Do you see?—"Why pass the more difficult exam.? Come to us and pass ours—it qualifies for practice, for the title of 'architect.' What more do you want?"

*

The Registration Council and the societies and architects in favour of the Bill got the big idea quickly enough. They decided that under no circumstances would they countenance a two-standard qualification. Nor would they recognize a standard lower than the very reasonable one achieved in present recognized exams. Apart from these essentials there was nothing they would not do to secure a professional united front over the Bill. During two years or so they have tried—and failed. Now it is your turn.

WHAT YOU SHOULD DO

It is, in my belief, time to stand no more nonsense. *You* have missed all the hard work, the endless efforts at agreement. What you can do now—during a vital ten days—is to do all you can to get M.P.s to study the Bill and to attend the debate at 11 a.m. on December 17 *and stay to vote.* By the result of that vote architecture, and incidentally your livelihood, will be affected for a generation. (The Commons cannot provide time year after year for a profession's domestic affairs.) You can, before you start doing anything else after reading this, *write*, *'phone* or *wire* your M.P. A small thing—taking twenty minutes or so—but at this juncture, *vital.*

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

SEVENTEEN NEW BRIDGES FOR SOVIET CAPITAL

The Moscow Soviet has placed an order with the City Bridge Building Trust for the construction, during the next few years, of seventeen new bridges and viaducts, at an estimated cost of 357,200,000 roubles.

THREE-YEAR PROGRAMME OF SPECIAL WORKS IN L.C.C. PARKS

At last week's meeting of the London County Council the Parks Committee submitted the second three-year programme, involving estimated expenditure of nearly £275,000, for the provision of further amenities and additional facilities for recreation in its parks and open spaces. The programme, which covers the period 1938-41, also includes schemes for bringing up to date some of the existing facilities, so that they may be of greater benefit to the public.

Of the five new lidos which the Council has already decided to construct, those at Charlton Playing Fields and Parliament Hill will be completed in the first year of the programme, those at Battersea and Ladywell Recreation Ground, Lewisham, during the second year, and the one at Clissold Park, Stoke Newington, during the third year. Improvements will also be made at four of the existing swimming baths.

THOMAS v. HAMMERSMITH BOROUGH COUNCIL

On Tuesday of last week in the King's Bench Division, Mr. Justice Porter, after hearing the concluding speech of counsel, reserved his judgment and announced that he hoped to deliver it in a week or two.

I.A.A.S. ANNUAL DINNER

Sir Edwin Cooper, R.A., has succeeded Sir Edwin Lutyens, R.A., as President of the Incorporated Association of Architects and Surveyors. The name of the new President was announced by the Press last Friday morning and confirmed by Sir Robert Tasker, M.P., in his speech at the Association's annual dinner at Claridges Hotel, London, on Friday night. Responding to the toast of "The Association," Sir Robert said that Sir Edwin Lutyens, the retiring President—who had occupied the position for the past seven years—had resigned because he did not regard it as suitable for a man to hold office for an indefinite period. "I am confident," added the speaker, "that future generations will confirm the tributes now paid to Sir Edwin by the many who regard him as the greatest architect produced by this country since the time of Wren. This brings me to the name of the President designate—Sir Edwin Cooper . . . The edifices designed by him will last a thousand years after much of the modern apology for architecture has been demolished . . . I think we ought to designate Sir Edwin Lutyens as Edwin the First and Sir Edwin Cooper as Edwin the Second." Sir Robert Tasker also announced that the Association hoped to start, in the future, a school of architecture, and concluded his speech with the following remarks: "Those of us who are seared by toil and touched by time view with apprehension and alarm the tendency to acclaim that which possesses neither form nor beauty. We believe that a building of noble proportion and design is no more costly than that which exhibits a frantic endeavour to create something sensational. If people must produce something revolting let it be confined to gargoyles; I protest against disgusting caricature of sacred persons or things; such products constitute an abuse of art."

The toast list was as follows: "Lords and Commons," proposed by Mr. Norman Birkett, K.C., and responded to by Lord Hewart, P.C., and Sir Ernest Graham Little, M.P.; "The Association," proposed by the Rt. Hon. L. S. Amery, P.C., M.P.; "Our Guests," proposed by Mr. J. E. Swindlehurst, M.A., and responded to by Lord Strabolgi. Over 600 members and guests were present.

RURAL HOUSING

A Rural Housing Exhibition prepared by the Housing Centre was opened at 13 Suffolk Street, S.W.1, on Monday last, by Mr. Robert Bernays, Parliamentary Secretary to the Ministry of Health. Mr. Bernays said there was a tendency to represent the champions of health and the champions of beauty as necessarily opposed. The aim of the exhibition was to show by text and picture that there were wide possibilities of bringing country cottages up to standard without destroying their charm. The Ministry was in warm agreement.

The Exhibition, which will run until the end of January, has been designed in compact form in order that it may be suitable for touring to small country towns and villages.

THE LATE SIR ANDREW TAYLOR

We regret to record the death of Sir Andrew Thomas Taylor, F.S.A., F.R.I.B.A. (retired), which occurred at his home at Hampstead on Sunday last. He practised for twenty years in Canada, designing many important buildings there; and, after his return, he did much valuable work on the L.C.C. and at Hampstead, and for various societies in London.

Sir Andrew Taylor was born in Edinburgh in October, 1850. He was educated at Edinburgh; and received his architectural training at the R.A. Schools and on the Continent. After practising for a short time in London he went to Canada in 1883 and practised in Montreal and throughout the Dominion. He gained many competitions and medals, and was architect to the Bank of Montreal, the Merchants' Bank of Canada, and Molsons Bank, and the buildings for which he was responsible included the McGill University, Lennoxville College, the Royal Victoria Hospital, and the Montreal General Hospital. He was Professor of Ecclesiastical Architecture in the Presbyterian College, Montreal, and lecturer on drawing at McGill.

In 1904 Sir Andrew retired from practice and returned to England. He represented Hampstead (of which he was an ex-mayor) on the London County Council from 1908

THE ARCHITECTS' DIARY

Thursday, December 9

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Exhibition of photographs taken by members of the A.A. Excursion to Paris. Until December* 17.

BLUE CIRCLE PLAYERS. *At the Arts Theatre, Great Newport Street, W.C. "The Late Christopher Bean." Until December* 11; *each evening at* 8.30 *p.m.*

LONDON MASTER BUILDERS' ASSOCIATION. *The Annual Dinner. At the Connaught Rooms, W.C.2.* 7.30 *p.m.*

L.C.C. SCHOOL OF ARTS AND CRAFTS, *Hammersmith. "Interior Decoration." By E. M. Dinkel.*

INSTITUTION OF MECHANICAL ENGINEERS. *At the Hotel Metropole, Leeds. Chairman's Address, by Alfred Roebuck.* 7.30 *p.m.*

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. Exhibition: "Rural Housing." Until the end of January.*

Friday, December 10

TOWN PLANNING INSTITUTE. *At Caxton Hall, Caxton Street, S.W.1. "Planning and Productivity." By Miss J. F. Adburgham.* 6 *p.m.*

ROYAL SANITARY INSTITUTE. *Visit to Oxford. Until December* 11. *Friday: "Overcrowding Standards: A Comparative Study."* 5 *p.m. (at the Town Hall). Saturday: Visits to two buildings.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Western Counties Branch. At the Merchant Venturers' Technical College, Bristol. "Architecture in Relation to Modern Construction." By J. H. Hollier.* 7.15 *p.m.*

LONDON SOCIETY. *Visit to the Royal Empire Society, Northumberland Avenue, W.C.* 3 *p.m.*

ILLUMINATING ENGINEERING SOCIETY. *At the Institution of Mechanical Engineers, Storey's Gate, S.W. Discussion on "Problems in Decorative Lighting."* 6.30 *p.m.*

Saturday, December 11

LONDON SOCIETY. *Visit to the French Hospital, Victoria Park Road, Hackney.* 3 *p.m.*

ST. PAUL'S ECCLESIASTICAL SOCIETY. *Visit to St. Mary Abchurch* (2.30 *p.m.*) *and St. Mary Woolnoth, E.C.* (3.30 *p.m.*).

Tuesday, December 14

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Students' Annual Pantomime. Until December* 16, *each evening at* 8.30 *p.m. (Wednesday,* 2.30 *p.m., matinee.)*

INSTITUTION OF CIVIL ENGINEERS, *Storey's Gate, S.W.1. "Reconstruction of Chelsea Bridge." By E. J. Buckton and H. J. Fereday.* 6 *p.m.*

Wednesday, December 15

CHARTERED SURVEYORS' INSTITUTION. *Quantity Surveyors' Committee. Annual Dinner. At the Savoy Hotel, W.C.2.* 7.30 *p.m.*

DESIGN AND INDUSTRIES ASSOCIATION. *Annual Dinner. At the Cafe Royal, W.1.*

ECCLESIASTICAL SOCIETY, 6 *Queen Square, W.C.1. "The Use of Timber in Our Churches." By Edward Yates.* 8 *p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Lancashire and Cheshire Branch—Junior Members' Section. At the Y.M.C.A., Peter Street, Manchester. Informal discussion between members on "Stanchion Design."* 7.30 *p.m.*

LONDON SOCIETY. *Visit to St. George's-in-the-East.* 2.45 *p.m.*

to 1926. He was elected an Associate of the R.I.B.A. in 1878, a Fellow in 1889, and became a Retired Fellow in 1915. He was knighted in 1926.

ANNOUNCEMENT

Messrs. Jordan, Handisyde and Fairweather, A/A.R.I.B.A., have entered into partnership and are practising at 7 Gower Street, London, W.C.1. Telephone No. : Museum 8483.

TRUSCON SUPPER-DANCE

The Truscon supper-dance, which has now definitely established itself as one of the regular festive occasions of the year, took place at the Wharncliffe Rooms, London, on December 3. Acting on the principle that deeds speak louder than words, the organizers had banned all speeches, and the whole of the time was available for dining, wining and chatting to friends from the provinces, whose visits to London are all too rare. The arrangements, as usual, were letter-perfect, and the Master of Ceremonies, Mr. W. M. Woodgate, if reinforced concrete ever palls, will doubtless reappear as one of the kings of the entertaining industry. The menu and programme, disguised as a book of Cook's travel tickets, recalled memories of summer tours which the cuisine happily did not dispel. Over 400 guests attended the function and among those present were : Messrs, Harold H. D. Anderson, C. H. Aslin, Maurice Bland, O.B.E., Cecil Burns, S. B. Caulfield, R. V. Chate, Sydney Clough, Clifford Culpin, Frederick Gibberd, Douglas H. Green, O.B.E., M.C., W. H. Hamlyn, G. R. Holland, C. Beresford Marshall, D. F. Martin-Smith, T. H. McCall, A. Minoprio, H. E. Palmer, Lionel G. Pearson, Frank Scarlett, Harold S. Scott, T. S. Tait, Michael Thornely, Leonard Voisey, Sir Duncan Watson, and W. M. Woodgate.

FACTORY AT NEASDEN

The conveyors shown in the illustration on page 924 of our last issue, of the storage, packing and distribution depot for Pitman and Sons on the North Circular Road, were installed by Messrs. Sovex, Ltd. The name of this firm was omitted from the list of sub-contractors.

DIARY FOR 1938

Collins' *Architects' and Builders' Diary for 1938* is now on sale at most of the stationery shops. This diary presents in a simple, practical form the generally accepted principles of design as applied to buildings. Recognized standards of the building trades, plasterers, plumbers, glaziers, etc., have been followed in making up each section. It is pocket-sized and is published with a variety of bindings ranging from 1s. 3d. to 7s.

CORRECTIONS

On page 673 of the JOURNAL for October 28 it was stated that the cost of raising 100 gallons of water through 80 deg. F. by two different electrical systems was 26d. and 27½d., respectively. 26 and 27½ were the number of units consumed and since the cost per unit was taken at ½d., the cost should have read 13d. and 13¾d.

We are informed by Mr. T. Stevenson, of the British Steelwork Association, that in our description of the new medical school at the University of Aberdeen, published in our issue for November 25, no mention was made of the fact that it is a steel-framed building.

R . I . B . A .

NEWS BULLETIN

The Architects' Benevolent Society in Need.—The Architects' Benevolent Society is faced with the prospect of a considerable overdraft in 1938 unless it obtains more money. The number of applications for help has increased this year, and while the Society is always loth to refuse help in cases of great hardship, its tiny income is quite inadequate to meet the demands on it. The majority of applicants are elderly architects who have fallen on hard times through no fault of their own ; many are over eighty years of age. Several applicants are widows left destitute with young children to bring up.

The practice of architecture is casual labour. Its very uncertainty makes necessary a strong benevolent organization. Ten shillings per architect per annum would allow the A.B.S. to extend its benefits and build up a reserve against depressions. Christmas, the season of charity, is at hand. Write to your bank and tell them to pay the A.B.S. (66 Portland Place) the sum of ten shillings (or less, preferably more) on the first of January each year, beginning with 1938. The A.B.S. will send a banker's order form if you prefer.

As we go to press we learn that Mr. T. Cecil Howitt, F.R.I.B.A., the assessor of the competition for Scunthorpe Municipal Buildings and Lincoln and Parts of Lindsay County Council Police Buildings, to be erected at Scunthorpe, Lincolnshire, has announced his award as follows :—

Design placed first (£500) : Messrs. Pearson and Son, of Dalton Square, Lancaster.

Design placed second (£250) : Sir John Brown and A. E. Henson, of 117 Sloane Street, S.W.1.

Design placed third (£150) : Charles C. Spence and Robert McKinlay, of Roath House, Low Fell, co. Durham.

The premiated designs will be reproduced in our next issue.

The premiated designs in the competition for a glass house to be erected at next year's "Ideal Home" Exhibition are reproduced in the supplement to this issue.

The A.B.S. does not confine its ministrations to members of the R.I.B.A. or of any group of societies. Anyone genuinely entitled to call himself an architect—assistant or principal, registered or unregistered—is eligible for help, *if the A.B.S. has the money.*

General Meeting on December 20.—"The Case for a Learned Society"—the title of Mr. E. J. Carter's paper—promises to be a lively inquiry as to where the architectural profession is heading, what equipment it is taking with it, and how, if at all, it is controlling its destinies. The vote of thanks will be proposed by Sir William Bragg, O.M., President of the Royal Society (Hon. A.) and seconded by Mr. Stanley Casson (Hon. A.).

Exhibitions.—"Modern Schools" is forming a unit in the Schools Exhibition, organized by the *News Chronicle* and opening at Dorland Hall, Regent Street, on Monday, December 20.

"Airports and Airways" is at the Mortimer Galleries, Hull, until December 30.

"Civic Centres" is at the Public Library and Art Gallery, Huddersfield, until January 8.

Informal General Meeting. — The Informal General Meeting fixed for Wednesday, December 15, has been postponed until Wednesday, January 19, 1938.

R.I.B.A. Dance.—There is a dance on Friday next, December 17. Single tickets are 6s. each, obtainable from Mr. R. W. A. Robertson, Clerk of the Dance Club at the R.I.B.A.

University Extension Lecture.—Mr. Basil Ward's series of lectures at the R.I.B.A. will conclude on Tuesday, December 14.

HOUSING

[By E. Maxwell Fry]

HOUSING as a branch of architecture would appear to be set some little way down the scale of contemporary architectural consideration, as though it were something that failed to engage the fullest concentration of architectural thought and could only rise to so-so levels of grandeur.

There is for both houses and flats a nearly fixed formula of construction, planning and equipment ; and because the unit is simple the standard remains lower than it should be. For the single family house the standard is a cottage standard retaining much of the anti-machine anti-urban bias of the garden suburb movement, as though the early enthusiasts had defined and limited a field of inquiry beyond which it was neither proper nor loyal to explore. And the urban flat is only a little more than a "ground" house lifted up.

Yet curiously enough the first break away from nineteenth century formalism produced house types that appeared to be grounded on a study of how people live, and to herald a much more human kind of architecture. The architects of the Continent, of Austria, Germany and Holland, welcomed them as such, and developed the idea. But architecture triumphed in England, and the grand problems of urbanism that arise exactly from a study of how people can live well in the contemporary world, remain largely to be solved.

We have not as architects carried far enough the inquiry into the way people, and especially poor people, live. In a rough sort of a way we have provided the necessities of living at lowish cost. But in this task we have not always succeeded because much working-class housing is expensive and over-architectural, and the trouble at bottom is lack of imagination.

One may quite properly distinguish imagination from fancy. Imagination seeks always to discover life from whatsoever channels it may approach its subject : but fancy obscures, Le Corbusier says—set the programme in order and most else follows. But the programme of housing is in the lives of poor people, and what do architects know of their lives other than what they can by the exercise of imagination reconstruct from their own lives.

But it is necessary not only to imagine but to feel for poor people, and it is my experience that this capacity is rare in architects, and where it exists fights unequally against the overmastering desire to be about the job of creating architecture. In the design of Sassoon House in which Elizabeth Denby and I collaborated, it was her intense feeling for those tenants, combined with a

knowledge of the needs of a working woman and her family, that prompted her innumerable suggestions, and turned a workable sort of a plan into an intimately practical flat, suited to the real needs of the tenants. The net result was a rise in the standard of accommodation and equipment. A rough idea for a balcony only reached its final form—with built-in flower-box, light mesh railing giving a view through it and letting in sun and air, the solid curb cutting out floor draughts—through her knowledge of how poor people could live if they had a chance. And the kitchen providing cheap constant hot water to bath and sink, where this was originally thought impossible, sprung from the same impulse.

Apart from my wish to establish Elizabeth Denby's contribution to this particular scheme, I mention these points to underline the importance of a complete programme for housing, and to show how largely this is a matter of imagination, observation and true feeling. Lacking these qualities, mere experience is grossly over-valued.

It is the experience of many that you must rail with high railings every open space in a housing scheme, that children smash everything within sight, and that roughly speaking no working-class tenant is to be trusted with exactly the sort of things with which we like to surround ourselves in our own more expensive homes and gardens. Such experience is the result of only a superficial observation, little imagination and less feeling. At Kensal House the other day I watched three little children who, unattended by parent or guardian, moved from one little unprotected garden to another, smelling the flowers and trying to distinguish one flower from another. Those children were indulging in an experience hitherto impossible to the children of the crowded city, even though we have been building urban flats, with open spaces, for the last many years. Their particular right to smell and touch—education in the real sense of the word—is a property that should lie with all dwellers in working-class flats, and does so at Kensal House because Miss Denby has created there a society that gives to each family a sense of ownership, and, from this, a sense of responsibility. To create this in place of railings is one of the most important parts of housing. It is of the essence of the programme of housing.

At a recent congress at Paris, Le Corbusier, in support of his theories of the functional farm, produced a peasant, a very loquacious and politically competent peasant, who addressed the assembly with superb aplomb. It reminded us all that if we had a mind to reorganize the farm, he and his fellow farm-workers were our clients. That this reminder served to shape the meeting shows how easily architects leap ahead of their programme.

There is no essential difference between the call for responsibility and ownership for the tenant, the free right to smelling flowers, and the development of such delicately adjusted machinery as the Garchey System of refuse disposal or high-pressure hot-water distribution. They are all resolved in terms of people's welfare, and qualified by rentals, subsidies and the numbers of units to be engaged.

Architecture is a dual affair. Architects subscribe to both the immediate and the lasting need, certain qualities in architecture quite clearly outlasting the machinery of contemporary living. It is impossible to overlook the second of these two. It claims the most earnest thought and feeling of those in whom the practical and the æsthetic are closely united. It is the quality of all great architecture. But there can be nothing of second-hand in it. It must arise directly and strongly from the service of contemporary life—be the outcome of real imagination and not academic fancy; and it is therefore impossible if not founded upon a programme largely extended beyond its present boundaries so as to include not only the ascertained data of housing, but truly experienced knowledge of the needs of working-class families.

SILCOCK AND THEARLE

CHAS. F. WARD, BOROUGH ARCHITECT, NEWPORT, MON.

F. T. BUSH, DEPUTY ARCHITECT, NEW SCOTLAND YARD

LETTERS *FROM* READERS

"Professor Reilly Speaking"

SIR,—A fact which Professor Reilly appears to have overlooked in his entertaining indictment of the present competition system is that the majority of competitions are promoted by public bodies. In this country, the members of municipal committees, unfortunately, do not hold advanced views on modern architecture, and it is often an assessor's most difficult duty to persuade the promoters of a competition to accept and be willing to carry out a design which is even reasonably up to date. To alter the system of assessment in such a way as to ensure that awards are made chiefly to schemes of an ultra modern character (which appears to be what Professor Reilly would like) would, in our opinion, do much to make architectural competitions unacceptable in the quarters from which they now receive their chief support.

As the authors of a basement full of unsuccessful competition schemes, we feel that the chief failing of the present system is that the assessor is apparently under no obligation to provide, for the competitors, a really adequate report, explaining the reasons for his award.

SILCOCK AND THEARLE

The President's Address

SIR,—The new President, and I purposely use the term instead of Mr. Goodhart-Rendel, was elected by the Council, and they in turn by all members of the Institute. In other words, the President is our representative as members, and as such, the public have the right to expect the opinions and policy expressed in his inaugural address to be those of the Council and Institute. In fact, Mr. Goodhart-Rendel stated he had brought forward one of the *Institute's* primary concerns. Further, the *Institute*, in Mr. Goodhart-Rendel's view—in his own words "if possible must avert the dangers of architecture too exclusively departmental."

Later, the President states the inaugural address should be rather a programme than a survey; therefore, if he has his way, the Institute's programme will include a policy to curtail the duties and work of the Official Architect, but suggests the Official will be allowed to impart his special knowledge and experience to private Architects to enable them to produce designs for government and public buildings. This is a very admirable suggestion from the point of view of one section of the Institute, but is it a policy in the interests of the R.I.B.A. or of architecture as a whole, or the public? I say definitely it is not, and Mr. Goodhart-Rendel has a task before him if he has to prove to the public that they would be better served by the employment of private architects, and that better architecture in the full sense would be produced.

Fortunately, at the commencement of his year, Mr. Goodhart-Rendel has shown his hand so that Official Architects know what to expect during his term of office, and will no doubt take action to correct the "inappropriateness" of his inaugural address.

Mr. Goodhart-Rendel said, in his personal views, nothing can be said in defence of the present practice of engaging Official Architects except it saves Public Authorities trouble, etc. I beg to inform Mr. Goodhart-Rendel, after over 40 years of public experience,

he is quite wrong, due probably to his lack of service in the interests of the public, as evidenced by his address, but on the other hand, I can assure him the representatives of the public of local authorities expend much thought and time in order to obtain the best results in the interests of the public, and even architecture, but not in the interests of individual members of our profession.

Now that the President has declared his policy in regard to Official Architects, the question arises as to what action will be taken by the Official Architects' Committee, and whether they will still function.

As a member of the R.I.B.A. for 35 years, I deeply resent Mr. Goodhart-Rendel's inaccurate, unjust and biased remarks, and it is hoped, in the interests of the Institute, the Council will take immediate action to prevent a very serious cleavage in the membership of the Institute.

As a member who claims to have assisted the R.I.B.A. by long service in the interests of the Institute and to the best of my ability, I consider the inaugural address by the President to be against the principles of professional etiquette and one waits to see what action the Council will take—none, I expect!

CHAS. F. WARD, F.R.I.B.A.,
Borough Architect.

Newport, Mon.

SIR,—Whilst sharing our President's desire to uplift the art of building, may I question his tactics in creating and/or widening a breach between two sections of the profession?

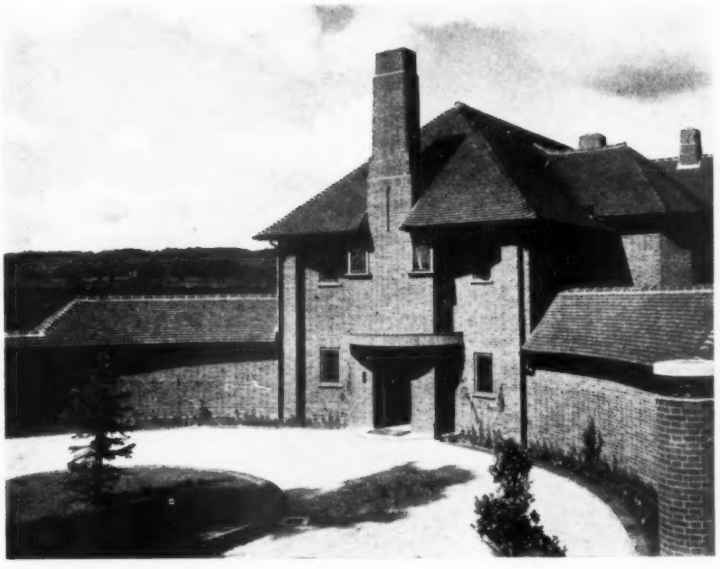
At 50 years of age, with not inconsiderable experience in "both camps," including a present intimate and, to me, happy official relationship with many of my "outside" professional colleagues, I have learned that good architecture is not peculiar to either free lance or official positions, but is due, so I believe, to the spirit and vision of "the man at the top."

The private practitioner may be more trammelled by a monetary outlook than any official by his Committee and Seniors, whom he may and does so often inspire. "Quinneys" reminds us that "people are more important than things," even building-things, and there seems little doubt that in this difficult and changing world, an official position is now generally preferred by very many of the younger generation.

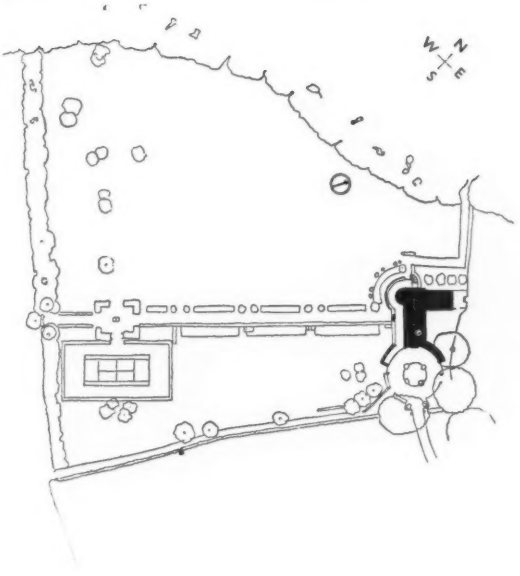
I am not anxious that the spirit of adventure may be stifled, for opportunity is never lacking to those who really desire it. Let us, therefore, seek unity, for in that way lies our hope for advancement in all things, including the Art of Architecture.

F. T. BUSH,
Deputy Police Architect and Surveyor, New Scotland Yard.

HOUSE AT FERNHURST



DESIGNED BY P. J. WESTWOOD AND SONS



SITE PLAN

GENERAL—*In spite of the sloping site the ground floor had to be level throughout.*

SITE—*The house was placed to take advantage of the magnificent view.*

PLAN—*The position of the house is very exposed and it was felt that the expense of flank walls to the entrance courtyard was well justified. They provide shelter from the prevailing wind and give privacy to the terrace and loggia.*

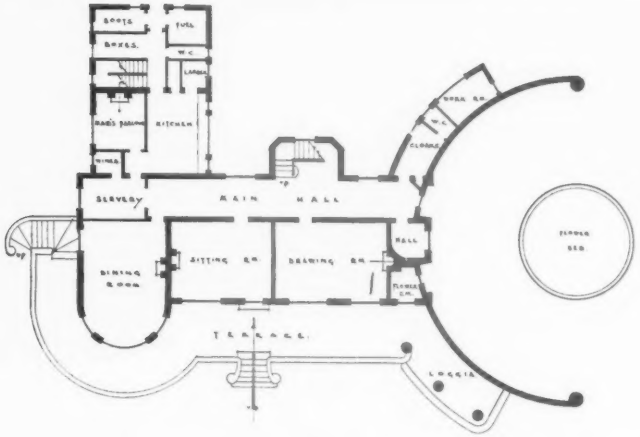
CONSTRUCTION AND EXTERNAL FINISHES—*Cavity walls, with Danes Hill facing bricks outside and white facing bricks inside. The terrace walling is in random local stone with York stone dressings. The client desired leaded lights in casements. In view of the exposed position a specially heavy window section was used.*

INTERNAL FINISHES—*No special finishes; oak strip flooring to principal rooms; composition floors to kitchen and bathrooms.*

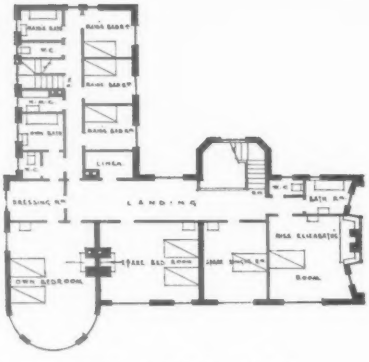
COST—*£6,053; 1s. 5½d. per foot cube.*

Above, a view of the entrance front. *For list of general and sub-contractors see page 974.*

HOUSE AT FERNHURST, SUSSEX:



GROUND FLOOR PLAN

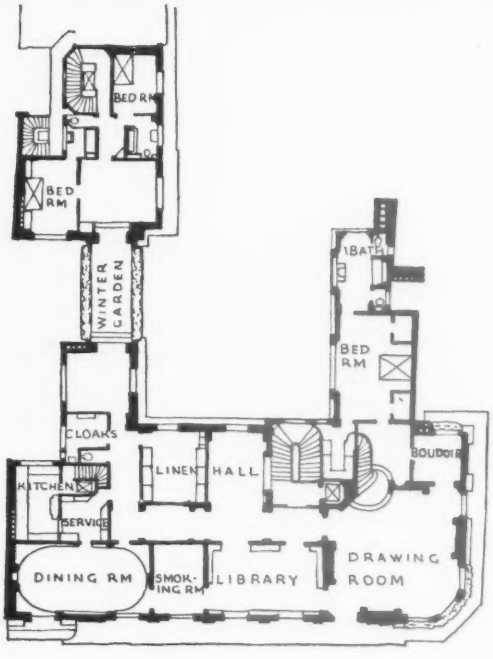


FIRST FLOOR PLAN

The photographs show : Above, a view from the loggia, looking towards the terrace. Facing page : top, a view from the west ; bottom, the loggia and part of the south-west front.

BY P. J. WESTWOOD AND SONS

FLATS ON THE QUAI DE BETHUNE, PARIS:



SIXTH FLOOR PLAN

PROBLEM—*A new flat block on the Quai de Béthune, Ile Saint Louis, Paris, on the site of the Hôtel Hesselin, designed by le Vau. The flats have the river on one side and a courtyard and the church of Saint Louis on the other. The control exercised by the Commission des Sites et du Vieux, Paris, led to the site outline and general appearance of the old block being retained, and the new building is therefore in some senses a complete reconstruction.*

PLAN—*The lower floors are divided into four flats, the fifth and sixth floors being single large flats. On this page is the top flat belonging to Mlle. Helena Rubinstein, who is also the owner of the building. The flat has been decorated by M. Marcoussis, Mme. Halika and Max Ingrand in conjunction with the architect.*

Above is the river front of block; top left, the winter garden extending across the bridge between the two sections of the building.

DESIGNED BY LOUIS SUE

Top, the Seine from Mlle. Rubinstein's flat; below, the drawing room; left, the library and the salon.

ARCHITECTURAL ASSOCIATION

THE PARIS EXHIBITION

Following are some extracts from a paper, entitled "The A.A. Excursion to Paris," read by Mr. Eric L. Bird, A.R.I.B.A., at last week's meeting of the Architectural Association.

THE principal objective of the A.A. 1937 excursion to Paris was the Exhibition. Each of the great Parisian exhibitions has marked some significant term in the development of architecture and art. The 1900 Exhibition, though digressing into the *art nouveau*, first showed Europe the gigantic in construction. The Eiffel Tower must have shocked badly the academically-minded professors of the Ecole des Beaux Arts; but it certainly appealed to the imagination of the ordinary man. The 1925 Exhibition first revealed the modern movement as a world force. True it was an unformed modernity, coloured by the pursuit of elegance and fashion typical of the Parisian, particularly in furniture and decoration. But with all its imperfections it made clear that a new architecture born of modern material and structural resources had sprung into being all over the world. What is the significant feature of this exhibition? I will try and answer that question at the end of this paper.

No one but the French would place an exhibition in the heart of a metropolis. It was done with quite astonishing ingenuity. That this was possible depends to a large extent on the fact that the banks of the river have two levels, of quay and boulevard. To these, bridges have added a third and even a fourth level. Some of the main traffic roads were actually kept open and went right through the exhibition so that one could even drive into the middle of it and find an entrance. It is reported that complaints of dislocation of business have not been inconsiderable, but against that more than thirty million persons visited the exhibition.

I have been told that the best way to enter the exhibition for the first time was by the Gate of Honour at the Trocadero. From the high terrace inside one obtained both a clear view of the magnificent central section and an instantaneous realization of the plan of the exhibition. On the first morning of our visit a small party of us approached the central section along the north bank of the Seine and our impressions were not unsensational. Passing along the flank of the German Pavilion we rounded a corner and looked up towards the Trocadero. There burst on our astonished gaze the immense system of fountains which fill the central space and which are to be a permanency. A vast arch of water shoots from the higher level and is surrounded by vertical jets of all sizes; level sheets of water fall into vertical sheets from basin to basin; the whole is an impressive composition in moving water. We found it even more impressive by night when the fountains glowed with internal light.

Then we turned round and looked backwards and upwards at the German Pavilion. The German and Russian pavilions were rather what one would expect. Both had massive, entirely blank façades hiding masses of propaganda. Both made liberal use of sculpture.

A first impression was that aggressive propaganda can be overdone and end by defeating itself. The senses quickly tire of over-dramatized facts and figures. This was a defect of some of the French pavilions not less than of the dictator countries.

The Netherlands Pavilion, apart from being an interesting building, showed some remarkably clever ideas in exhibition presentation. The fact of the Dutch air route to the East Indies was put across by a zigzag neon line across the obscured glass façade. Inside I noted, among many other things, that the very difficult task of making town planning appeal to the layman was successfully accomplished.

Next door was the amazing effort by the Spanish Government. That a country should produce a pavilion at all when engaged in a civil war is astonishing, and this was a remarkably good one. The building itself was of light steel frame, wood and glass frankly expressed. The ground floor was open and one entered a species of loggia. On the end wall was an immense and terrifying mural painting by Picasso entitled "Guernica." This was perhaps all the more impressive because of the manner of presentation. Opposite the painting was a fountain of running mercury. Beyond the main building there was a pleasing open courtyard covered with a velarium. Perhaps the most impressive thing about this pavilion was the quality of the paintings and drawings. It seems as if the fire of national agony were refining the national art.

The Norwegian Pavilion was perhaps the least satisfactory of the Scandinavians, but that is rather high praise. The centre of the main front was a sheet of falling water, but this was a good idea that did not come off. In the Finnish Pavilion, Aavar Aalto beautifully expressed Finland's staple industry, the production of softwoods. Everywhere was yellow pine in trunk, plank and plywood.

The Hungarian Pavilion was very definitely romantic. The Hall of Honour contained some huge colour murals of vigorous quality, while the exterior was a consciously dramatic composition.

The Pavilion of Austria I thought not quite so good as the one they had at the Brussels Exhibition, although the basic idea was the same. The main block of the pavilion was a huge shop window containing inside an enormous mural depicting a vast panorama of mountains.

The Japanese Pavilion, which I personally had not time to enter, was an excellent example of modern light frame construction and a direct descendant of traditional Japanese building.

On the south side of the river the sedate Belgian Pavilion on the left faced that of the British Government on the right. Personally I thought the best thing about the British Pavilion was the presentation. The idea presented, namely, English sport and the English week-end, particularly the society side of them, did not seem very significant of a great industrial and seafaring nation, though admittedly it was a welcome relief after the trumpetings of some other nations. The building I thought an uninspired casing to the goods within, and therefore not untypical of British architecture.

Beyond the British Pavilion was that of Czechoslovakia, a very interesting construction in steel, faced with anodized aluminium. The Swedish Pavilion next door was light, graceful and highly civilized. The United States Pavilion was correct, but dull.

To the east of the Belgian Pavilion was that of Switzerland, and beyond again, that of Italy. The Swiss building was one of the most attractive in the whole exhibition. Like those of Spain, Finland and Sweden, it was a frankly expressed structure of steel, glass and wood, very definitely in the Crystal Palace tradition. The floors were built up as an independent structure inside the outer casing in a series of mezzanines. The exhibits, mainly concerned with watchmaking and winter sport, were not overcrowded.

The Italian Pavilion was an impressive piece of totalitarianism, which, nevertheless, did not overpower the native instinct for good design and craftsmanship. A lift took the visitor to the top of the tower, where was the Hall of Honour, from which he descended through successive levels of exhibition to the ground.

The French Pavilions included some new permanent buildings in the Trocadero, which was not finished, and the Museum of Modern Art, which contained several art exhibitions, including one of the work of Van Gogh. The building is striking but disappointing. It is really two buildings joined by a colonnade and the lack of a really dominant central mass is felt. The columns are very tall, plain cylinders of travertine drums without capitals or bases. The two buildings are flat with slight mouldings and are faintly reminiscent of the R.I.B.A. building. In the main courtyard is a large pool, of which the water is coloured blue. Round it is grouped an assortment of statuary, some of it very good, but in three distinct scales.

The French temporary exhibition buildings, with a few notable exceptions, were impressive as architecture rather than interesting as displays.

The Aeronautical Pavilion was an example of the impressive which proved disappointing on examination.

The façade of the Radio Pavilion was a good example of a design considered equally for daylight and artificial illumination, the latter excellently done in a combination of coloured floodlight and tube. This new art of lighting, which is at once functional and decorative, appears to be ever extending its possibilities and methods.

The United Modern Artists' Pavilion was one of the most interesting buildings in the exhibition because it had a quality of architectural prophecy. It was not that this or that detail could be imitated; many of them were experimental and even unpractical; it had no sensational novelties; but in general it showed the kind of thing that might follow from present architectural tendencies; above all, it made one think. The structure was very thin and light. Stanchions of quite small section, infilled with wood framing and covered externally with asbestos sheet having a rippled surface and internally with wallboard and plasterboard, plus large areas of glass, made up the whole thing.

It is a sudden change from the structural frankness of the Modern Artists to the Pavilion of Elegance and that of the Society of Artists' Decorators. The Pavilion of Elegance was of barrel-vault shape inside and out, the external surface laced over with a pattern of rope, nailed on.

The Artists-Decorators hoisted you up to the top of a high building by lifts (in passing, why did no one use escalators in an exhibition of different levels?), and you wandered down again in a growing daze amid their creations. In a brilliantly-planned succession of rooms, groups and vistas, one saw furniture and fabrics of a quality that only Paris can produce, arranged in ensembles that, while striking, were unreal in appearance and certainly unpractical in use. Nevertheless, the showmanship, the sense of composition and more especially the use of colour were of exceptionally high quality.

The Pavilion of Electricity by Mallet-Stevens was dramatic and generous in scale. It closed the end of the mile-long vista from the Trocadero and gives me an opportunity to say that almost never did the French architects make a mistake in scale. The pavilion, in spite of containing what was announced to be the largest mural painting in the world, was bare and disappointing inside.

The Pavilion of Glass was a fascinating and daring design showing all the possible uses, both practical and unpractical, of the numerous varieties of glass.

One outstanding feature of the exhibition was the lavish use of sculpture. This was invariably well placed, though ranging in type from Canova classic, through the various versions of the archaic and impressionist to the surrealist.

At the beginning of this paper I promised to say at the end what I thought to be the significant feature of this exhibition. It marks, I think, the final end of the Renaissance, which was the last spontaneous flowering of the great Classic tradition started by the Greeks. That tradition was built on the use and expression of a system of compressive masonry structures and developed into the magnificence of grand manner, axial planning. Latterly it had become atrophied into Beaux Arts stylism and even into downright copying of the antique. The impact of modern tensile materials has killed it. Its penultimate flicker is the Museum of Modern Art in Paris, while even now across the Atlantic there is rising another new museum of modern art that is a portent.

The Paris Exhibition taught me one thing above all others, the necessity for looking only to the future in architecture.

The Architects' Journal Library of Planned Information

INFORMATION SHEET

SUPPLEMENT

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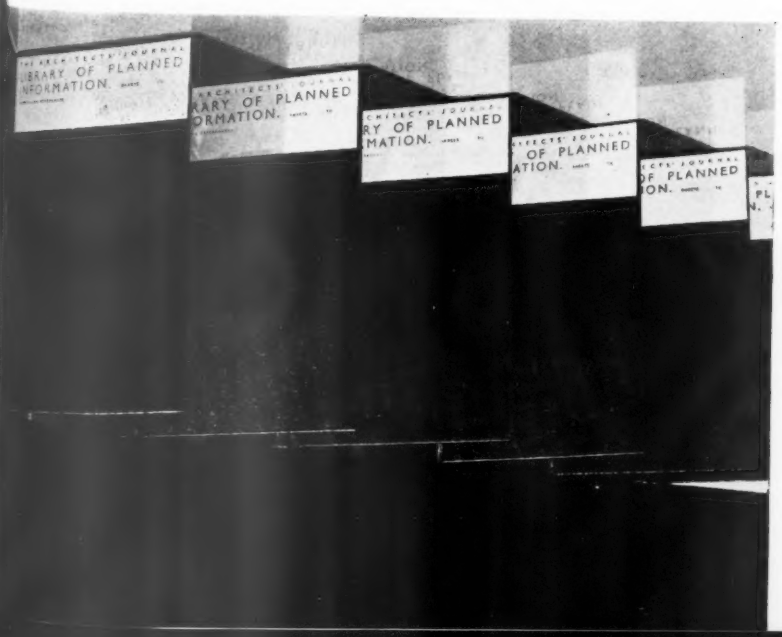

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541 : Linoleum
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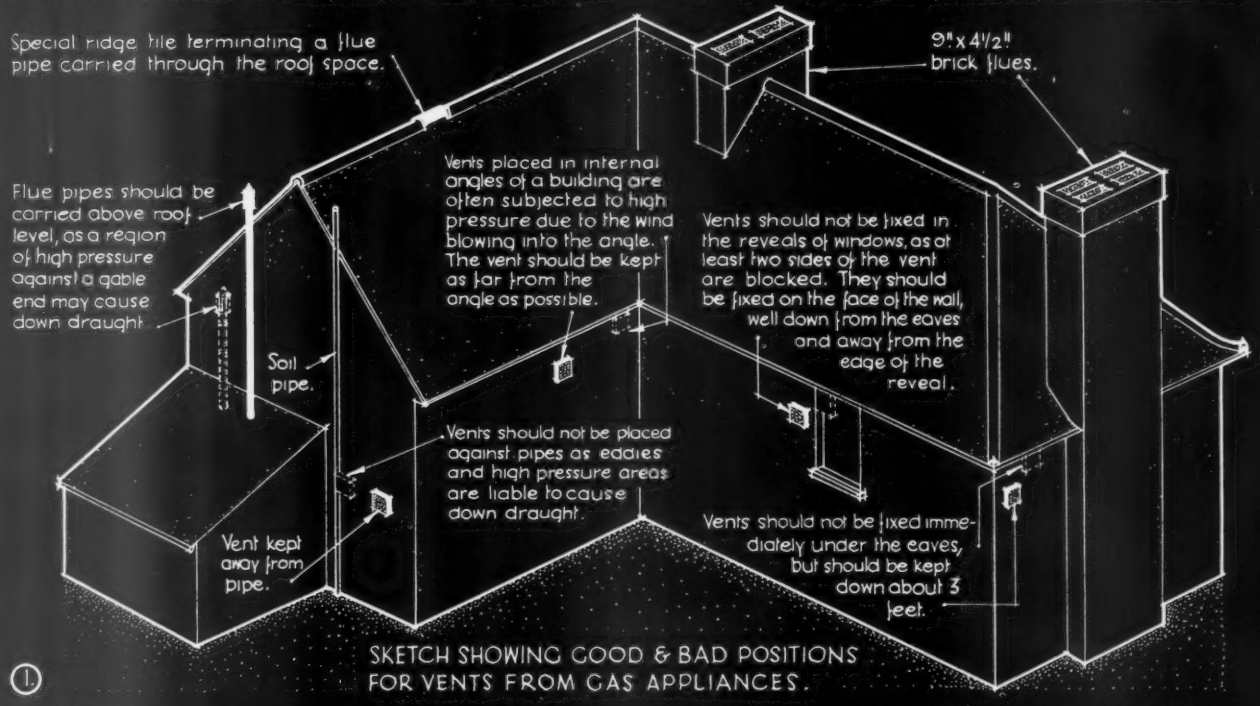
543 : The Equipment of Buildings
544 : Sheet Leadwork
545 : Elementary Schools—III
546 : Elementary Schools—IV
547 : U.S.A. Plumbing—III
548 : Wallboards
549 : Elementary Schools—V
550 : Elementary Schools—VI
551 : U.S.A. Plumbing—IV
552 : Sheet Leadwork
553 : Kitchen Equipment
554 : Burnt Clay Roofing Tiles
555 : A.B.M. Draining Boards
556 : Kitchen Equipment
557 : Asbestos-Cement Roofing
558 : A.B.M. Rainwater Pipes
559 : Flashing
560 : Kitchen Equipment
561 : Asbestos-Cement Roofing
562 : A.B.M. Rainwater Gutters and Fittings
563 : Asbestos-Cement Roofing
564 : The Equipment of Buildings
565 : Air Conditioning
566 : A.B.M. Rainwater Gutters and Fittings
567 : Plywood—I
568 : Leadwork
569 : Gas Cookers
570 : A.B.M. Moulded Gutters and Fittings
571 : Fuel Storage—I
572 : Electrical Equipment
573 : Wallboard and Insulating Board
574 : Sanitary Equipment
575 : Plywood—II
576 : Plumbing
577 : Leadwork
578 : Plumbing
579 : Sanitary Equipment
580 : Condensation in Industrial Buildings

651.

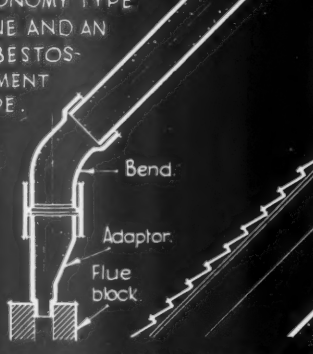
THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

THE POSITIONS OF OUTLET FOR ECONOMY TYPE FLUES FOR GAS BURNING APPARATUS:

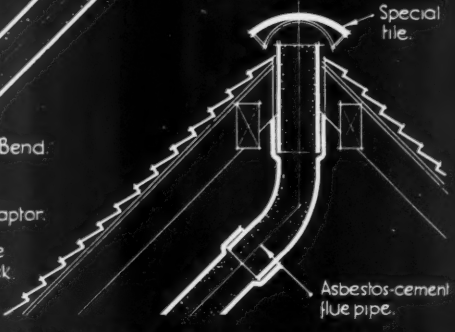


① SKETCH SHOWING GOOD & BAD POSITIONS FOR VENTS FROM GAS APPLIANCES.

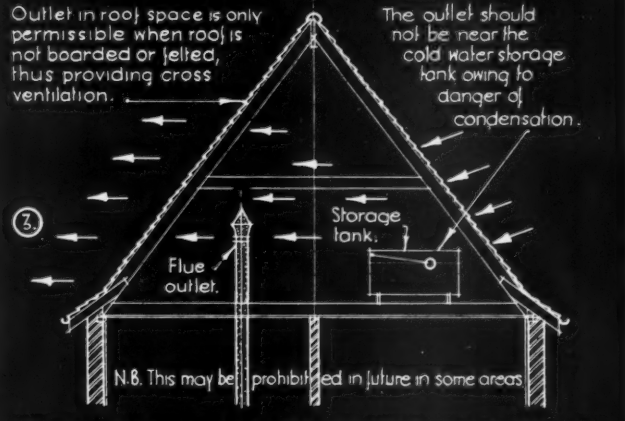
DETAIL OF CONNECTION BETWEEN AN ECONOMY TYPE FLUE AND AN ASBESTOS-CEMENT PIPE.



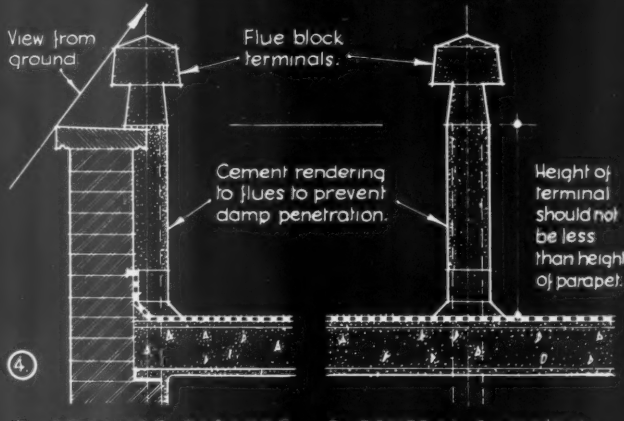
DETAIL OF THE SPECIAL RIDGE TILE FLUE TERMINAL.



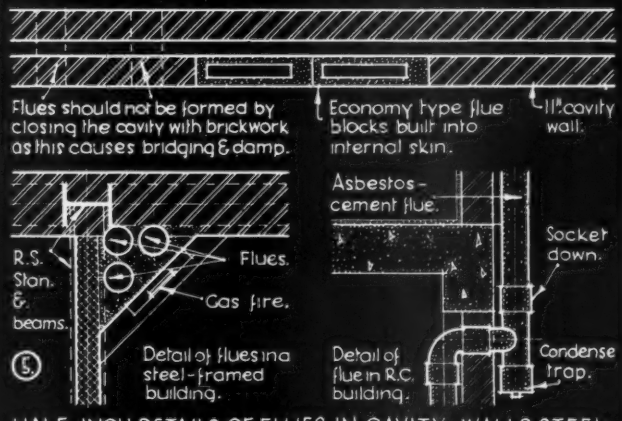
HALF-INCH SCALE DETAILS OF RIDGE TERMINAL.



SKETCH SHOWING FLUE OUTLET INSIDE ROOF SPACE.



A. AGAINST PARAPET. B. CENTRAL POSITION.
HALF-INCH SCALE DETAILS OF ROOF OUTLETS.



HALF-INCH DETAILS OF FLUES IN CAVITY WALLS, STEEL-FRAMED & REINFORCED CONCRETE BUILDINGS.

Information from the British Commercial Gas Association.

INFORMATION SHEET: THE EQUIPMENT OF BUILDINGS: ECONOMY GAS FLUES: N°
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar a. Bayne

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INFORMATION SHEET

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THE EQUIPMENT OF BUILDINGS

Subject : Gas Installations
Economy type flues

General :

This is the fifth of the series of Information Sheets on the installation of gas services in buildings. This Sheet deals with the positions of outlets from economy type gas flues.

Areas of High Pressure Around a Building : Detail 1

When wind blows against a building, at certain points an area of high pressure may occur. If the outlet of any flue for gas or solid fuel is placed in such an area the upward current of the waste products in the flue may be reversed, giving rise to down draught. Thus, no flue outlet should be fixed in the following positions :—

In an internal angle of the building ; close under the projecting eaves ; against any projection, such as a chimney stack, or drain pipe ; and preferably not below the level of the ridge, or of the verge of a gable wall.

When the flue has to be terminated on the face of the wall, the design and position of the terminal shall be such as to take advantage of the air movement, to achieve up draught in the flue.

Beside high pressure areas, any obstruction to the flow of gases from the vent where it is fixed in a window reveal, will reduce the efficiency of this outlet. Vents near windows should be placed as far from the glass as is conveniently possible in order to prevent the windows being "steamed" by the water vapour in the products of combustion.

Side terminals through walls are commonly used for gas water heaters. Some authorities permit and some deprecate their use for gas fires. A ridge outlet is, however, almost invariably preferable where it can be arranged.

All the above faults are illustrated in dotted lines on the diagram on the front of this Sheet, and suggested satisfactory positions for the vents are indicated solid.

Ridge Outlet : Detail 2

Where flues pass through the roof space, they may be gathered over by means of asbestos cement flue pipe, to discharge through the ridge. A special ventilating ridge tile is necessary, and care should be taken that the area of the vent opening is at least equal to the sum of the areas of all the flues discharging under the ridge tile. Special asbestos cement adaptors are available for making connection between the economy flue blocks and the asbestos cement flue pipes.

Outlet in Roof Space : Detail 3

If the roof construction is not close boarded or felted, the flue outlet has been permitted to discharge in the roof space. The outlet should be kept well away from any woodwork, and also from uninsulated cold water storage tanks, as condensation of the water vapour contained in the products of combustion might occur.

This practice with gas fires will be prohibited under any new By-laws which follow in detail the recommendations of the 1937 Model By-laws of the Ministry of Health.

Outlets on Flat Roofs : Detail 4

Outlets adjacent to parapets should always be carried up so that the terminal is above the level of the top of the parapet. Outlets in the middle of the flat should also be carried up to the level of nearby parapets. Where economy flue blocks are used, the outside should be rendered to prevent the penetration of damp.

Cavity Walls : Detail 5

The cavity should never be used as a flue, nor should a flue be formed by bridging the cavity with brickwork, as damp could then penetrate the wall. Flue blocks built into the inner skin should be used with proper terminals.

Steel-framed and Reinforced Concrete Buildings:

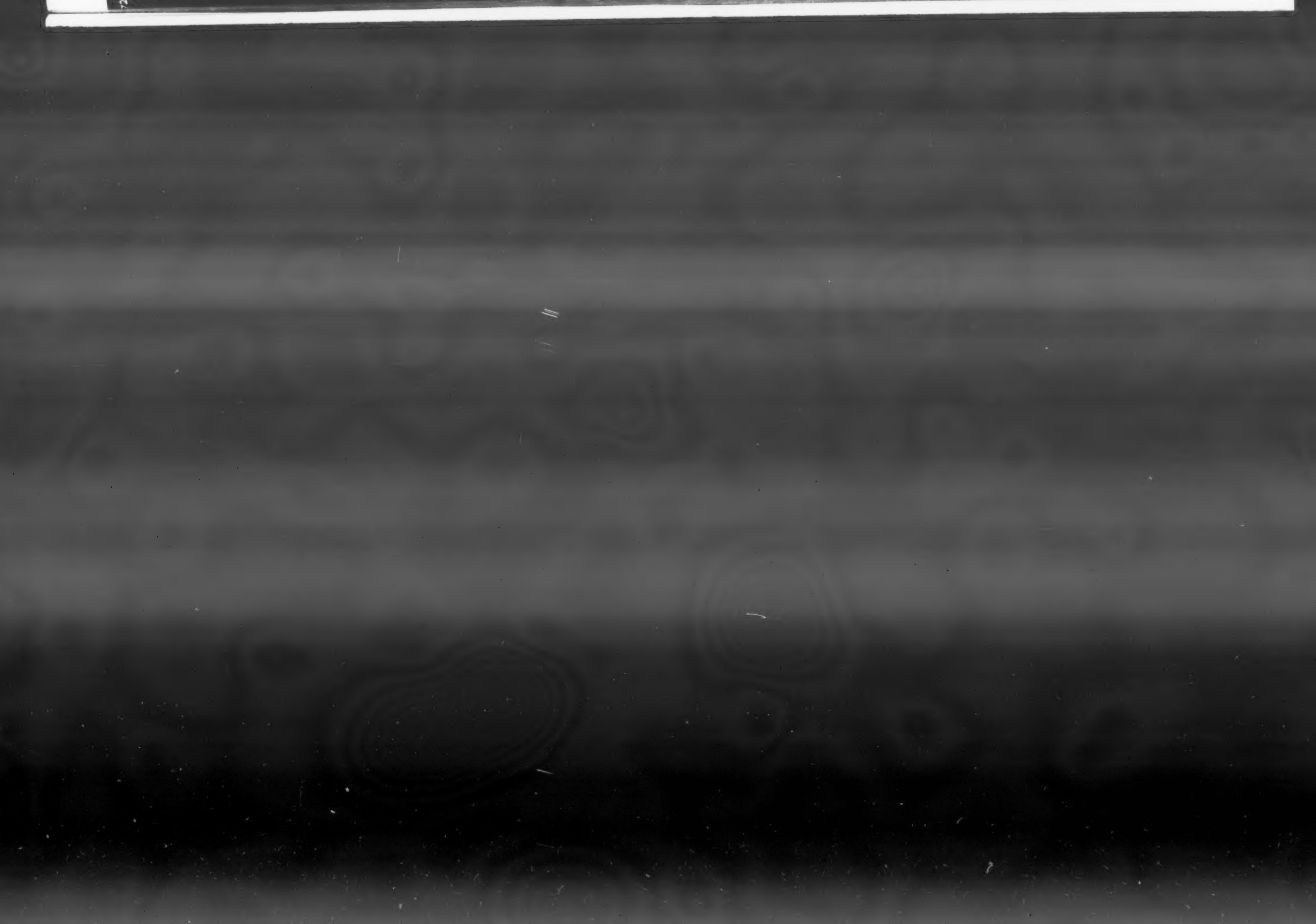
Flues in steel-framed or reinforced concrete buildings cannot be carried up in the thickness of the wall owing to the steelwork. To overcome this difficulty, corner fireplaces may be used, with the flues run in the angle between the wall and the partition : asbestos cement flue pipe is a convenient material for this purpose.

Where the angle treatment is not possible, the flue must be carried round inside the beam in asbestos cement or a shallow chimney breast of 4½-in. projection worked up in economy type flue blocks on the inside of the wall.

Information from : British Commercial Gas Association

Address : Gas Industry House, 1 Grosvenor Place, S.W.1

Telephone : Sloane 4554



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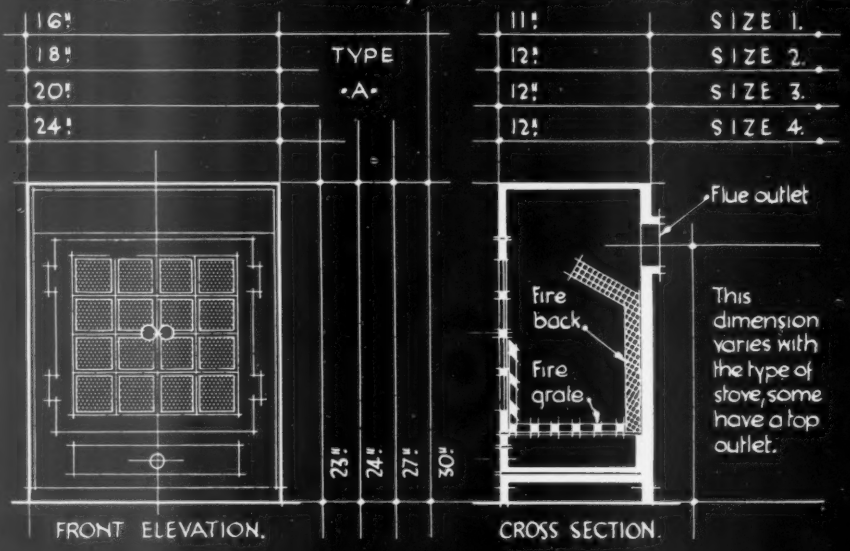
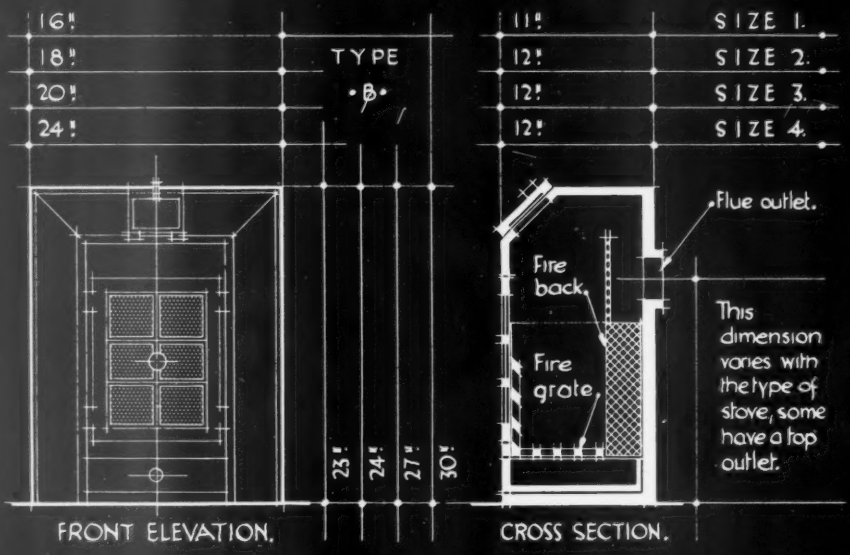
TYPICAL OPEN OR CLOSED, AND CLOSED TYPE SOLID FUEL BURNING HEATING STOVES.





Ⓐ OPEN OR CLOSED TYPE STOVE.

This type of stove provides slow combustion when it is used with the doors closed and open fire combustion rates when the doors are open.

It may also have a back boiler for supplying radiators or hot water supply systems.

Fuels recommended.
Kitchen nuts, anthracite, low volatile coals and special smokeless fuels.

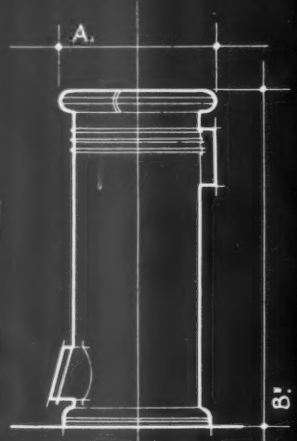
APPROXIMATE CAPACITIES OF STOVES, TYPES ·A· AND ·B· (Under average conditions.)

No.	Size of room. (WITH BOILER) CU: FT:	Size of room. (WITHOUT BOILER) CU: FT:	Radiator heating surface. SQ: FT:	Water heated to 100° F. per hr. GALS.
1.	1130	1700	20	10
2.	2000	3000	40	20
3.	2660	4000	60	30
4.	3300	5000	80	40

Ⓑ CLOSED STOVE, HOPPER TYPE.

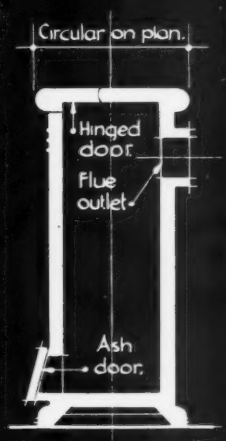
This type of stove is designed specifically to provide slow combustion and has provision for approximately twelve hours fuel storage above the fire-box.
It is constructed with or without doors, and some patterns have a back boiler.

Fuels recommended:
Anthracite, low volatile coals, coke, or other smokeless fuels.



APPROXIMATE DIMENSIONS.

No	A.	B.
1.	11"	18"
2.	11"	20"
3.	11"	22"
4.	12"	24"
5.	12"	26"
6.	14"	28"
7.	14"	30"
8.	16"	32"
9.	18"	34"
10.	18"	36"
11.	20"	40"
12.	20"	44"



APPROXIMATE CAPACITY.

No.	Space heated. CUBIC FEET:
1.	2000.
2.	3000.
3.	4000.
4.	5000.
5.	6000.
6.	7000.
7.	10000.
8.	15000.
9.	20000.
10.	25000.
11.	30000.
12.	35000.

CLOSED, ROUND TYPE STOVE.

This type of stove is designed for variable rates of combustion & under normal conditions of firing will contain several hours supply of fuel.

The flue outlet varies with the make of stove, some having the outlet at the top, and some at the back, while with some models it is interchangeable.

These stoves may be lined with fireclay and some models have boilers for radiators or hot water systems.

Fuels recommended:
Any class of solid fuel can be burnt.

Information from the Coal Utilisation Council.

INFORMATION SHEET : SOLID FUEL BURNING HEATING STOVES:
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 · Oscar a Bayne.

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HEATING STOVES BURNING SOLID FUEL

II

The open and closed types of stove are usually constructed of cast iron, but in some cases are provided with a steel, or other metal casing, and also with complete glazed ceramic casings. Those constructed of iron are obtainable with a plain cast finish or alternatively vitreous enamelled in a variety of colours and other special finishes. The stoves are also available with decorative casings of special shape and dimensions suitable for fixing in front of existing fireplaces.

Stoves of the above type may be built in flush with the fireplace surround in order to economise in space, or may be fixed in a recess with a clearance on all sides, according to the type of stove selected. When fixed in existing fireplaces, the usual practice is to blank off the grate opening, stand the stove on the hearth and connect the flue outlet to an opening in the blanking sheet. Fireplaces and stoves constructed as a whole are available in glazed ceramics.

The figures given in the table under the heading "Radiator Heating Surface" and "Hot Water Heated" are not obtained together, and usually only apply when the doors of the Stove are kept closed. The hot water heated may exceed 100° F. if desired.

For particulars of the fuels recommended for use in these boilers, reference should be made to the information published on the back of the Sheet entitled "Fuel Storage —1."

Further particulars relating to Radiator Heating Surface to be obtained from the Information Sheet entitled "Radiators for Central Heating," which will be published later in this series.

The particulars supplied on this Sheet are intended to be generally representative of this class of appliance only, and are given without prejudice to any information that may be subsequently published by appliance makers.

The British Coal Industry, through the Engineers of the Coal Utilisation Council, provides technical service to architects and the public generally on all problems relating to the use of coal and its derivatives for all purposes.

In addition to the staff at the head office there is an Engineer attached to each branch office at the addresses given below.

Also available are two Technical Bulletins, "Heating Efficiency in the Home" and "Central Heating with Solid Fuel," for those requiring further information on heating problems.

Previous Sheet :

This Sheet is the second of the series issued by the Coal Utilisation Council, the first one being No. 571, Fuel Storage.

Information from : Coal Utilisation Council

Head Office and Southern Branch :
British Industries House, Marble Arch, W.1
Telephone : Mayfair 0511

Midland Branch :
Essex House, 27 Temple Street, Birmingham, 2
Telephone : Midland 3736

Eastern Branch :
Alliance Chambers, 19 Horsefair Street, Leicester
Telephone : Leicester 65011

North-Eastern Branch :
38-39 Pearl Chambers, East Parade, Leeds, 1
Telephone : Leeds 23616

North-Western Branch :
38 Deansgate, Manchester, 3
Telephone : Blackfriars 4081

Scottish Branch :
81 Mitchell Street, Glasgow, C.1
Telephone : Central 146

Irish Branch :
Bank of Ireland Chambers, 1-2 Westmoreland Street, Dublin
Telephone : Dublin 23034

South Wales and South Western Branch :
United Kingdom Provident Buildings, 14-16 Baldwin Street, Bristol, 1
Telephone : Bristol 24797

SCHOOLS

The Architects' Journal Library of Planning

Nursery - Infant Schools

LAVATORIES, COATROOMS AND OTHER UNITS

Lavatories

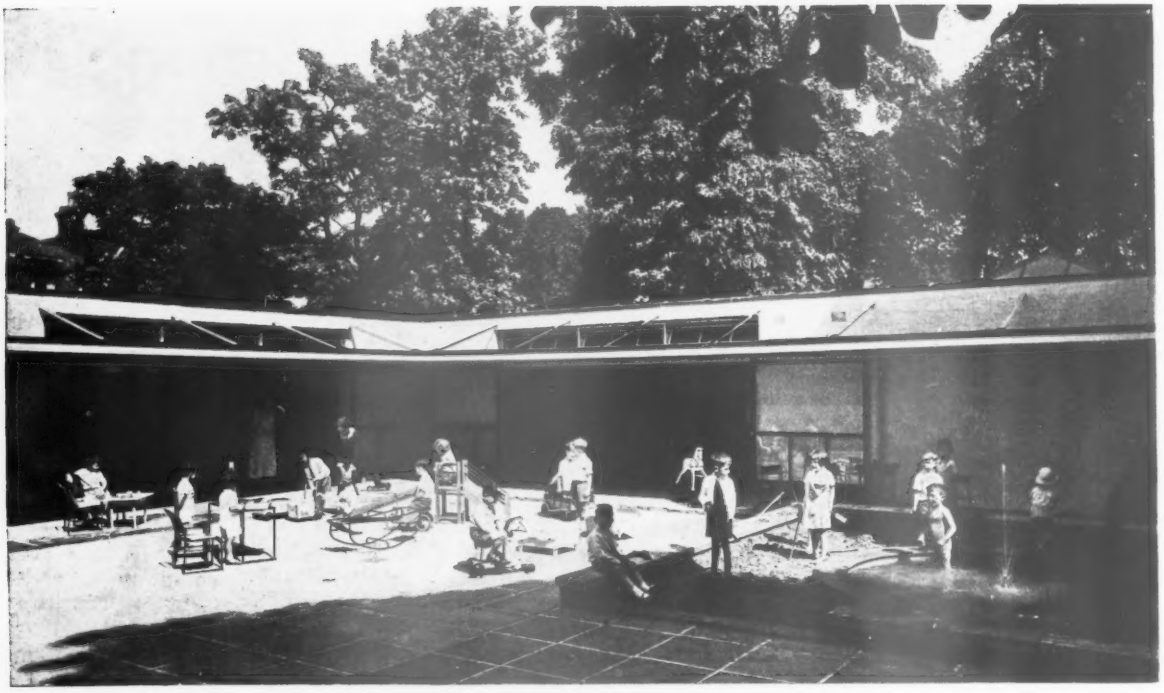
IN the Nursery School lavatories and coat rooms must be thought of as rooms of instruction. Tying up shoes, brushing teeth, going to the lavatory are just so many more "educational pursuits." Lavatories and w.c.s emphatically *must* adjoin the playrooms and be entered directly from them. They must be kept well ventilated and clean, and there is every reason why they should be immediately accessible to the children and to the teachers for easiest possible supervision. A glass panel between playroom and lavatory at teachers' eye level is a valuable feature. Playroom and lavatory together should form a repeating unit in a multi-group school.

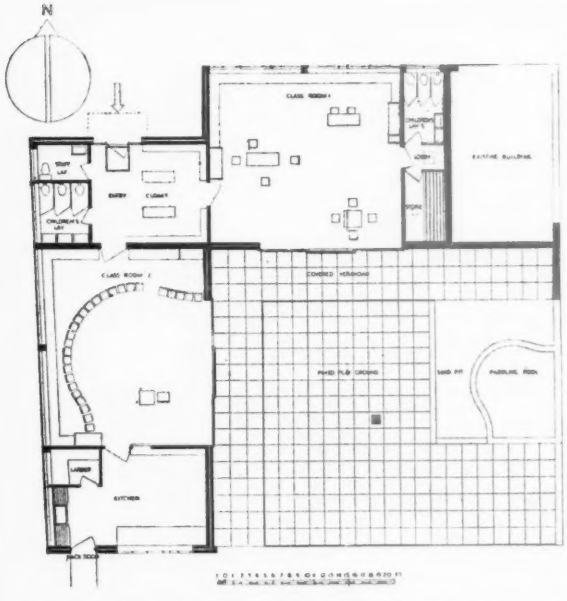
The best lavatory arrangement is to group wash basins in the centre of the room, back to back, towel and tooth brush racks on the walls immediately behind them, and w.c.s and urinals at one end. For training the under 5 children in "self-reliance and control" some teachers prefer movable basins on shelves to the fixed type, the children filling and emptying them at sinks. The fixed type, however, is now the general rule. Hangers for individual towels and racks for tooth brushes and mugs each marked with a flower or animal symbol, are usually provided for each child.

To simplify supervision w.c.s should be in the same room as the basins. They should have half doors, hung not more than 4 ft. 6 ins. above the ground and having a good cleaning space below. They should not be fitted with locks when used by children under 5. A urinal (in a closet like w.c.s) should be provided for boys. Seats should be of bakelite, rubber composition, or wood finished with a hard enamel. Fittings likely to harbour moisture should be avoided.

For children under 5 lavatories are of course "co-educational," but whether this should be so in Nursery-Infant Schools for children over 5 depends to a large extent on the attitude of mind of the local education authority. In most existing Infant Schools it is the rule to separate w.c.s for boys and girls, but this will not

Elementary hygiene at Kensal Nursery School. Mugs, towels and toothbrushes are kept on the wall behind. Ideally, towels should not touch each other.





Nursery School at Dulwich, by Harding and Samuel. Interesting features are glazed canopy, sliding windows, clerestory lighting.

necessarily apply when Nursery and Infant Schools are combined. Lavatories shared by the 5–7+ children, with immediate access to separate ranges of w.c.s, is a perfectly satisfactory arrangement.

Windows

All-opening hopper types are the most efficient for ventilation purposes. They should come down to within 1 ft. 6 ins. of the floor, as in the playrooms. When lavatories are planned in series with playrooms similar window types may very reasonably be used. There is no reason why a full view of the garden and a full share of the sun should be excluded from the 2–5 children's lavatories, where privacy does not have to be considered.

Heating

An important point, inclined to be overlooked in this country, is that lavatories should be heated. In fact, all parts of the school should be kept at the same temperature (about 55 to 60 degrees near the floor) in order to eliminate sudden temperature changes and draughts.

Ventilation

Natural cross ventilation is important. The peculiarly British habit of having permanent "vents" in walls of lavatories should be abolished. These almost invariably let air in instead of drawing it out, make satisfactory heating and ventilation more difficult and in no way contribute to health. When insisted upon by local authorities they should be filled up the moment the inspector's back is turned.

Efficiently designed *extract* roof ventilators which allow no appreciable amount of air to come in are an advantage if placed in the roof immediately over coat lobbies and w.c.s. Glass roof ventilators are not efficient for the purpose of extracting foul air.

Floor, Wall and Ceiling Finishes

Tiles or terrazzo are best for floors and for walls up to a height of about 4 ft. Most forms of jointless magnesite flooring are to be avoided as urine causes them to disintegrate. Cork in any form is not suitable, but linoleum or rubber are quite suitable for floors and even the lower parts of walls. For walls in framed buildings, glazed asbestos panels or some equally reliable form of easily fixed washable slabs will be found cheaper than tiles or terrazzo. Ceilings and upper parts of walls should be finished with

SCHOOLS

enamel paint or made otherwise washable and steam-proof.

Equipment

For a group of 30–35 children the following lavatory equipment is required :

6-8 washbasins (6 are adequate for children of 5-7) :

Children of 2 + : 14 ins. high fitted with cold taps only.

Children 3–5 + : 16 ins. high fitted with h. and c.

Children 5–7 + : 17 ins. high fitted with h. and c.

Four low-pedestal w.c.s in closets :

Children 2–5 + : 7 ins. high, seats 7 ins. to 9 ins. diameter.

Children 5–7 + : 8 ins. high, seats 10 ins. diameter.

If pull-chain types are used, chains must be long enough to be operated by the children.

One urinal, preferably in a closet or screened off in the mixed lavatories.

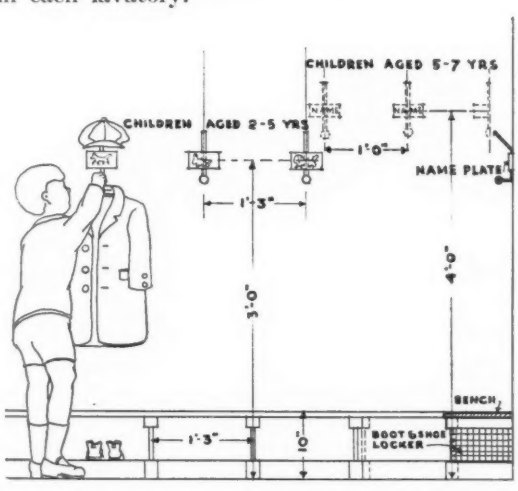
One bath-sink, 48 ins. by 18 ins. by 16 ins. deep, fitted with hot and cold taps. Height, 33 ins. from base to ground.

25–35 racks for towel, toothbrush, hair brush and comb. These should be arranged so that towels can be hung without touching each other. Slots for movable painted symbols should also be provided for the 2–5s.

Hot-water supply should be constant, and w.c.s should have rapidly filling tanks or troughs.

Electric radiators should be avoided.

A small first-aid cupboard should be provided in each lavatory.

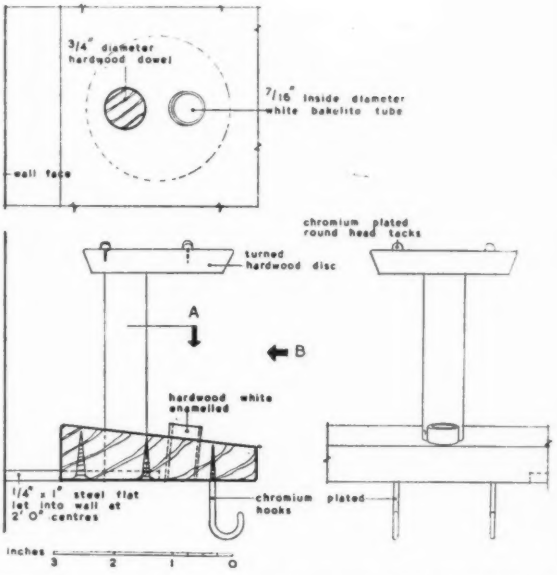


Heights and spacing of coat pegs for Nursery-Infant Schools.

Coatrooms

The position of these depends to some extent on the size and type of school. It is always best to arrange the 2–5 + children's coatroom where it is immediately accessible from the playroom, though it need not be directly connected with the lavatory.

In 1 and 2 group schools a single coatroom at the entrance can at the same time be made directly accessible to the playrooms. In a larger school, or a school planned for expansion, it is better to treat coat-hanging space in the same way as lavatory accommodation, that is, as part of a repeating unit consisting of playroom, lavatory, coatroom. This arrangement is specially advisable for the younger children, who frequently have to be helped with their coats and shoes. In Infant Schools, or the Infant section of Nursery-Infant Schools, a single coatroom is quite workable, though separate accommodation for each playroom is to be preferred provided that the hanging space is adequately and independently ventilated.



Details of mug, towel and toothbrush racks at Kensal, designed by E. Maxwell Fry. (See *also* page 961.)

Windows

Aspect is not important, but ample window area should be provided. The putting on of shoes is a long and exhausting job.

Heating

Coatrooms should be kept at the same temperature as playrooms and lavatories. The heating pipes below coat racks may be found sufficient to do this.

Ventilation

Windows should give maximum ventilation and, in addition, extract ventilators over coat racks are an advantage, especially if corridor connections between playrooms are used for hanging coats.

Floor and Wall Finishes

Linoleum or rubber are probably the most suitable floor coverings. Walls should be made washable within finger range.

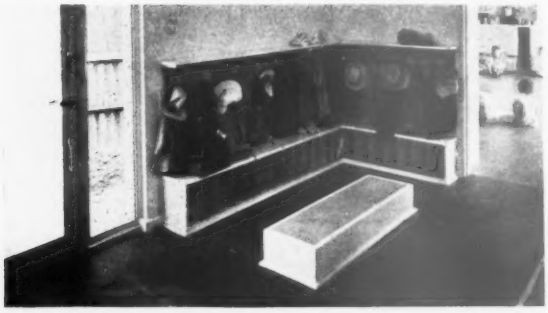
Equipment

Ample space is needed. A low daïs in the centre of the room is a good idea where there is room to spare. When space is confined the shoe-lockers under each peg can be designed to form low seats. Hot pipes should run behind the shoe lockers with outlet grilles above them.

Coat-hangers should be placed a good 12 ins. apart to allow complete separation of children's clothes. The best arrangement is to have small screens, about 12 ins. wide, projecting at right angles from the wall. Shoe lockers should project

sufficiently far forward of these screens to allow elbow room for the children when sitting on them.

A *drying cupboard* for rain-wet clothes should open off each coat room. This should be distinct from the drying cupboard in the laundry.



Coat room in the Dulwich school. The bench is a good idea, but coats should be kept apart by generous spacing of pegs (see diagram) or by use of wood or wire mesh screens.

*Bathroom

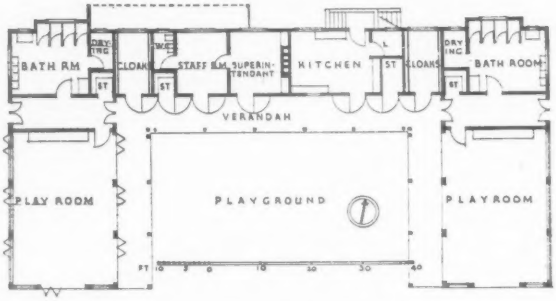
A bathroom independent of the other lavatory accommodation is recommended. It is best placed in a central position near the children's entrance and can with advantage adjoin the medical inspection room. Only one small bath, raised so that children can be washed in it without too much stooping of the nurse or attendant, is necessary for a school of two groups ; two baths for up to six groups. Even in the poorest districts, children usually arrive clean and only have to be bathed occasionally.

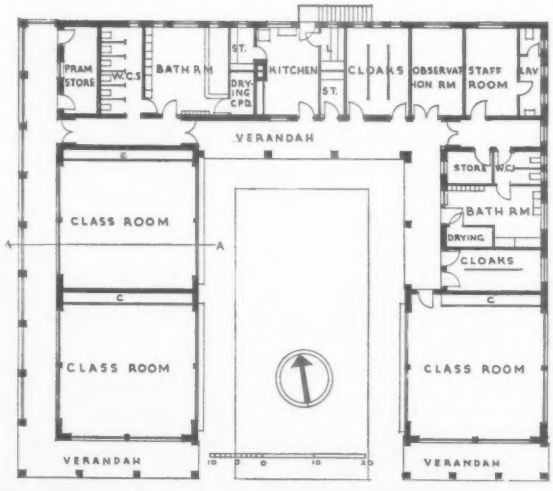
However, where it can be afforded, a sunk bath in the middle of the floor, about 10 ft. by 3 ft. and 1 ft. 3 ins. deep, with gentle sprays on either side, is a tremendous asset. This would be for all-the-year-round water play rather than washing. The smallest children are easily frightened by too vigorous sprays, so these should be designed to be perfectly controlled. They should be horizontal sprays, not overhead showers, and should be fitted with efficient hot and cold mixers. Where the sunk bath cannot be provided there should be at least one separate spray for each three groups. In the open-air school at Surêsnes there is a shower room with a large tiled floor and high ceiling sprays diffusing warm or cool rain : a delightful if extravagant feature. It can be enclosed by sliding windows or thrown open to the sun.

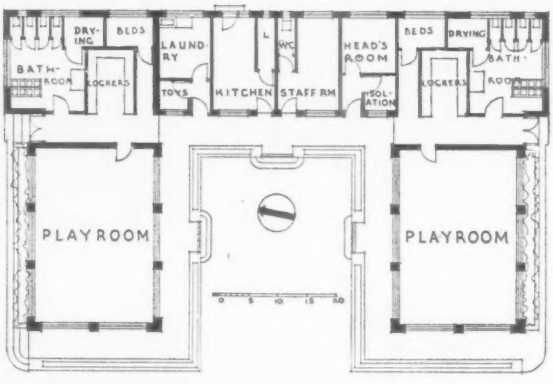
A sink should be provided in the bathroom and also an airing cupboard for towels.

In very small schools, if sink-baths are provided in the lavatories, the separate bathroom can be eliminated. Where mothers are

* *Optimum* accommodation has been listed here. Asterisks indicate units which can be eliminated when great economy is necessary.



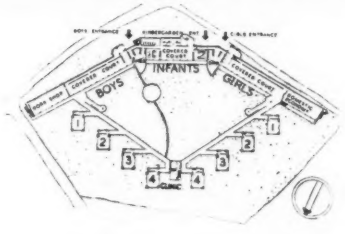


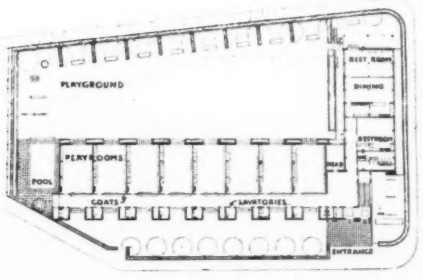


Above : Lavatory at Lache Nursery School, Chester, by Gibson an Lemmon. Asbestos-cement in various finishes for dwarf parti: ons, dadoes, wall and ceiling panels. Right : Three typical "local authority" open-air plans for Nursery Schools. (Accrington, by H. Sanderson ; Shipley, by H. Dawson; Plymouth, by L. F. Yanstone.) The popular forecourt arrangement provides a suntrap playground, but has the disadvantages of indirect connections between playrooms, and indirect access to lavatories.

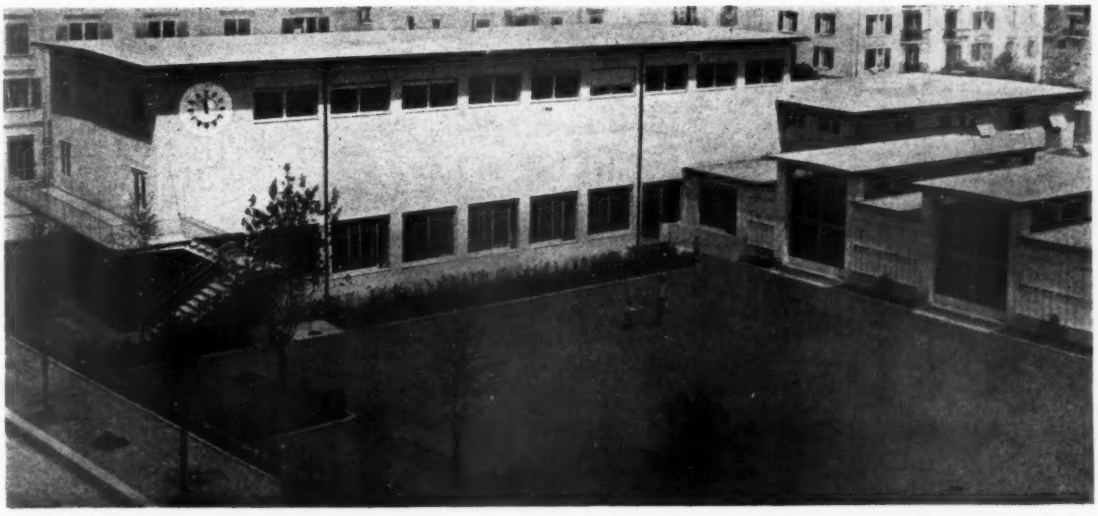
SCHOOLS

Nursery-Infant School (Ecole Maternelle) at Zurich, an interesting two-level arrangement of playrooms to give cross ventilation. Notice also dispersed planning of lavatories.





Extreme example of the open-air pavilion type. Nursery-Infant School at Surêsnes, near Paris, by Beaudoin and Lods. Pavilions are connected by covered ways and ramps lead up to excessive areas of asphalt play spaces on roofs. "Free" planning tends to elongate circulation, to make the school appear more of a labyrinth than it really is. Nevertheless, this building has a big idea most competently handled and is already a classic example of its type. Detail designing is excellent, but an attractive lightness in character is marred to some extent by a scale oppressive when related to very small children.



encouraged to come and wash their own babies it is, of course, necessary.

Kitchen

This should be centrally placed in relation to the playrooms. Meals are taken in each of the playrooms, though not necessarily simultaneously. The 2–3 + children are usually fed first so that they can have their extra amount of sleep.

The essentials are :

- Large-sized steam cooker.
- Steam kettle for fish.
- One or two additional heating rings.
- Double sink, preferably cast metal.
- Large refrigerator for storage of milk, butter, eggs.
- Dry goods store, including hoppers for storing flour, etc., in bulk.
- China and cutlery store (easily accessible to children when required).
- Ample work table.
- Service counter (low enough for children to collect and dump plates).
- Light dinner trolleys.

In some schools the children are encouraged to help wash up. Where this is so, a special low sink and draining board are necessary, and plate racks must be well within their reach.

The kitchen should of course be planned to minimise movement. Easily cleanable floors and walls are essential.

Service entrance should be entirely separate from staff and children's entrance.

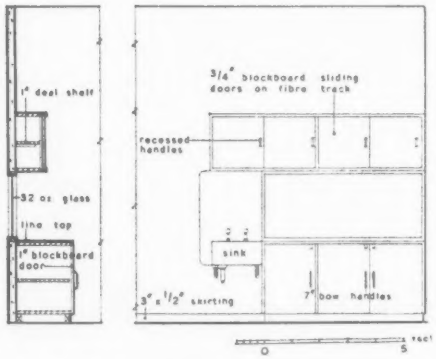
Medical Inspection

The children are regularly inspected every morning by a nurse as they enter the school. There are periodical inspections by a doctor.

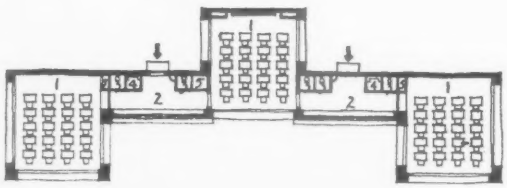
The inspection room must be placed at the entrance. Since it will sometimes be used as an isolation room it is good, when possible, to place it next door to one of the playrooms with a communicating window *above* children's eye level so that the isolated child can be under constant observation.

The inspection room must contain :

- Small couch.
- Writing desk.
- Filing cabinet.
- Medicine chest.
- Weighing machine } in the bathroom where
- Sink } adjoining.



Detail of medical inspection and isolation room at Kensal Nursery School. (E. Maxwell Fry.) The observation panel connects with a playroom.



Open-air Infant School at Arnhem, by H. B. Van Brockluisen. The simplest type of plan. Canopies over sliding windows allow open-air teaching even in wet weather.

ODEON CINEMA, LEICESTER SQUARE, W.C.

ASSOCIATED ARCHITECTS:

ANDREW MATHER

AND

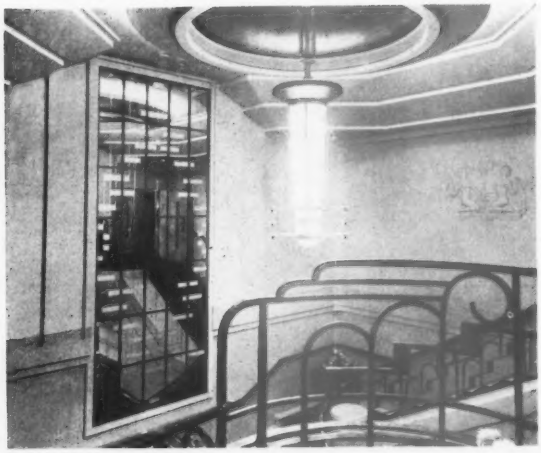
HARRY W. WEEDON

GENERAL—*This cinema, erected on the site of the old Alhambra Theatre, was opened on November 2.*

SITE—*The site is almost rectangular, having an area of approximately 27,009 sq. ft. The cinema has a frontage of 100 ft. to Leicester Square, and a ten-storey block of shops and offices fronting Charing Cross Road.*

EXTERNAL FINISHES—*The elevation to Leicester Square, shown above, is faced with black granite, some 200 slabs 6 ft. by 5 ft. and 2 ins. in thickness being used. The canopy is bronze. The tower on the north side rises 120 ft. above pavement level and, in the upper part of the front, a large recess has been formed which holds movable illuminated signs.*

ODEON CINEMA, LEICESTER SQUARE, W.C. ASSOCIATED



PLAN—*The main entrance faces Leicester Square and a vestibule leads to a wide-panelled foyer, with the pay boxes arranged as part of the general design, the staircase to the balcony leading off from the northern side to the balcony foyer overlooking the Square and from which access to the lower balcony is obtained. Over the balcony foyer are offices, the telephone exchange, and a room for the B.B.C.*

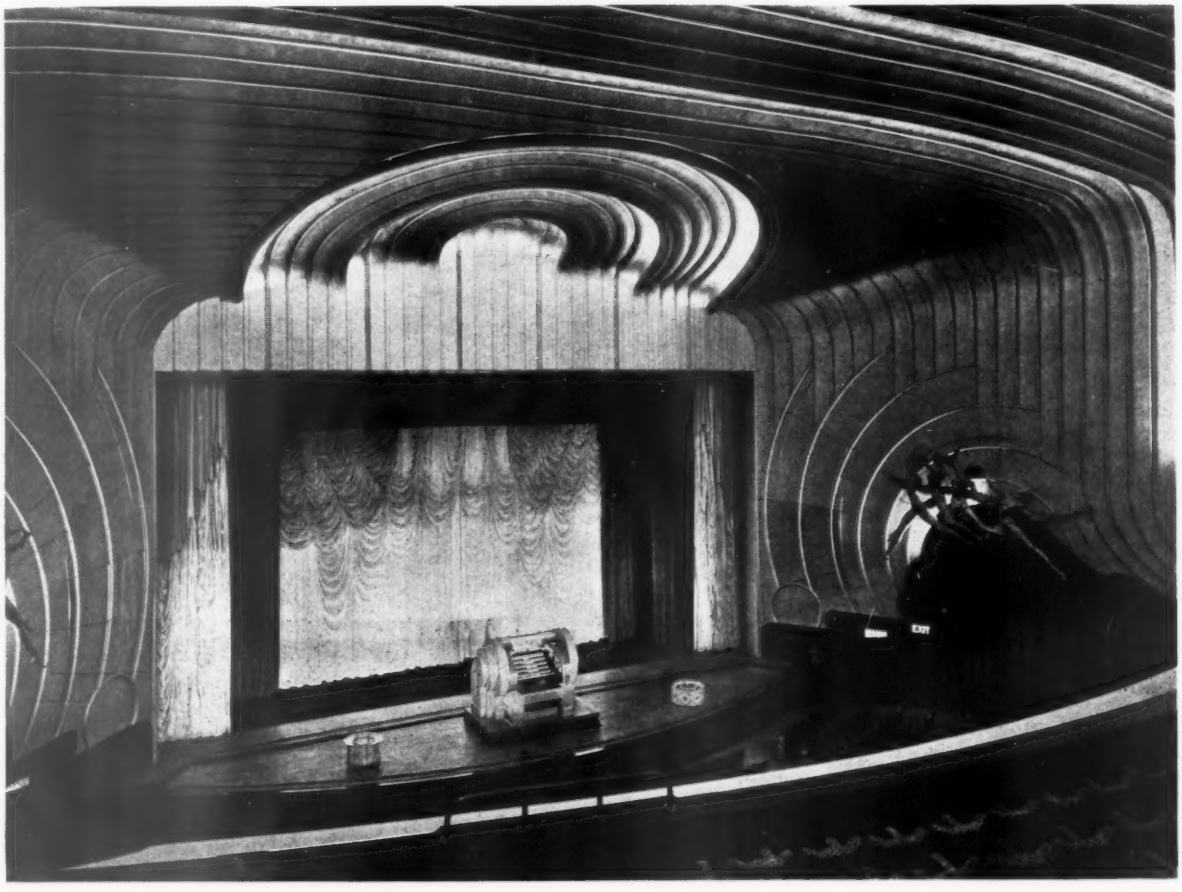
Seating accommodation is provided for 2,300 persons. The auditorium has one balcony of an unusually flat rake and, apart from large foyers and vestibule, a reception room for guests and press room with telephone room are provided; the staff apartments and toilets, shower baths, transformer room, vacuum cleaning chamber and stores are housed under the front portion of the building. Under the stage there are the organ room, musicians' room, plenum and refrigerating plant, boiler room, and orchestra and organ console pit. The floor of the orchestra pit is constructed on a lift, so that it can be raised to the level of the stage and thus provide extra floor seating.

CONSTRUCTION AND INTERNAL FINISHES—*The general construction of the cinema is of brick and steel. The balcony is supported on steel cantilevers on a deep transverse girder. The steppings of the balcony are constructed with filler joists and concrete on shaped expanded metal lathing. The constructional flooring throughout the building is in filler joists and concrete. The external roof is of asbestos troughed sheeting supported on steel principals, from the bottom members of which fibrous plaster is hung to form the ceiling of the auditorium. The roof space thus formed serves as accommodation for the many ventilation ducts required.*

The stairs are of concrete, faced with margins of marble and protected with metal ornamental balustrading. Between the margins carpet is laid. Carpet is the general floor covering in the building, and for this purpose the constructional floors have been overlaid with deal boarding fixed to wood battens filled in with concrete.

The photographs show: Left, top, a detail of the staircase balustrading; left, the entrance; below, the balcony foyer.

ARCHITECTS : ANDREW MATHER AND HARRY W. WEEDON

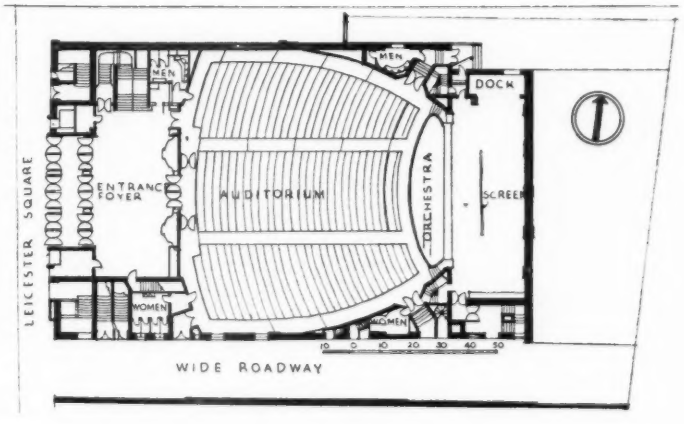


EQUIPMENT—*The stage is fully equipped for dramatic and music-hall entertainments as well as for films. Ample dressing-rooms, and scenery dock, property room, fly gallery, etc., are also provided. The design of the safety curtain is by Mr. Bainbridge Copnall. The dimmer machinery room and the ventilation extract chamber are above the foyers in the front part of the building.*

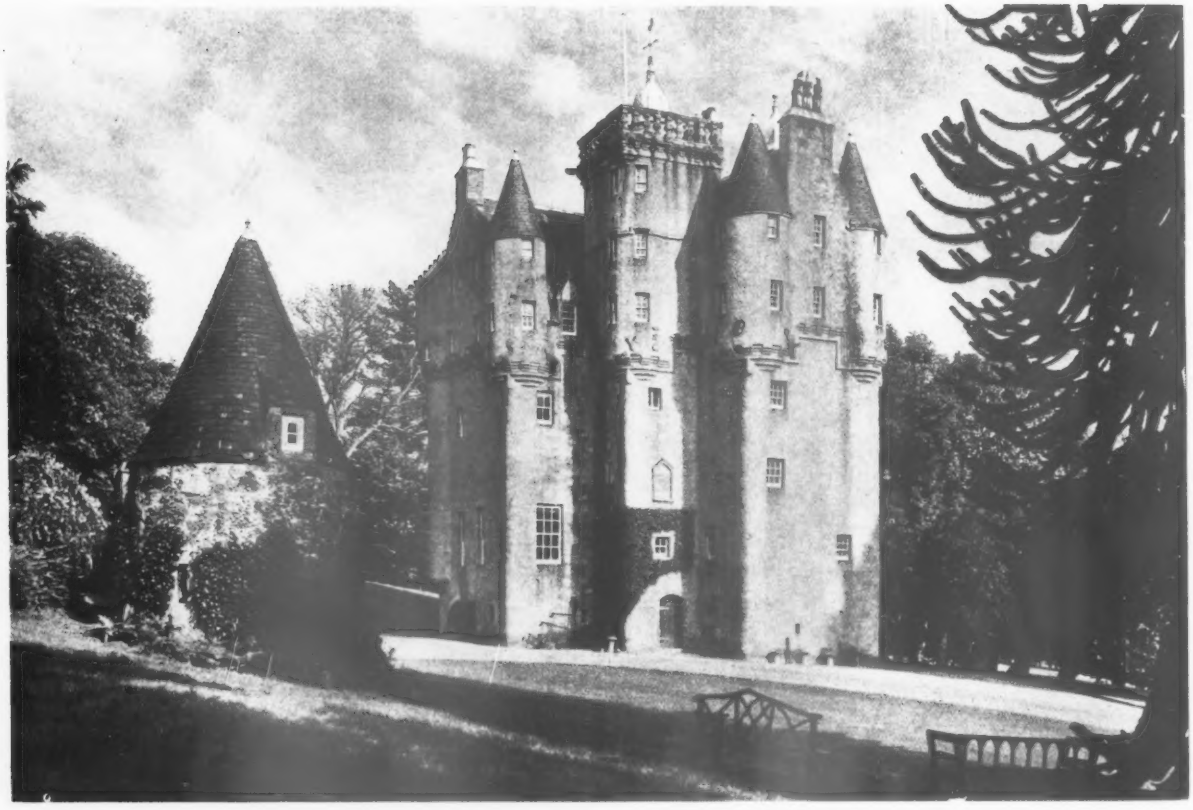
VENTILATION—*Ventilation is by plenum design, the inlets being arranged in the ceiling and extracts placed under the balcony steppings and also under the stall seats.*

Above is a general view of the auditorium.

For list of general and sub-contractors, see page 974.



GROUND FLOOR PLAN



Craigievar Castle. From "Shrines and Homes of Scotland."

LITERATURE

SCOTTISH HOUSES

[*By ROBERT HURD*]

Shrines and Homes of Scotland. By Sir John Stirling-Maxwell, K.T. Maclehose. Price 10s. 6d.

THE architect-reviewer can only wish that the title of this admirable book had been more direct. Sir John Stirling-Maxwell has given us an account of Scottish Architecture from early until recent times; but "Shrines and Homes of Scotland" has, frankly, a trippery tang about it that does scant justice to what is actually a good architectural history. One is forced to the melancholy conclusion that "Architecture" must be a word of no selling value.

The mere existence of a Scottish architectural idiom, so often ignored by those who consider themselves authorities, is here handsomely vindicated both by word and picture. The author traces the converging and diverging tendencies of Scottish and English architecture from mediæval times until the twentieth century, and reveals the gradual development of a national idiom, the outcome of climate, economic conditions and available materials. This has been done before (in Hannah's "Story of Scotland in Stone") but not so explicitly.

Perhaps the one characteristic which stands out above all else is the modest, human scale of all Scottish architecture, and this is true of Scottish life generally. We suffer quite unnecessarily from an inferiority complex when our works are held up to comparison with English and foreign examples, largely because we have lost our sense of scale. We cannot afford to go splashing money about indiscriminately on County Halls and Shell Mex Buildings, nor do we normally need such vast structures for efficient living in Scotland.

The illustrations reveal this characteristic not only in secular but ecclesiastical buildings. One has only to think of the Thistle Chapel and then of St. George's Windsor, or Henry VII Chapel Westminster, to grasp this. There is no falling off in quality between England and Scotland—indeed no; but merely a totally different conception of scale. And it is because we are apt to forget this sense of scale, and try to emulate—most unreasonably—the necessary largeness of the South, that Scotland is seriously threatened with provinciality.

Various accounts have been given from time to time of the development of the Scottish fortified tower from the simply rectangle to the L-plan and Z-plan. Dr. MacKay Mackenzie and Ian Hannah have both gone into this in detail; but neither seem to me to have simplified it for the enlightenment of the general reader as well as Sir John Stirling-Maxwell. These fortified towers finally developed into fortified houses, and then into purely domestic houses with a few external relics of former defensive details. At the height of their glory these buildings are astonishing not only on account of their exuberant appearance, but their late date; Craigievar, Aberdeenshire, for instance, was only built between 1610–24.

Sir John Stirling-Maxwell devotes considerable space to ordinary houses of the sixteenth and seventeenth centuries. He dwells lovingly on them—and they do indeed form a unique inheritance. The depredations of the 1935 Housing Act have recently drawn

the National Trust for Scotland into a prolonged campaign not only to save individual houses, but to educate the general public in Scotland as to their priceless common domestic architecture. They have partially succeeded—but this well-illustrated section on the same subject in a book which will obviously have a wide circulation will be a most valuable help. No other European country, perhaps, has produced a mass of domestic architecture at once so sturdy, so functional, so naïve and so charming. The sixteenth and seventeenth century burgh of Culross in Fife, for instance, is surely unique—and whatCulross displays can be seen all over Fife, and less frequently in most parts of Scotland. This domestic idiom is an exact mirror of the real Scotland before the deluge of industrial revolution; and mercifully fragments still survive as a salutary corrective to our modern provincial tendencies.

The author's elucidation of the architectural ancestry of the Adam brothers may interest and surprise many architects south of the border. I do not refer to the influence of foreign travels on their style of design, but to the sequence, so to speak, of professional talent. Sir William Bruce, the landed proprietor and architect who flourished in Scotland during the latter half of the seventeenth century, designed several well-known buildings such as Holyrood House and Kinross House in a style vaguely familiar to all who know Wren's works—that is emphatically only a general comparison. But he started his career by building in the old Scots tradition, as we see in his steeple of the old Merchants' Hall in Glasgow. He ended it by training William Adam, the architect-father of the more famous Adam brothers who worked as much in England as they did in Scotland. Sir William Bruce is therefore a figure of cardinal importance in the history of both Scottish and English architecture.

Only one major criticism have I to make. I admire the book deeply enough to feel almost churlish in mentioning it; but it is too important to pass over. The author leads us as far as Sir Robert Lorimer, and there leaves us. But Sir Robert Lorimer is by no means the only leader worth following: the one man Scotland produced who really matters in modern architecture to-day—Charles Rennie MacKintosh—the author never mentions. This is a serious omission. MacKintosh brought the essentials of the Scottish tradition into the service of modern design. The frankly functional basis of Scottish architecture at its most national period, with which MacKintosh was familiar, formed an admirable jumping-off ground for the development of his experiments in modern design in 1894, which in turn had such fruitful results on the continent. His School of Art in Glasgow is a landmark not only in Scottish, but in European architecture, though the author might justifiably plead, I suppose, that he left it out as being neither a "shrine" nor a "home." But MacKintosh's "homes" in Helensburgh and Kilmacolm illustrate this relation between the Scots tradition and modernism even more vividly than his School of Art; and I submit therefore the MacKintosh has far too important a place in modern Scottish architecture to be omitted. It was he who linked Scotland to Europe once more after centuries of increasing isolation beyond the northern counties of England; and he did it mainly by re-interpreting the Scots tradition of functionalism.

The bee in the reviewer's bonnet has now bumbled its way out, and he must make reparation by saying sincerely that this is a remarkably sound, readable and attractive general history of Scottish architecture, well produced and reasonably priced. It deserves a wide public.

Let us hope, incidentally, that this book will suggest to educationalists that Scottish architectural students might well be taught more about the architecture of their native land; it is usually considered proper to the curriculum of architectural schools in most countries.

Steep'e of Old Merchants' Hall, Glasgow. From "Shrines and Homes of Scotland."

OLD WORLD SYNOPSIS

[*By A. G. ALEXANDER*]

Carpentry and Joinery. By W. B. Douglas. Published by Messrs. Crosby Lockwood and Son, Ltd. Price 3s. 6d.

MR. W. B. DOUGLAS, in his new book, "Carpentry and Joinery," claims that he has tried to "keep level with the requirements of students in carpentry and joinery." Although one does not doubt this for a moment, it would seem a little unfortunate that most of the facts and figures in his book only corroborate those given in similar textbooks published during the last century.

The usual procedure is followed, including notes on timbers and tools, general carpentry in floors, roofs and partitions and the main points relating to joinery in windows, doors and staircases, etc. At the end of each chapter is a group of three or four questions on which the student may test his memory or pass over according to his mental calibre.

All this information is imparted in a clear, straightforward manner which may be easily understood. The book is rounded off, however, with a rather curious chapter on mechanics which may be guaranteed to give the uninitiated a sick headache in double quick time from a sudden rise from practice to theory.

It is not suggested that this book gives any other than that good sound knowledge which forms the essential basis for the training of the carpenter and joiner. But there it stops, just where many other similar books stopped last century, and that is no place to stop in instructing carpenters for the present day.

The status and work of the carpenter and joiner in the building trade of today has altered so much during the last generation that the student ought to be given a clear lead on his present-day functions.

This book leaves him to plunge into his career expecting to be buoyed up by inadequate theoretical knowledge and ignorant of the fact that during the last twenty to thirty years new-fangled whirlpools have arrived all waiting to "get him down."

More and more, in works of any size, the carpenter is being ousted by the increasing use of other material. Roofs are being spanned by steel, floors built of concrete, partitions made of slabs, windows, doors, door-frames, skirtings and even the humble picture-rail moulded from metal.

But apparently all these things are dark secrets as no hint is given of them in this book. The budding carpenter is seemingly left to gape at the sight of his first steel truss, to stagger at the

idea of laying a wood floor on concrete and to collapse on seeing that impossible thing—a perfectly good wood door without any visible signs of construction.

And how is a good drawer—that sure test of a good joiner—made? For all the reader of this book can gather, they may grow on trees.

Submission of Plans for

HOUSING ESTATES

[*By STANLEY GALE*]

[*In this article a City Surveyor summarises the points which should receive careful attention if plans for the layout of a new housing estate are to be passed by a local authority with smooth celerity.*—ED. A.J.]

CLOTH bound plans and sections of proposed streets or layouts for housing estates should be drawn to a scale not less than $\frac{1}{500}$th. The longitudinal sections must be shown in the same direction as the plans.

The easiest practicable gradient must be aimed at having regard to access of adjoining land to the new street level and for communication with other streets that it may be connected. The plan must show the widths of footpaths, verges and carriageway and the building line as laid down by the Local Authority. The proposed sewers (if separate system is adopted show foul sewer in red and surface water sewer in blue), manholes and gullies must be all clearly indicated.

The manholes on straight lengths of sewers must be not more than 80 yards apart, and street gullies opposite each other where possible should not be less than 40 yards apart.

The longitudinal sections of streets must clearly show the new street levels in a different colour to existing ground levels and the new gradients printed on. The lines of sewers showing size and gradients of pipes should be shown in distinctive colours on the sections. All levels relative to street levels, sewer inverts and step levels of abutting buildings should be printed along the bottom of the section. All levels must be calculated to some known fixed datum, or preferably to ordnance datum level.

With regard to cross sections of streets, these should be drawn to a natural scale of not less than 8 ft. to an inch. The various widths of footpaths, verges and carriageways, and various depths of materials of street construction to be used, are all to be shown.

The sections should also show in distinctive colours the amount of excavation and filling necessary to the fixing of new street levels.

Street Construction Details:

In built-up areas and districts where there are no town-planning schemes, operative standard widths and methods of construction are laid down in local byelaws.

These byelaws generally govern the width of streets in relation to its length. The maximum length of a 36-ft. street is often 1,500 ft.; for a 30-ft. or 26-ft. street it is 750 ft.; for a 21-ft. street it is 300 ft. The widths of the carriageways for such streets will be 24 ft., 18 ft., and 16 ft., respectively.

The crossfall of the carriageway must not be less than $\frac{1}{4}$ in. or more than $\frac{3}{4}$ in. to every foot of width, between the crown and channel. The fall of the footpaths should not be less than $\frac{1}{2}$ in. or more than $\frac{3}{4}$ in. to the foot, and the slope be towards the kerb. The kerb should not be less than 3 ins. or more than 7 ins. above the level of the channel.

The longitudinal fall in the channels should not be less than 1 in. in 120. Gullies should be so placed to avoid surface water flowing across street junctions. The materials used in the construction of the streets naturally vary according to the locality. Generally, however, carriageways wider than 16 ft. have handpitched stone or slag foundations at least 9 ins. deep, sometimes laid on a 6-in. bedding of ashes on wet ground. For smaller width carriageways a 6-in. or 9-in. hardcore foundation is sufficient. The surfacing may consist of water-bound macadam, tarmacadam, wood block or asphalte. Concrete roads are subject to special local byelaws.

In districts subject to mining subsidence, concrete roads are not favoured. Footpaths may be paved with stone or concrete flags, tarmac, brick, or chippings well rolled down.

Town-Planning Requirements:

Practically all local authorities have prepared town-planning schemes which are operative under an Interim Development Order. Their requirements in respect of new streets, and more particularly housing scheme layouts, are expressly laid down in the schemes. It is advisable to inspect the town-planning maps before depositing plans, in order to ascertain such requirements as widths of streets, density of houses to the acre, various zoned areas such as residential, industrial, open spaces, etc. The local surveyor or town-planning officer will be found willing to explain the details of such schemes and to help the enquirer with regard to the preparation of deposited plans within a town-planning area.

Briefly summarized, the town-planning requirements are as follows:

Layouts: Must conform with nature of the zoning map which states density of houses allowed per acre, usually 10 or 12 houses to each acre. Any arterial roads laid down in a town-planning scheme will form the basis of a layout for new streets adjoining it. Building lines and future road widths are also indicated on the town-planning scheme. The position of open spaces, reserved private spaces, public parks, cemeteries shown on the plan will enable the developer of estates to see what available building sites there are and restrictions applicable to them. Development is thus controlled and guided along right lines to ensure more pleasing and desirable planning. The number of new streets entering classified roads is restricted in the interests of traffic safety.

Widths of Streets:

The town-planning standard street widths differ somewhat from those laid down in local byelaws. Greater width is to be provided for that will be governed by future volume of traffic anticipated for them, especially in the case of new arterial roads and by-passes laid down in the town-planning scheme.

Briefly, the standard street widths and maximum lengths generally permitted are as follows: 16-ft. street formed of 10-ft. carriageway and two 3-ft. footpaths or verges and maximum length 200 ft.; 24-ft. street formed of 16-ft. carriageway and two 4-ft. footpaths or verges and maximum length 600 ft.; 30-ft. street formed of 16-ft. carriageway, two 4 ft. 6 in. footpaths and two 2 ft. 6 ins. verges, maximum length 750 ft.; 36-ft. street formed of 18-ft. carriageway, two 4 ft. 6 ins. footpaths and verges and maximum length 1,500 ft.; 45-ft. street formed of 24-ft. carriageway, two 7 ft. 6 ins. footpaths and two 3-ft. verges, and must communicate at each end with a highway.

For arterial roads widths varying from 45 ft. to 120 ft., the width of the carriageway for present-day traffic needs is fixed by the local authority, and the remaining width of road is temporarily formed of grass verges until such future time the volume of traffic increase demands maximum width of carriageways being constructed.

Density of Houses:

The extent to which the land can be covered with buildings is controlled by the town-planning density zone laid down in defined areas. The density is the number of houses or building plots permissible per acre, and ranges from six to twelve per acre. In special circumstances such as where land is scarce, as much as 15 houses per acre may be permitted. The most common density used is 12 houses per acre, which means each house occupying a minimum of 250 square yards of land, and this allows a margin for streets and open spaces.

It should be noted in computing the density of each house that the area can include half the width of the street on to which it abuts, in addition to the building plot on which the house stands.

Restriction of Ribbon Development Act, 1936: This Act enables local highway authorities to define the building line along classified roads and such other unclassified roads as may be decided by them with the approval of the Ministry of Transport. The building line under this Act in respect of classified roads is controlled up to 220 ft. back from the middle of such roads. With regard to unclassified roads for which standard widths have been decided upon by the local authority with the approval of the Ministry of Transport, the building line is fixed at a minimum distance back from the road equal to half the width of the standard width applicable to that road. If, for example, it is an 80 ft. standard width road, then the building line will be set back at 40 ft. from the middle of road.

The standard widths of such roads are decided on by the highway authorities, and are shown on a map which is open for inspection to the public.

The Act also restricts the number of new streets communicating with classified roads to the very minimum sufficient for the needs of adjoining layouts. To obtain access to buildings fronting such main roads, the developer must provide service roads adjoining the main roads, and their width and construction should be agreed upon with the highway authority before depositing final layouts.

The Ministry of Transport has recently published a memorandum on the design of layouts describing and illustrating treatment of various road junctions and giving standard widths of single and dual roadways, together with service roads and cycle tracks. This memorandum will prove to be useful, and it can be obtained from H.M. Stationery Office at 6d. per copy.

TRADE NOTES

[EDITED BY PHILIP SCHOLBERG]

Fewer Steel Sections

A CIRCULAR letter from the British Heavy Steel Makers states that, "in order to assist in speeding up the sequence of rollings, they have, after consultation with various bodies of consumers, decided to request customers to confine their designs forthwith to a temporary reduced list of sizes and sections of joists." A schedule of the sizes and sections to be retained is attached to the letter and it seems that there is still a reasonable freedom of choice, for nearly forty sections, from 3 ins. by 1½ ins. by 4 lb. to 24 ins. by 7½ ins. by 95 lb., mostly to British Standard Specifications, still remain on the list. Special sizes not included in the list, which are rolled for special trades by certain makers, will still be available subject to individual arrangements between customer and maker. There is also a schedule of channels, angles (equal and unequal), flats and tees, again mostly to British Standard sizes.

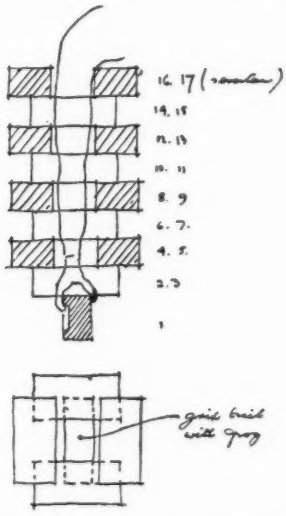
Mr. Budgen pointed out some years ago in this JOURNAL that American rollers produced far more sections than are available in this country, a practice which offers many advantages to the designer, who can thus easily jump up one size and still be reasonably economical if his load is just too heavy for the size below. Any limitation of sizes is therefore a retrograde step, though one gathers that it is more or less inevitable, for the "present unusual circumstances" referred to in the circular presumably means the armaments racket. No hint is given as to the exact meaning of the word temporary, but the short list will probably remain in force until such time as the re-armament programme is completed. Designers will obviously be able to survive these limitations, but they may one day have to insist firmly that the temporary list does not become a permanency. As a sideline it is interesting to note that the clay interests are alive to the nuisance caused by delay in steel deliveries and are pushing bricks as a building material which you can still get in large quantities at short notice.

•

The steelmakers' letter is signed by Messrs. Peat, Marwick, Mitchell & Co., Royal Exchange, Middlesbrough, and by W. A. Millar, 77 St. Vincent Street, Glasgow, C.1, for the English and Scottish steel makers, respectively. Copies of the limited schedule are probably to be obtained from either source.

Architect Lifts Bricks

A week or two ago I asked how many bricks it is possible to lift with one hand, no strings or other outside help being allowed. The Midhurst people gave thirteen as the maximum, but Mr. A. F. Russell, A.R.I.B.A., whom you see in the adjoining column, has managed seventeen, his slightly surreal sketch showing how the whole thing is done. Mr. Russell modestly refrains from suggesting that this is a record, and Midhurst say, "Well, we don't think he could manage more than thirteen of *our*



Left, Mr. A. F. Russell holding 17 bricks; above, plan and section showing his technique. See note on this page.

bricks." So it would seem that the honour of both sides is satisfied unless Mr. Russell can do it again while hanging by his teeth from a ring in the best music hall manner. But after all it may be merely a victory for the slide rule gang, for Mr. Russell is a member of the architectural staff of a metropolitan borough engineer, though this is getting perilously near the controversial and would seem to be more Astragal's business than mine.

Information about Aluminium

Slowly but surely the idea of collective publicity is gaining ground. Copper, lead and nickel interests all maintain information bureaux where you can get fairly disinterested advice on the proper use of the materials concerned. And now the Northern Aluminium Company have started a bureau in Bush House, and although it is run by a single company and not by the aluminium industry as a whole it seems none the worse for that. Most of the aluminium companies are suppliers of raw material rather than actual fabricators, and they are therefore particularly interested that their product shall be properly used. A fabricator who has a failure with anodized door furniture, for instance, can always revert to stainless steel or chromium plate and the discredit goes back on the material, so that the aluminium companies may suffer through the fault of somebody else.

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The bureau is to be run not only for the convenience of the designer or the ultimate user, but also for the fabricator who wants to know the best methods for working the material, and it seems to me that this kind of information is especially important with a material like aluminium, for there is a constant stream of new alloys, most of which have slight variations in machining properties and which need different methods of heat treatment, so that a central bureau where all this information can be easily obtained ought to be useful to quite a lot of people. Booklets are to be published on research and new developments, and I imagine that there will also be a certain amount of general publicity about aluminium as a material for this, that and the other purpose. Booklets of this latter kind can be very useful, but they can also be quite meaningless—a series of pretty pictures, however good the jobs may be, is of very little use to anyone. In conversation I gather than those responsible for this bureau are alive to the danger, and we should therefore get something worth reading as well as worth looking at.—(*The Aluminium Information Bureau, Bush House, Aldwych, London, W.C.2.*)

Progress in Concrete

Consideration of information bureaux reminds me that the Reinforced Concrete Association has just issued a booklet describing the work it has done during the five years since it was founded in 1932. Economic depression was pretty severe at this time, and the foundation of the Association was doubtless inspired partly by the instinct for self-preservation, for the building industry only seems to think of setting its house in order when there is nothing immediately profit-making to do. But whatever the reasons for its origin, the Association has done a great deal of very useful work, not only in the promotion of discussions and the reading of papers and what may be generally called educative publicity, but they have also initiated, in conjunction with various other allied bodies, a comprehensive programme of research which is now being carried out by the Building Research Station. The programme is printed at full length and is worth reading, for it deals not only with cement, steel and aggregates, but with methods of execution such as working rules for placing concrete during cold weather, with vibration, with the behaviour of reinforced concrete under various conditions of exposure, and with various problems of design. It is interesting, too, to note that recent work on the grading of aggregates and its effect on the strength and workability of concrete may lead to the introduction of a more satisfactory test for the consistency of concrete than our old friend the slump test, which is still commonly used, although many people seem to recognize it as being erratic and unreliable. Other objects of the Association, such as the maintenance of high standards of workmanship and uniformity in methods of tendering and fees for design are obviously desirable. This little booklet (not so little either—80 pages) is worth reading, if only as an outline of the sort of things an association of this kind ought to do. One or two other groups seem incapable of looking more than a week or two ahead and confine their efforts to the lavish entertainment of engineers, architects and borough surveyors, in the hope, apparently, that they will secure orders through goodwill rather than merit.—(*The Reinforced Concrete Association, 91 Petty France, London, S.W.1.*)

THE BUILDINGS ILLUSTRATED

HOUSE AT FERNHURST (pages 949–951). Architects: P. J. Westwood and Sons. General contractors, Bartley and Ward, Ltd. Sub-contractors: Danes Hill Brick and Tile Co., bricks; Chapman, Lowry and Pattick, electric wiring; Welsteads, casements.

ODEON, LEICESTER SQUARE (pages 967–969). Associated Architects: Andrew Mather and Harry Weedon. Designer of safety curtain: Bainbridge Copnall. Sub-contractors: Anselm Odling and Sons, Ltd., marble paving; Armstrong Cork Co., cork board to walls, floor and ceilings; Baxter, Geoffrey & Co., Ltd., drainage and drinking water supply; Brookes, Ltd., black granite; British Thomson-Houston, Ltd., Thyraction dimmer; Carron Co., sanitary fittings; Walter Cassey, Ltd., locks and ironmongery; James Clark & Co., glass wall linings, etc.; Central Perivale, Ltd., main entrance doors and frames; Cookes (Finsbury), Ltd., canopy, metal grilles and external decorative metal work; Dawnays, Ltd., steelwork; Decorative Crafts, Ltd., interior decoration; Samuel Elliott and Sons, doors to telephone booths; Garton and Thorne, iron gratings; J. W. Gray & Co., lightning conductors; Trussed Concrete Steel Co., expanded metal (Hy-rib); Hudsons, Ltd., demolition; C. Isler & Co., Ltd., artesian well; G. J. Jackson & Co., Ltd., scale model; G. K. Jensen & Co., organ console, lift, etc.; J. A. King & Co., pavement lights; Kingsmill Metal Co., wrought iron gates; Knight & Co., fire curtain; Haywards, Ltd., roof lights; Sir Robert McAlpine & Co., Ltd., metal casements; Neon Luminations, Ltd., moving neon sign over entrance doors; Alfred Olby, Ltd., ventilating cowls; F. A. Norris & Co., iron staircases and cat ladders; Pearce Signs, Ltd., Odeon notice boards; Pugh Bros., Ltd., mirrors; Pyrene Co., Ltd., fire extinguishers; Self-Sentering Expanded Metal Co., metal reinforcements to auditorium floor; Shutter Contractors, Ltd., roller shutters to scene dock; Stablefords All-metal Screens, screen amplification; Sturtevant Engineering Co., vacuum cleaning plant; Tile Decorations, Ltd., tiling; Twisteel Reinforcement, Ltd., reinforcement to concrete slabs in auditorium; Troughton and Young, Ltd., electrical work and clocks; Universal Asbestos Co., asbestos tiles; Vacuum Refrigeration, Ltd., ventilation; Viger Bros., oak strip flooring and benches and shelving; White Allom, Ltd., interior decoration; Midhurst Whites, Ltd., bricks; Marston Valley Brick Co., Ltd., Flettons.

IN PARLIAMENT

Rural Housing

Mr. De Chair asked the Minister of Health if any new legislation to stimulate the building of cottages in rural areas, in addition to the provisions of the Slum Clearance, Overcrowding, and Rural Workers Housing Acts, was contemplated during the present session for England and Wales.

Mr. W. Roberts asked the Minister of Health whether he had noted that, with the present cost of building in many areas, the existing subsidies in the case of slum clearance or overcrowding did not enable rural district councils to build houses for farm workers to be let at 4s. a week, inclusive of rates; and whether in the new Housing Bill he would provide a new additional subsidy so that in the specific case of farm workers such houses might be built to be let at rents not exceeding the figure above stated.

Sir K. Wood said that, as previously stated, he proposed to introduce in the near future a Bill to make further Exchequer assistance available towards the erection of houses for the agricultural population.

Rent Restriction Committee

Mr. Ammon asked the Minister of Health whether the committee on rent restriction had yet reported.

Sir K. Wood said that it had not, but he hoped to receive this report within the next few days.

Rural Areas

Mr. W. Roberts asked the Minister of Health whether, in the new Housing Bill, he would provide for subsidies to be payable to housing associations established under the Housing Act, 1935, of the same amounts as those payable to rural district councils.

Sir K. Wood said that while he was not in a position to anticipate the details of forthcoming legislation, the question of making assistance available for housing associations was one which he would certainly bear in mind.

Model Building Byelaws

Sir F. Fremantle asked the Minister of Health whether, having regard to the fact that Part III of the new model building byelaws related to works and fittings which usually come within the province of the sanitary inspector, he would arrange for notices of intention to execute such work or instal such fittings to be given to the sanitary inspector instead of to the surveyor, as proposed in Part IV of the same byelaws.

Sir K. Wood said that the model building byelaws were prepared with the assistance of an advisory committee on which the various associations of local authorities were represented, and he was not at present satisfied that there was any reason for an alteration of the model as suggested. If, however, a local authority desired, when submitting byelaws for confirmation, to alter the model in the sense suggested, he would certainly consider the suggestion.

Slum Clearance

Mr. Silverman asked the Minister of Health whether local authorities who applied for clearance orders under the Housing Act customarily gave any undertaking with regard to the

exercise of their discretionary powers to pay compensation to dispossessed shopkeepers; and in what manner he exercised his powers to enforce the due keeping of such undertakings and/or to review the exercise by such local authorities of their discretion in suitable specific instances.

Sir K. Wood said that the answer to the first part of the question was in the negative. The granting of allowances under these powers was at the discretion of the local authority and he had no jurisdiction. He had, however, frequently expressed the hope that authorities would exercise their powers in suitable cases.

Earl Haig Statue

Lord Apsley asked the First Commissioner of Works who was responsible for the selection of Mr. Hardiman's statue of Lord Haig, erected in Whitehall; what was the total cost of the statue, including any modifications made; and whether any other tenders were made and their comparative estimated cost.

Sir Philip Sassoon said that five sculptors were invited by his predecessor in 1928 to submit competitive designs. Three accepted the invitation, and the recommendation that Mr. Hardiman's design be selected was made by a committee of assessors which comprised nominees of the Royal Academy, the National Gallery, the Royal Institute of British Architects and the Royal Society of British Sculptors, with an independent chairman. He was not at present in a position to state the actual total cost of the statue. It was not considered that a matter of this nature could appropriately be dealt with by the process of competitive tendering.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICT (15 MILES RADIUS)

BATTERSEA. *Flats.* Plans passed by the Battersea B.C.: Flats, Leathwaite Road, Greenland and Luckes.

CROYDON. *Flats, etc.* Plans passed by the Croydon Corporation: Block of flats, adjoining 297 Whitehorse Lane, Mr. A. H. Middleton; 48 houses, Lime Tree Grove, Addington, Bennett, Worskett and Bennett; block of 12 maisonettes, Warrington Road, F. W. Woolgar & Co.; factory, Cubitt Street, Mr. G. Crump; factory, off Purley Way, London Pattern Co.

ENFIELD. *Houses.* Plans passed by the Enfield U.D.C.: 22 houses, Grafton Road, Mr. D. Thomson; 45 houses, Arbour Road, Farebrother Ellis & Co.; 15 shops with 30 flats over, Hertford Road, Bowyer and Bowyer.

FINCHLEY. *Flats.* Plans passed by the Finchley Corporation: 50 flats, Gordon Road, Mrs. P. Straus.

FULHAM. *Tenements.* Plans passed by the Fulham B.C.: Block of tenements, Field Road and Albert Mews area.

LAMBETH. *Housing.* The Lambeth B.C. is to erect further dwellings on the Hemans Street area at a cost of £41,480.

LEWISHAM. *Flats, etc.* Plans passed by the Lewisham B.C.: 48 flats, Loampit Hill, Mr. C. A. Jones; eight houses, Liphook Crescent, Forest Hill, and 27 houses, Ringmore Rise, Forest Hill, Mr. Hugh Macintosh; flats, Lawrie Park Road, Sydenham, Fox and Champion; flats, Perry Vale, Forest Hill, Mr. E. W. Wallis; flats, Church Terrace, Lee, Mr. V. W. Hindwood; 20 flats, Winsford Park Estate, Catford, New Ideal Homesteads, Ltd.; 64 flats, Southend Lane, Sydenham, T. Spencer Bright & Co.; flats, Kangley Bridge Road, Sydenham, W. Johnson & Co.; flats, Gillian Street, Mr. D. Hobday; 22 houses, Grierson Road, and four lock-up shops, Honor Oak Road, R. H. Brine & Co.; flats, etc., Kirkdale, Sydenham, Great Britain, etc., Co., Ltd.; 26 houses, Bromley Road, Wates, Ltd.

SOUTHGATE. *Flats, etc.* Plans passed by the Southgate Corporation: 60 flats, Winchmore Hill Road, Mr. J. R. Scarborough; 42 flats, Bramley Road, Cockfosters, and 30 houses, Lakenheath, Mr. C. E. Ward; six houses, Minchenden Crescent, Mr. E. W. Palmer.

STEPNEY. *Housing.* The L.C.C. is to redevelop 17 acres in the White Horse Lane area of Stepney and erect 15 blocks of flats at a cost of £765,000.

STOKE NEWINGTON. *Flats* Plans passed by the Stoke Newington B.C.: Block of flats, Seven Sisters Road, Evans and Lynde.

TOTTENHAM. *Central Depot.* The Tottenham Corporation is to erect a central depot, having obtained sanction to borrow £12,953 for the purpose.

WANDSWORTH. *Tenements.* The Wandsworth B.C. is to erect tenements at a cost of £64,445 in Fairfield Street.

WOOLWICH. *Cottages.* The Woolwich B.C. is to erect 176 cottages on a site at Garland Road, at a cost of £90,557.

SOUTHERN COUNTIES

ADDINGTON. *Houses.* The First National Housing Trust, Ltd., is about to proceed with the erection of 500 houses on the new Addington estate, near Croydon. The houses will be ready for occupation by March, 1938.

BEXHILL. *Houses.* Plans passed by the Bexhill Corporation: 13 houses, Bancroft Road, Mr. R. A. Larkin; eight houses, Chantry Avenue, Mr. Bunce; six houses, Uplands Gardens, Mr. R. W. Moore.

GRAVESEND. *Police Station, etc.* The Gravesend Corporation has approved plans by the borough architect for the new police station and fire station, at a cost of £79,720.

GUILDFORD. *Flats.* Mr. Hiscock is to erect a block of 42 flats in York Road, Guildford.

GUILDFORD. *Houses.* Plans passed by the Guildford Corporation: 161 houses, Winterhill estate, New Inn Lane, Burpham, Mr. A. E. Armstrong.

HOUNSLOW. *Council Offices Enlargement.* The Heston and Isleworth Corporation is to enlarge the council offices at Hounslow, at a cost of £15,462.

ISLE OF WIGHT. *Library.* The Isle of Wight C.C. is to erect a library at Freshwater, at a cost of £3,000.

ST. ALBANS. *School.* The Hertfordshire Education Committee is to adapt central school premises at St. Albans for use as a girls' secondary school, at a cost of £14,798.

WORTHING. *Shops, etc.* Mr. Mark Hauser is to erect shops and flats, at a cost of £11,000, in Chapel Street, Worthing.

WORTHING. *Houses.* Plans passed by the Worthing Corporation: 87 houses, adjoining Findon Road, Monks Farm Estate, Ltd.; eight houses, Keymer Crescent, Worthing Estates Building Co.; 13 houses, Rosebery Avenue, West Park Estates (Worthing), Ltd., six houses, Lullington Gardens, Mr. W. W. Howard; 10 houses, Ham Road, Mr. H. M. Potter; 16 houses, George V Avenue, Mr. C. A. Jarvis; 17 houses, Leeward Road; Willmore Phillips Estates Co.

EASTERN COUNTIES

IPSWICH. *School.* The Ipswich Education Committee has obtained sanction to borrow £68,140 for the erection of the North-Eastern senior school.

MIDLAND COUNTIES

ATCHAM. *Housing.* The Atcham R.D.C. has obtained land on the Leebotwood estate for housing purposes.

DERBY. *Aerodrome Buildings.* The Derby Corporation is to lay out and erect buildings at the civic aerodrome at a cost of £21,176.

HALESOWEN. *School.* The Worcestershire Education Committee has obtained sanction to borrow £31,206 for the erection of a senior girls' school at Halesowen.

HEANOR. *Housing.* The Heanor U.D.C. has purchased 5 acres in Breach Road, Langley, for a housing scheme.

HEANOR. *Houses.* Plans passed by the Heanor U.D.C.: 12 houses, Hands Road, and Aldred's Lane, Mr. Harold Slaney; six houses, Nottingham Road, Woodlinkin, Mr. F. J. Severn; 16 houses, Elmsfield Estate, Mr. C. Grace.

MANSFIELD. *Fire Station.* The Mansfield Corporation has approved plans of the new fire station incorporating the suggestions made by the Royal Fine Art Commission.

MARKET DRAYTON. *Police Station.* The Shropshire C.C. has approved plans by the county architect for the erection of a police station and police houses at Salisbury Road, Market Drayton.

WELLINGTON. *School.* The Shropshire Education Committee is to proceed with the erection of a high school for boys at Wellington.

NORTHERN COUNTIES

BLACKPOOL. *Houses.* Plans passed by the Blackpool Corporation: 15 houses, Pierston Avenue, G. Hodgson and Sons, Ltd.; 28 houses, Devonshire Road, J. W. Lee, Ltd.; 11 houses, Warley Road, J. Fielding and Sons.

ESTON. *Houses.* Plans passed by the Eston U.D.C.: 12 houses, Crossbeck estate, for Mr. C. W. Bell.

KEIGHLEY. *Houses.* Plans passed by the Keighley Corporation: 16 houses, Worth Avenue, Mr. Norman Procter; 101 houses, Guard House Estate, Housing Committee.

MANCHESTER. *Housing.* The Manchester Corporation is to erect 216 houses at Openshaw Housing Estate, at a cost of £105,230.

MIDDLESBROUGH. *Fire Station Improvements.* The Middlesbrough Corporation is to enlarge the fire station in Park Road, at a cost of £16,395.

MORECAMBE. *Houses, etc.* Plans passed by the Morecambe Corporation: 16 houses, Windsor Grove, for Messrs. A. Robinson and Sons; six houses, Morecambe Road, for Mr. A. Heathcote; 21 houses, Burlington Grove, for Mr. J. Westwell; 23 houses, Low Lane, for Mr. H. Priestley; 25 houses, Alice Street, for Mr. F. Armistead.

MORECAMBE. *Offices, etc.* The Morecambe Corporation is to enlarge the bus garage in Heysham Road, and erect offices, at a cost of £9,806.

MORECAMBE. *Café, etc.* The Morecambe Corporation has prepared a scheme for the erection of a café and the alteration of the band arena, Happy Mount Park, at a cost of £16,000.

RAWTENSTALL. *Houses.* Plans passed by the Rawtenstall Corporation: 18 houses, Clayton Avenue, Townsendfold, G. Clayton and Sons, Ltd.

REDCAR. *Houses.* Plans passed by the Redcar Corporation: Eight houses, Raby Road, Mr. F. Allison; nine houses, Warwick Road and Beverley Road, Mr. F. Jacobs; 12 houses, Broadway East, Westfield Estates, Ltd.; six houses, Thames Road, Day Bros.; eight houses, Thames Road, Manson and Sockett; 12 houses, Raby Road, T. Robinson and Son.

SHIPLEY. *Houses.* Plans passed by the Shipley U.D.C.: 158 houses, Wrose Road, Mr. A. Greenwood.

SOUTHPORT. *Flats.* The Southport Corporation is to erect 24 flats in Warwick Street, at a cost of £7,745.

WALLASEY. *School.* The Wallasey E.C. has obtained sanction to borrow £28,243 for the erection of an elementary school at Moreton.

Manufacturers' Item

In order to meet the particular floor requirements of the architect engaged upon industrial buildings, such as breweries, car factories, dyeworks, etc., Messrs. Prodorite, Ltd., of Wednesbury, are constantly adding to their series of special industrial floorings, and floor finishes. Over 55,000 yds. of floor space in Government factories has recently been surfaced by the Prodorite contract departments, and many other contracts for which Ferrogran steel-faced flags, and Prodorite acid-resisting floors, have been specified, are in hand.

RATES OF WAGES

The initial letter opposite every entry indicates the grade under the Ministry of Labour schedule. The district is that to which the borough is assigned in the same schedule. Column I gives the rates for craftsmen; Column II for labourers The rate for craftsmen working at trades in which a separate rate maintains is given in a footnote. The table is a selection only. Particulars for lesser localities not included may be obtained upon application in writing.

			I. s. d.	II. s. d.
A	ABERDARE ...	S. Wales & M.	1 7	1 2½
A	Aberdeen ...	Scotland	1 7	1 2½
A_1	Abergavenny ...	S. Wales & M.	1 6½	1 2
A_3	Abingdon ...	S. Counties	1 5½	1 1½
A	Accrington ...	N.W. Counties	1 7	1 2½
A_3	Addlestone ...	S. Counties	1 6	1 1½
A	Adlington ...	N.W. Counties	1 7	1 2½
A	Airdrie ...	Scotland	*1 7	1 2½
C	Aldeburgh ...	E. Counties	1 3	0 11½
A	Altrincham ...	N.W. Counties	1 7	1 2½
B_3	Appleby ...	N.W. Counties	1 3½	0 11½
A	Ashton-under-Lyne	N.W. Counties	1 7	1 2½
B	Aylesbury ...	S. Counties	1 5	1 9½
B	BANBURY ...	S. Counties	1 5	1 0½
B_1	Bangor ...	N.W. Counties	1 4½	1 0½
A_3	Barnard Castle	N.E. Coast	1 5½	1 1½
A	Barnsley ...	Yorkshire	1 7	1 2½
B	Barnstaple ...	S.W. Counties	1 5	1 0½
A	Barrow ...	N.W. Counties	1 7	1 2½
A	Barry	S. Wales & M.	1 7	1 2½
B	Basingstoke ...	S.W. Counties	1 5	1 0½
A_2	Bath	S.W. Counties	1 6	1 1½
A	Batley ...	Yorkshire	1 7	1 2½
A_2	Bedford ...	E. Counties	1 6	1 1½
A_2	Berwick-on-Tweed	N.E. Coast	1 6	1 1½
A_2	Bewdley ...	Mid. Counties	1 6	1 1½
B	Bicester ...	S. Counties	1 5	1 0½
	Birkenhead ...	N.W. Counties	*1 8	1 3
A	Birmingham ...	Mid. Counties	1 7	1 2½
A_1	Bishop Auckland	N.E. Coast	1 6½	1 2
A	Blackburn ...	N.W. Counties	1 7	1 2½
A	Blackpool ...	N.W. Counties	1 7	1 2½
A	Blyth	N.E. Coast	1 7	1 2½
B	Bognor ...	S. Counties	1 5	1 0½
A	Bolton... ...	N.W. Counties	1 7	1 2½
A_3	Boston ...	Mid. Counties	1 5½	1 1½
A_2	Bournemouth...	S. Counties	1 6	1 1½
B_2	Bovey Tracey	S.W. Counties	1 4	1 0
A	Bradford ...	Yorkshire	1 7	1 2½
A_1	Brentwood ...	E. Counties	1 6½	1 2
A	Bridgend ...	S. Wales & M.	1 7	1 2½
B	Bridgwater ...	S.W. Counties	1 5	1 0½
A_1	Bridlington ...	Yorkshire	1 6½	1 2
A	Brighouse ...	Yorkshire	1 7	1 2½
A	Brighton ...	S. Counties	1 6	1 1½
A	Bristol... ...	S.W. Counties	1 7	1 2½
B	Brixham ...	S.W. Counties	1 5	1 0½
A	Bromsgrove ...	Mid. Counties	1 7	1 2½
B	Bromyard ...	Mid. Counties	1 5	1 0½
A	Burnley ...	N.W. Counties	1 7	1 2½
A	Burslem ...	Mid. Counties	1 7	1 2½
A	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury	N.W. Counties	1 7	1 2½
A_1	Buxton ...	N.W. Counties	1 6½	1 2
A_1	CAMBRIDGE	E. Counties	1 6½	1 2
B_1	Canterbury ...	S. Counties	1 4½	1 0½
A	Cardiff... ...	S. Wales & M.	1 7	1 2½
A	Carlisle ...	N.W. Counties	1 7	1 2½
B	Carmarthen ...	S. Wales & M.	1 5	1 0½
B	Carnarvon ...	N.W. Counties	1 5	1 0½
A_1	Carnforth ...	N.W. Counties	1 7	1 2½
A	Castleford ...	Yorkshire	1 7	1 2½
A_3	Chatham ...	S. Counties	1 5½	1 1½
A_3	Chelmsford ...	E. Counties	1 5½	1 1½
A_3	Cheltenham ...	S.W. Counties	1 5½	1 1½
A	Chester ...	N.W. Counties	1 7	1 2½
A	Chesterfield ...	Mid. Counties	1 7	1 2½
B	Chichester ...	S. Counties	1 5	1 0½
A	Chorley ...	N.W. Counties	1 7	1 2½
B_1	Cirencester ...	S. Counties	1 4½	1 0½
A	Clitheroe ...	N.W. Counties	1 7	1 2½
A	Clydebank ...	Scotland	1 7	1 2½
A	Coalville ...	Mid. Counties	1 7	1 2½
A_3	Colchester ...	E. Counties	1 6	1 1½
A_1	Colne	N.W. Counties	1 6½	1 2
A_3	Colwyn Bay ...	N.W. Counties	1 6	1 1½
A_1	Consett ...	N.E. Coast	1 6½	1 2
A_3	Conway ...	N.W. Counties	1 6	1 1½
A	Coventry ...	Mid. Counties	1 7	1 2½
A_3	Crewe	N.W. Counties	1 6	1 1½
A_3	Cumberland ...	N.W. Counties	1 5½	1 1½
A	DARLINGTON	N.E. Coast	1 7	1 2½
A	Darwen ...	N.W. Counties	1 7	1 2½
B_1	Deal	S. Counties	1 4½	1 0½
A_2	Denbigh ...	N.W. Counties	1 5½	1 1½
A	Derby	Mid. Counties	1 7	1 2½
A	Dewsbury ...	Yorkshire	1 7	1 2½
B	Didcot... ...	S. Counties	1 5	1 0½
A	Doncaster ...	Yorkshire	1 7	1 2½
B_1	Dorchester ...	S.W. Counties	1 4½	1 0½
A_3	Driffield ...	Yorkshire	1 5½	1 1½
A_3	Droitwich ...	Mid. Counties	1 6	1 1½
A	Dudley ...	Mid. Counties	1 7	1 2½
A_3	Dumfries ...	Scotland	1 6	1 1½
A	Dundee ...	Scotland	1 7	1 2½
A	Durham ...	N.E. Coast	1 7	1 2½
A_2	EASTBOURNE	S. Counties	1 6	1 1½
A_1	Ebbw Vale ...	S. Wales & M.	1 6½	1 2
A	Edinburgh ...	Scotland	1 7	1 2½
A_2	Exeter... ...	S.W. Counties	*1 6	1 1½
B	Exmouth ...	S.W. Counties	1 5	1 0½
A_3	FELIXSTOWE	E. Counties	1 5½	1 1½
A_3	Filey	Yorkshire	1 5½	1 1½
A	Fleetwood ...	N.W. Counties	1 7	1 2½
B_1	Folkestone ...	S. Counties	1 4½	1 0½
A	Frodsham ...	N.W. Counties	1 7	1 2½
B_2	Frome ...	S.W. Counties	1 4	1 0
A	GATESHEAD	N.E. Coast	1 7	1 2½
B	Gillingham ...	S. Counties	1 5	1 0½
A_1	Glamorgan-shire, Rhondda Valley District	S. Wales & M.	1 6½	1 2
A	Glasgow ...	Scotland	1 7	1 2½
A_2	Gloucester ...	S.W. Counties	1 6	1 1½
A_2	Goole	Yorkshire	1 6	1 1½
A_2	Gosport ...	S. Counties	1 6	1 1½
A_3	Grantham ...	Mid. Counties	1 5½	1 1½
A_1	Gravesend ...	S. Counties	1 6½	1 2
A	Greenock ...	Scotland	*1 7	1 2½
A	Grimsby ...	Mid. Counties	1 7	1 2½
B	Guildford ...	S. Counties	1 5	1 0½
A	HALIFAX ...	Yorkshire	1 7	1 2½
A	Hanley ...	Mid. Counties	1 7	1 2½
A	Harrogate ...	Yorkshire	1 7	1 2½
A	Hartlepools ...	N.E. Coast	1 7	1 2½
B	Harwich ...	E. Counties	1 5	1 0½
B	Hastings ...	S. Counties	1 5	1 0½
A_3	Hatfield ...	S. Counties	1 6	1 1½
B	Hereford ...	S.W. Counties	1 5	1 0½
A_2	Hertford ...	E. Counties	1 6	1 1½
A	Heysham ...	N.W. Counties	1 7	1 2½
A	Howden ...	N.E. Coast	1 7	1 2½
A	Huddersfield ...	Yorkshire	1 7	1 2½
A	Hull	Yorkshire	1 7	1 2½
A	ILKLEY ...	Yorkshire	1 7	1 2½
A	Immingham ...	Mid. Counties	1 7	1 2½
A_2	Ipswich ...	E. Counties	1 6	1 1½
B_2	Isle of Wight ...	S. Counties	1 4	1 0
A	JARROW ...	N.E. Coast	1 7	1 2½
A	KEIGHLEY ...	Yorkshire	1 7	1 2½
A_3	Kendal ...	N.W. Counties	1 5½	1 1½
A_3	Keswick ...	N.W. Counties	1 5½	1 1½
A	Kettering ...	Mid. Counties	1 6½	1 2
A_2	Kidderminster	Mid. Counties	1 6	1 1½
B_1	King's Lynn ...	E. Counties	1 4½	1 0½
A	LANCASTER ...	N.W. Counties	1 7	1 2½
A_1	Leamington ...	Mid. Counties	1 6½	1 2
A	Leeds	Yorkshire	1 7	1 2½
A	Leek	Mid. Counties	1 7	1 2½
A	Leicester ...	Mid. Counties	1 7	1 2½
A	Leigh	N.W. Counties	1 7	1 2½
B	Lewes	S. Counties	1 5	1 0½
A_2	Lichfield ...	Mid. Counties	1 6	1 1½
A	Lincoln ...	Mid. Counties	1 7	1 2½
	Liverpool ...	N.W. Counties	*1 8½	1 3½
A_2	Llandudno ...	N.W. Counties	1 6	1 1½
A	Llanelly ...	S. Wales & M.	1 7	1 2½
	London (12-miles radius)		1 8½	1 3½
	Do. (12-15 miles radius)		1 8	1 3
A	Long Eaton ...	Mid. Counties	1 7	1 2½
A	Loughborough	Mid. Counties	1 7	1 2½
A_1	Luton	E. Counties	1 6½	1 2
A	Lytham ...	N.W. Counties	1 7	1 2½
A_1	MACCLESFIELD	N.W. Counties	1 6½	1 2
A_3	Maidstone ...	S. Counties	1 5½	1 1½
A_3	Malvern ...	Mid. Counties	1 5½	1 1½
A	Manchester ...	N.W. Counties	1 7	1 2½
A	Mansfield ...	Mid. Counties	1 7	1 2½
B_1	Margate ...	S. Counties	1 4½	1 0½
A_3	Matlock ...	Mid. Counties	1 5½	1 1½
A_1	Merthyr ...	S. Wales & M.	1 6½	1 2
A	Middlesbrough	N.E. Coast	1 7	1 2½
A_2	Middlewich ...	N.W. Counties	1 6	1 1½
B_2	Minehead ...	S.W. Counties	1 4	1 0
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 4	1 0
A	Morecambe ...	N.W. Counties	1 7	1 2½
A	NANTWICH ...	N.W. Counties	1 6	1 1½
A	Neath	S. Wales & M.	1 7	1 2½
A	Nelson... ...	N.W. Counties	1 7	1 2½
A	Newcastle ...	N.E. Coast	1 7	1 2½
A	Newport ...	S. Wales & M.	1 7	1 2½
A	Normanton ...	Yorkshire	1 7	1 2½
A	Northampton	Mid. Counties	1 7	1 2½
A	North Shields...	N.E. Coast	1 7	1 2½
A	North Staffs ...	Mid Counties	1 7	1 2½
A_1	Norwich ...	E. Counties	1 6½	1 2
A	Nottingham ...	Mid. Counties	1 7	1 2½
A	Nuneaton ...	Mid. Counties	1 7	1 2½
A_3	OAKHAM ...	Mid. Counties	1 5½	1 1½
A	Oldham ...	N.W. Counties	1 7	1 2½
A_3	Oswestry ...	N.W. Counties	1 5½	1 1½
A_1	Oxford ...	S. Counties	1 6½	1 2
A	PAISLEY ...	Scotland	*1 7	1 2½
B_2	Pembroke ...	S. Wales & M.	1 3½	0 11½
A	Perth	Scotland	*1 7	1 2½
A_1	Peterborough	E. Counties	1 6½	1 2
A	Plymouth ...	S.W. Counties	*1 7	1 2½
A	Pontefract ...	Yorkshire	1 7	1 2½
A_1	Pontypridd ...	S. Wales & M.	1 6½	1 2
A_2	Portsmouth ...	S. Counties	1 6	1 1½
A	Preston ...	N.W. Counties	1 7	1 2½
A	QUEENSFERRY	N.W. Counties	1 7	1 2½
A_2	READING ...	S. Counties	1 6½	1 2
B	Reigate ...	S. Counties	1 5½	1 1½
A_3	Retford ...	Mid. Counties	1 5½	1 1½
A_1	Rhondda Valley	S. Wales & M.	1 6½	1 2
A_3	Ripon	Yorkshire	1 5½	1 1½
A	Rochdale ...	N.W. Counties	1 7	1 2½
B	Rochester ...	S. Counties	1 5	1 0½
A_1	Ruabon ...	N.W. Counties	1 6½	1 2
A	Rugby ...	Mid. Counties	1 7	1 2½
A_2	Rugeley ...	Mid. Counties	1 6	1 1½
A	Runcorn ...	N.W. Counties	1 7	1 2½
A_1	ST. ALBANS ...	E. Counties	1 6½	1 2
A	St. Helens ...	N.W. Counties	1 7	1 2½
B_3	Salisbury ...	S.W. Counties	1 3½	0 11½
A_1	Scarborough ...	Yorkshire	1 6½	1 2
A	Scunthorpe ...	Mid. Counties	1 7	1 2½
A	Sheffield ...	Yorkshire	1 7	1 2½
A	Shipley ...	Yorkshire	1 7	1 2½
A_2	Shrewsbury ...	Mid. Counties	1 6	1 1½
A_2	Skipton ...	Yorkshire	1 6	1 1½
A_2	Slough ...	S. Counties	1 6	1 1½
A_1	Solihull ...	Mid. Counties	1 6½	1 2
A_2	Southampton	S. Counties	1 6	1 1½
A_1	Southend-on-Sea	E. Counties	1 6½	1 2
A	Southport ...	N.W. Counties	1 7	1 2½
A	S. Shields ...	N.E. Coast	1 7	1 2½
A_1	Stafford ...	Mid. Counties	1 6½	1 2
A	Stirling ...	Scotland	1 7½	1 2½
A	Stockport ...	N.W. Counties	1 7	1 2½
A	Stockton-on Tees	N.E. Coast	1 7	1 2½
A	Stoke-on-Trent	Mid. Counties	1 7	1 2½
B	Stroud ...	S.W. Counties	1 5	1 0½
A	Sunderland ...	N.E. Coast	1 7	1 2½
A	Swansea ...	S. Wales & M.	1 7	1 2½
A_3	Swindon ...	S.W. Counties	1 5½	1 1½
A_1	TAMWORTH ...	N.W. Counties	1 6½	1 2
B	Taunton ...	S.W. Counties	1 5	1 0½
A	Teeside Dist. ...	N.E. Coast	1 7	1 2½
A_3	Teignmouth ...	S.W. Counties	1 6	1 1½
A	Todmorden ...	Yorkshire	1 7	1 2½
A_1	Torquay ...	S.W. Counties	1 6½	1 2
B_2	Truro	S.W. Counties	1 4	1 0
A_3	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ...	Mid. Counties	1 7	1 2½
A	Tyne District...	N.E. Coast	1 7	1 2½
A	WAKEFIELD	Yorkshire	1 7	1 2½
A	Walsall ...	Mid. Counties	1 7	1 2½
A	Warrington ...	N.W. Counties	1 7	1 2½
A_1	Warwick ...	Mid. Counties	1 6½	1 2
A_1	Wellingborough	Mid. Counties	1 6½	1 2
A	West Bromwich	Mid. Counties	1 7	1 2½
A_2	Weston-s.-Mare	S.W. Counties	1 6	1 1½
A_2	Whitby ...	Yorkshire	1 6	1 1½
A	Widnes ...	N.W. Counties	1 7	1 2½
A	Wigan ...	N.W. Counties	1 7	1 2½
B	Winchester ...	S. Counties	1 5	1 0½
A_2	Windsor ...	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 7	1 2½
A_3	Worcester ...	Mid. Counties	1 6	1 1½
A_3	Worksop ...	Yorkshire	1 5½	1 1½
A_1	Wrexham ...	N.W. Counties	1 6½	1 2
A_3	Wycombe ...	S. Counties	1 5½	1 1½
B	YARMOUTH ...	E. Counties	1 5	1 0½
B	Yeovil ...	S.W. Counties	1 5	1 0½
A	York	Yorkshire	1 7	1 2½

* In these areas the rates of wages for certain trades (usually painters and plasterers) vary slightly from those given.

The rates for every trade in any given area will be sent on request. The rates of wages have been revised consequent upon the increase in wages which came into operation on February 1, together with all revisions following authorised annual regradings.

CURRENT PRICES

The wages are the standard Union rates of wages payable in London at the time of publication. The prices given below are for materials of good quality and include delivery to site in Central London area, unless otherwise stated. For delivery outside this area, adjustment should be made for the cost of transport. Though every care has been taken in its compilation, it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry. The whole of the information given is copyright.

WAGES

		£ s. d.
Bricklayer	per hour	1 8½
Carpenter	,,	1 8½
Joiner	,,	1 8½
Machinist	,,	1 9½
Mason (Banker)	,,	1 8½
,, (Fixer)	,,	1 9½
Plumber	,,	1 8½
Painter	,,	1 7½
Paperhanger	,,	1 7½
Glazier	,,	1 8½
Slater	,,	1 8½
Scaffolder	,,	1 4½
Timberman	,,	1 4½
Navvy	,,	1 3½
General Labourer	,,	1 3½
Lorryman	,,	1 6½
Crane Driver	,,	1 7½
Watchman	per week	2 10 0

MATERIALS

EXCAVATOR AND CONCRETOR

		£ s. d.
Grey Stone Lime	per ton	2 2 0
Blue Lias Lime	,,	1 18 6
Hydrated Lime	,,	2 6 0
Portland Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	1 19 0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	2 5 0
White Portland Cement, in 1-ton lots	,,	8 15 0
Thames Ballast	per Y.C.	6 6
¾" Crushed Ballast	,,	7 0
Building Sand	,,	7 6
Washed Sand	,,	8 6
2" Broken Brick	,,	8 0
¾" ,, ,,	,,	10 3
Pan Breeze	,,	6 6
Coke Breeze	,,	8 9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s. d.	6" s. d.
Straight Pipes	per F.R.	0 9	1 1
Bends	each	1 9	2 6
Taper Bends	,,	3 6	5 3
Rest Bends	,,	4 3	6 3
Single Junctions	,,	3 6	5 3
Double	,,	4 9	6 6
Straight channels	per F.R.	1 6	2 6
¼ Channel bends	each	2 9	4 0
Channel junctions	,,	4 6	6 6
Channel tapers	,,	2 9	4 0
Yard gullies	,,	6 9	8 9
Interceptors	,,	16 0	19 6
IRON DRAINS:			
Iron drain pipe	per F.R.	2 3	3 8
Bends	each	6 4	13 1
Inspection bends	,,	11 5	14 4
Single junctions	,,	11 2	22 10
Double junctions	,,	17 2	30 9
Lead Wool	lb.	6	—
Gaskin	,,	5	—

BRICKLAYER

		£ s. d.
Flettons	per M.	2 12 0
Grooved do.	,,	2 14 0
Phorpres bricks	,,	2 15 0
,, Cellular bricks	,,	2 15 0
Stocks, 1st quality	,,	4 11 0
,, 2nd ,,	,,	4 2 6
Blue Bricks, Pressed	,,	8 14 0
,, Wirecuts	,,	7 12 6
,, Brindles	,,	7 0 0
,, Bullnose	,,	9 0 0
Red Sand-faced Facings	,,	6 18 6
Red Rubbers for Arches	,,	12 0 0
Multicoloured Facings	,,	7 10 0
Luton Facings	,,	7 10 0
Phorpres White Facings	,,	3 17 3
,, Rustic Facings	,,	3 12 3
Midhurst White Facings	,,	4 0 0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:		
Stretchers	,,	21 0 0
Headers	,,	20 10 0
Bullnose	,,	27 10 0
Double Stretchers	,,	29 10 0
Double Headers	,,	26 10 0
Glazed Second Quality, *Less*	,,	1 0 0
,, Buffs and Creams, *Add*	,,	2 0 0
,, Other Colours	,,	5 10 0
2" Breeze Partition Blocks	per Y.S.	1 7
4½" ,, ,, ,,	,,	1 10
3" ,, ,, ,,	,,	2 1
4" ,, ,, ,,	,,	2 6

MASON

		s. d.
The following d/d F.O.R. at Nine Elms:		
Portland stone, Whitbed	F.C.	4 4½
,, ,, Basebed	,,	4 7½
Bath stone	,,	2 10
York stone	,,	6 6
,, ,, Sawn templates	,,	7 6
,, ,, Paving, 2"	F.S.	1 8
,, ,, ,, 3"	,,	2 6

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.O.R. London station:

		£ s. d.
24" × 12" Duchesses	per M.	28 17 6
22" × 12" Marchionesses	,,	24 10 0
20" × 10" Countesses	,,	19 5 0
18" × 10" Viscountesses	,,	15 10 0
18" × 9" Ladies	,,	13 17 6
Westmorland green (random sizes)	per ton	8 10 0
Old Delabole slates d/d in full truck loads to Nine Elms Station:		
20" × 10" medium grey	per 1,000 (actual)	21 11 6
,, ,, ,, green	,, ,,	24 7 4
Best machine roofing tiles	,, ,,	4 5 0
Best hand-made do.	,, ,,	4 17 6
Hips and valleys	each	9
,, hand-made	,,	9½
Nails, compo	per lb.	1 4
,, copper	,,	1 6

CARPENTER AND JOINER

		£ s. d.
Good carcassing timber	F.C. 2s. 7d.–2	10
Birch	as 1" F.S.	9
Deal, Joiner's	,, ,,	5
,, ,, 2nds	,, ,,	4
Mahogany, Honduras	,, ,,	1 3
,, African	,, ,,	1 1
,, Cuban	,, ,,	2 6
Oak, plain American	,, ,,	1 0
,, Figured ,,	,, ,,	1 3
,, plain Japanese	,, ,,	1 2
,, Figured ,,	,, ,,	1 5
,, Austrian wainscot	,, ,,	1 6
,, English	,, ,,	1 11
Pine, Yellow	,, ,,	1 0
,, Oregon	,, ,,	4
,, British Columbian	,, ,,	4
Teak, Moulmein	,, ,,	1 3
,, Burma	,, ,,	1 2
Walnut, American	,, ,,	2 3
,, French	,, ,,	2 3
Whitewood, American	,, ,,	1 1
Deal floorings, ⅝"	Sq.	18 6
,, ¾"	,,	1 1 6
,, 1"	,,	1 2 0
,, 1¼"	,,	1 5 0
,, 1½"	,,	1 10 0
Deal matchings, ⅝"	,,	14 0
,, ¾"	,,	15 6
,, 1"	,,	1 4 0
Rough boarding, ¾"	,,	16 0
,, 1"	,,	18 0
,, 1½"	,,	1 6 0

Plywood• per ft. sup.:

Thickness	1/16"			¼"			⅜"			½"		
Qualities	A d.	B d.	BB d.	A d.	B d.	BB d.	A d.	B d.	BB d.	A d.	B d.	BB d.
Birch 60 × 48	4	2½	2	5	3	2¾	7	5	4	8	6	5
Cheap Alder	–	2	1½	–	3½	2	–	–	–	–	–	–
Oregon Pine	–	2½	–	3	2¾	–	4	3½	–	5	4½	–
Gaboon Mahogany	4	3¼	–	5	4½	–	7	6¼	–	8	7	–
Figured Oak	6½	5	–	7½	5¾	–	10	8	–	1/–	9	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:
(The following are the standard list prices from which should be deducted the various percentages as set forth below.)

		¼"	⅜"	1"	1½"	2"
Tubes 2'–14' long	per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23" long	each	10	1/1	1/11	2/8	4/9
,, 3"–11½" long	,,	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long	,,	11	1/3	2/2	2/10	5/3
,, ,, 3" M–½" long	,,	8	10	1/5	1/11	3/6
Bends	,,	8	11	1/7½	2/7½	5/2
Springs not socketed	,,	5	7	1/1½	1/11½	3/11
Socket unions	,,	2/–	3/–	5/6	6/9	10/–
Elbows, square	,,	10	1/1	1/6	2/2	4/3
Tees	,,	1/–	1/3	1/10	2/6	5/1
Crosses	,,	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples	,,	3	4	6	8	1/3
Diminished sockets	,,	4	6	9	1/–	2/–
Flanges	,,	9	1/–	1/4	1/9	2/9
Caps	,,	3½	5	8	1/–	2/–
Backnuts	,,	2	3	5	6	1/1
Iron main cocks	,,	1/6	2/3	4/2	5/4	11/6
,, with brass plugs	,,	—	4/–	7/6	10/–	21/–

Discounts	TUBES Per cent.		Per cent.
Gas	66⅔	Galvanised gas	56⅔
Water	61⅔	,, water	51⅔
Steam	58⅔	,, steam	46⅔
	FITTINGS		
Gas	57⅔	Galvanised gas	48⅔
Water	53⅔	,, water	46⅔
Steam	48⅔	,, steam	41⅔

		s. d.
Rolled steel joists cut to length	cwt.	15 6
Mild steel reinforcing rods, ⅜"	,,	18 0
,, ,, ,, ½"	,,	17 9
,, ,, ,, ⅝"	,,	17 6

SMITH AND FOUNDER—*continued*

		s. d.
Mild steel reinforcing rods, ¾"	cwt.	17 6
,, ,, ,, ⅞"	,,	17 6
,, ,, ,, 1"	,,	17 6
,, ,, ,, 1¼"	,,	17 6
,, ,, ,, 1½"	,,	17 6

		3" s. d.	4" s. d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.	1 0	1 3½
Shoes	each	2 0	3 0
Anti-splash shoes	,,	4 6	8 0
Boots	,,	3 0	4 0
Bends	,,	2 7	3 9
,, with access door	,,	—	6 3
Heads	,,	4 0	5 0
Swan-necks up to 9" offsets	,,	3 9	6 0
Plinth bends, 4½" to 6"	,,	3 9	5 3
Half-round rain-water gutters of ordinary thickness metal	F.R.	5	6
Stop ends	each	6	6
Angles	,,	1 7	1 11
Obtuse angles	,,	2 0	2 6
Outlets	,,	1 9	2 3

PLUMBER

		£ s. d.
Lead, milled sheets	Cwt.	1 7 3
,, drawn pipes	,,	1 6 9
,, soil pipes	,,	1 9 9
,, scrap	,,	18 0
Solder, plumbers'	lb.	1 1½
,, fine do.	,,	1 4
Copper, sheet	,,	1 0½
,, tubes	,,	1 2½

L.C.C. soil and waste pipes:		3"	4"	6"
Plain cast	F.R.	1 0	1 2	2 6
Coated	,,	1 1	1 3	2 8
Galvanized	,,	2 0	6	4 6
Holderbats	each	3 10	4	4 9
Bends	,,	3 9	5 3	4 3
Shoes	,,	2 10	4 4	6
Heads	,,	4 8	8 5	12 9

PLASTERER

		£ s. d.
Lime, chalk	per ton	2 0 0
Plaster, coarse	,,	2 15 0
,, fine	,,	4 7 6
Hydrated lime	,,	3 0 9
Sirapite	,,	3 6 0
Keene's cement	,,	5 0 0
Gothite plaster	,,	3 6 0
Pioneer plaster	,,	3 6 0
Thistle plaster	,,	3 6 0
Sand, washed	Y.C.	11 6
Hair	lb.	6
Laths, sawn	bundle	2 4
,, rent	,,	3 9
Lath nails	lb.	3

GLAZIER

	s. d.	s. d.
Sheet glass, 24 oz., squares n/e 2 ft. s. F.S.		2¾
,, ,, 26 oz. ,, ,, ,,	,,	3¼
Flemish, Arctic, Figures (white)*	,,	7½
Blazoned glasses	,,	2 6
Reeded: Cross Reeded	,,	11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	,,	6¾
Crown sheet glass (n/e 12" × 10")	,,	2 0
Flashed opals (white and coloured)	,, 1 0 and	2 0
¼" rough cast; rolled plate	,,	6
¼" wired cast; wired rolled	,,	10½
¼" Georgian wired cast	,,	11½
¼" Polished plate, n/e 1 ft.	,, †1 0 to	‡1 3
,, ,, 2	,, †1 4 ,,	‡1 6
,, ,, 4	,, †2 6 ,,	‡2 9
,, ,, 8	,, †2 11 ,,	‡3 4
,, ,, 20	,, †3 1 ,,	‡3 9
,, ,, 45	,, †3 3 ,,	‡4 0
,, ,, 100	,, †4 0 ,,	‡4 10
Vita glass, sheet, n/e 1 ft.	,,	1 0
,, ,, 2 ft.	,,	1 3
,, ,, over 2 ft.	,,	1 9
,, ,, plate, n/e 1 ft.	,,	1 6
,, ,, 2 ft.	,,	3 0
,, ,, 5 ft.	,,	4 0
,, ,, 7 ft.	,,	5 0
,, ,, 15 ft.	,,	6 0
,, ,, over 15 ft.	,,	7 6
"Calorex" sheet 21 oz., and 32 oz.	,, 2 6 and	3 6
,, rough cast ¼" and ⅛"	,, 8½ ,,	1 0
Putty, linseed oil	lb.	3

* *Colours, 1d. F.S. extra.*
† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

PAINTER

		£ s. d.
White lead in 1-cwt. casks	cwt.	2 17 9
Linseed oil	gall.	3 2
Boiled oil	,,	3 5
Turpentine	,,	3 9
Patent knotting	,,	14 0
Distemper, washable	cwt.	2 6 0
,, ordinary	,,	2 0 0
Whitening	,,	4 0
Size, double	firkin	3 0
Copal varnish	gall.	13 0
Flat varnish	,,	14 0
Outside varnish	,,	16 0
White enamel	,,	1 15 0
Ready mixed paint	,,	13 6
Brunswick black	,,	7 6

CURRENT PRICES FOR MEASURED WORK

The following prices are for work to new buildings of average size, executed under normal conditions in the London area. They include establishment charges and profit. While every care has been taken in its compilation, no responsibility can be accepted for the accuracy of the list. The whole of the information given is copyright.

EXCAVATOR AND CONCRETOR

		£ s. d.
Digging over surface n/e 12" deep and cart away	Y.S.	2 9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	8 6
" to form basement n/e 5' 0" and cart away	"	9 0
" " 10' 0" deep and cart away	"	9 6
" " 15' 0" deep and cart away	"	10 0
If in stiff clay	add	6
If in underpinning	"	4 0
Planking and strutting to sides of excavation	F.S.	1 0
" " to pier holes	"	5
" " to trenches	"	5
" " extra, only if left in	"	3
Hardcore, filled in and rammed	Y.C.	10 0
Portland cement concrete in foundations (6–1)	"	1 6 0
" " (4–2–1)	"	1 12 6
" " underpinning	"	1 16 0
Finishing surface of concrete, space face	Y.S.	7

DRAINLAYER

		4"	6"
		s. d.	s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	16 6	18 0
Cast iron drains, and laying and jointing	F.R.	5 9	8 3
Extra, only for bends (cast iron)	Each	12 3	18 4

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	26 10 0
" " in cement	"	27 12 6
" Stocks in cement	"	34 0 0
" Blues in cement	"	50 0 0
Extra only for circular on plan	"	2 0 0
" backing to masonry	"	1 10 0
" rising on old walls	"	2 0 0
" underpinning	"	5 10 0
Fair Face and pointing internally	F.S.	1½
Extra over fletton brickwork for picked stock facings and pointing	"	8
" " " red brick facings and pointing	"	11
" " " blue brick facings and pointing	"	1 4
" " " glazed brick facings and pointing	"	3 6
Tuck pointing	"	7½
Weather pointing in cement	"	3
Slate dampcourse	"	10
Vertical dampcourse	"	1 1

ASPHALTER

		s. d.
½" Horizontal dampcourse	Y.S.	4 9
½" Vertical dampcourse	"	7 9
¾" paving or flat	"	6 3
1" paving or flat	"	7 6
1" × 6" skirting	F.R.	1 0
Angle fillet	"	2½
Rounded angle	"	2½
Cesspools	Each	5 6

MASON

		£ s. d.
Portland stone, including all labour, hoisting, fixing and cleaning down, complete	F.C.	17 9
Bath stone and do., all as last	"	13 6
Artificial stone and do.	"	13 0
York stone templates, fixed complete	"	10 6
" thresholds	"	13 6
" sills	"	1 0 6

SLATER AND TILER

		£ s. d.
Slating, Bangor or equal to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3 10 0
Do., 18" × 9"	"	3 7 0
Do., 24" × 12"	"	3 17 0
Westmorland slating, laid with diminished courses	"	6 0 0
Tiling, best hand-made sand-faced, laid to a 4" gauge, nailed every fourth course	"	3 0 0
Do., all as last, but of machine-made tiles	"	2 16 0
20" × 10" medium Old Delabole slating, laid to a 3" lap (grey)	"	2 16 0
" " " " " " " (green)	"	4 15 0

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 2 6
Shuttering to sides and soffits of beams	F.S.	7
" to stanchions	"	7
" to staircases	"	1 6
Fir and fixing in wall plates, lintols, etc.	F.C.	3 9
Fir framed in floors	"	4 0
" " roofs	"	6 6
" " trusses	"	7 6
" " partitions	"	8 6
¾" deal sawn boarding and fixing to joists	Sqr.	1 14 6
1" " " " " "	"	1 17 6
1½" " " " " "	"	2 3 0
2" × 2" fir battening for Countess slating	"	9 6
Do., for 4" gauge tiling	"	12 0
Stout feather-edged tilting fillet	F.R.	4½
Patent inodorous felt, 1 ply	Y.S.	2 3
" " " 2 "	"	2 9
" " " 3 "	"	3 3
Stout herringbone strutting to 9" joists	F.R.	10½
1" deal gutter boards and bearers	F.S.	1 8
1½" " " " "	"	1 6
2" deal wrought rounded roll	F.R.	8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 1 0
1¼" do.	"	2 10 0
1½" do.	"	2 17 0
1" deal moulded skirting fixed on, and including grounds pinned to wall		1 0
1½" do.		1 3

CARPENTER AND JOINER—continued

		s. d.
1¼" deal moulded sashes of average size	F.S.	1 9½
2" " " " "	"	1 11½
1½" deal cased frames, double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass faced axle pulleys, etc., fixed complete	"	3 7
2" " " " " "	"	3 10
Extra only for moulded horns	Each	6
1¼" deal four-panel square, both sides, door	F.S.	2 0
2" " " " "	"	2 8
1¼" " but moulded both sides	"	2 4
2" " " " "	"	3 0
4" × 3" deal, rebated and moulded frames	F.R.	1 0
4½" × 3½" " " "	"	1 4
1¼" deal tongued and moulded window board, on and including deal bearers	F.S.	1 6
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2 6
1¼" deal moulded wall strings	"	2 1
1¼" " " outer strings	"	2 4
Ends of treads and risers housed to string	Each	1 9
3" × 2" deal moulded handrail	F.R.	1 3
1" × 1" deal balusters and housing each end	Each	2 0
1½" × 1½" " " "	"	2 9
3" × 3" deal wrought framed newels	F.R.	1 3
Extra only for newel caps	Each	6 0
Do., pendants	"	6 0

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.	18 6
Riveted plate or compound girders, and hoisting and fixing in position	"	1 6 0
Do. stanchions with riveted caps and bases and do.	"	1 2 0
Mild steel bar reinforcement, ½" and up, bent and fixed complete	"	1 4 6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g	F.S.	11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1 10 0

PLUMBER

								£ s. d.
Milled lead and labour in flats							cwt.	1 18 0
Do. in flashings							"	2 1 6
Do. in covering to turrets							"	2 7 0
Do. in soakers							"	1 12 9
Labour to welted edge							F.R.	3½
Open copper nailing							"	3
Close " "							"	4
	½"	¾"	1"	1¼"	2"	4"		
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.		
Lead service pipe and fixing with pipe hooks	1 2	1 4	1 8½	2 7	3 6		F.R.	
Do. soil pipe and fixing with cast lead tacks						7 3	"	
Extra, only to bends					2 3	7 6	Each	
Do. to stop ends	6½	8	9	11	1 0		"	
Boiler screws and unions	3 3	3 9	5 0	5 0			"	
Lead traps	—	—	—	8 0	11 6		"	
Screw down bib valves	6 9	9 6	11 0	—	—		"	
Do. stop cocks	7 0	9 6	12 6	—	—		"	
4" cast-iron ½-rd. gutter and fixing							F.R.	1 6
Extra, only stop ends							Each	1 0
Do. angles							"	1 6
Do. outlets							"	2 9
4" dia. cast-iron rain-water pipe and fixing with ears cast on							F.R.	1 7
Extra, only for shoes							Each	1 3
Do. for plain heads							"	6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	2 6
Do. in n/w to beams, stanchions, etc.	"	2 9
Lathing with sawn laths to ceilings	"	1 3
½" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1 5
Do. vertical	"	1 7
Rough under on walls	"	1 2½
Render, refloat and set in lime and hair	"	1 9
Render and set in Sirapite	"	1 11
Render backing in cement and sand, and set in Keene's cement	"	2 9
Extra, only if on lathing	"	4
Keene's cement angle and arris	F.R.	6
Arris	"	1½
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	1½
1" granolithic pavings	Y.S.	3 6
1½" " " "	"	4 6
6" × 6" white glazed wall tiling and fixing on prepared screed	"	17 6
9" × 3" " " "	"	2 2 6
Extra, only for small quadrant angle	F.R.	8

GLAZIER

		s. d.
21 oz. sheet glass and glazing with putty	F.S.	6½
26 oz. do. and do.	"	7½
Flemish, Arctic Figured (white) and glazing with putty	"	1 1
Cathedral glass and do.	"	1 2
Glazing only, British polished plate	"	7
Extra, only if in beds	"	2
Washleather	F.R.	4

PAINTER

		s. d.
Clearcolle and whiten ceilings	Y.S.	6
Do. and distemper walls	"	9
Do. with washable distemper	"	1 1
Knot, stop, prime and paint four coats of oil colour on plain surfaces	"	3 3
Do. on woodwork	"	3 6
Do. on steelwork	"	3 0
Do. and brush grain and twice varnish	"	5 6
Stain and twice varnish woodwork	"	1 11
Stain and wax polish woodwork	"	4 6
French polishing	F.S.	1 2
Stripping off old paper	Piece	2 6
Hanging ordinary paper	"	2 6

GLASS HOUSE COMPETITION

PREMIATED DESIGNS

THE result of the competition for a glass house to be erected at the "Daily Mail" Ideal Home Exhibition to be held at Olympia from April 5 to April 30 next, was announced on Tuesday last as follows :—

Design placed first (£100) : Miss N. H. Cuthbertson and Mr. D. W. Notley, students, R.I.B.A., of 9 Princes Avenue, Liverpool.

Design placed second (£50) : C. A. L. Levick, B.A.Arch., c/o Australia House, Strand, W.C.2.

Design placed third (£25) : Mr. R. H. Sheppard and Miss Jean Shufflebotham, AA.R.I.B.A., of 60 Witley Court, Woburn Place, W.C.2.

Highly commended : Mr. R. J. Sneller, L.R.I.B.A., of P. J. Westwood and Sons, 14 Buckingham Street, Adelphi, W.C.2.

The competition was organized in conjunction with the British Glass Industry and was conducted on behalf of the "Daily Mail" by the Board of the Building Centre. The assessors were : Messrs. L. H. Bucknell, J. M. Easton, G. Grey Wornum and Maurice E. Webb.

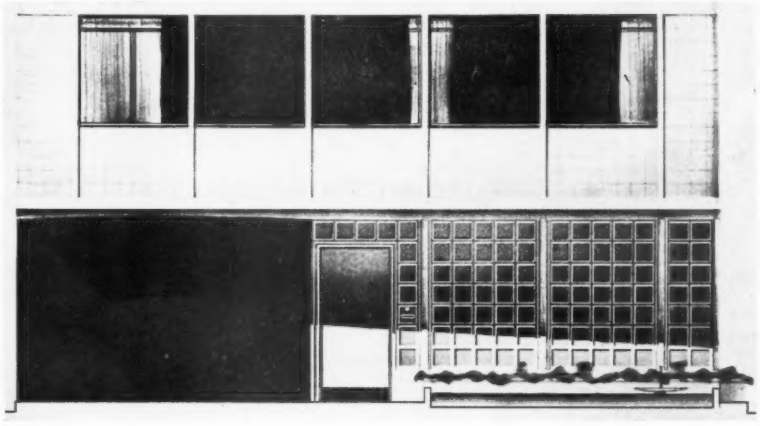
The assessors, in their report, stated : "In awarding the first prize to Miss N. H. Cuthbertson and Mr. Notley, we consider their design possesses outstanding merit in its simple structural character and its practical application of glass as the main material for its walls and decoration. Whereas the conditions clearly stated that your directors would not bind themselves to the carrying out of any of the designs, we consider that the one we have placed first is well worth building for the purpose you have in mind and will produce not only a good house but an exhibit of outstanding and imaginative character.

"In our opinion the designs placed second and third are also good solutions of the problem.

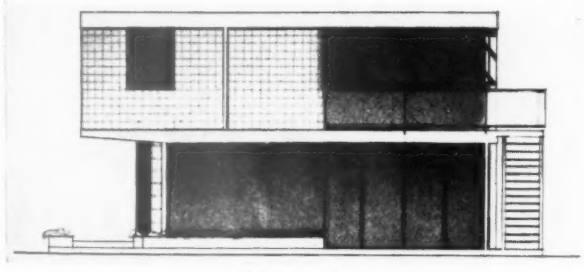
"We desire to refer to the many excellent drawings and sketches which were submitted by other competitors, who have shown that the material in which they were asked to design has proved of the greatest interest to them.

"It should be noted that a considerable number of competitors failed to comply with the conditions, and for this reason were disqualified."

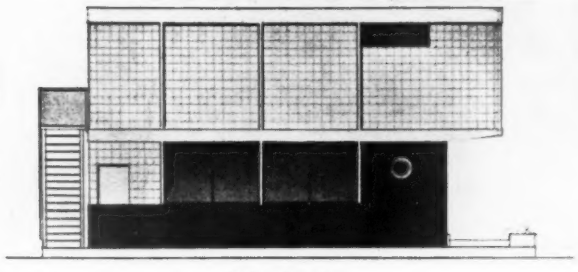
THE WINNING DESIGN : BY N. H. CUTHBERTSON AND D. W. NOTLEY



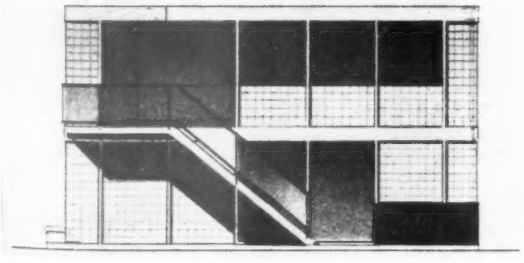
Half-inch of front elevation.



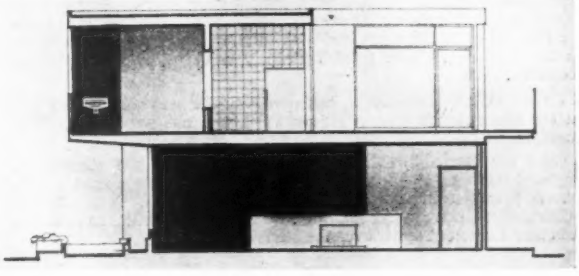
Side elevation.



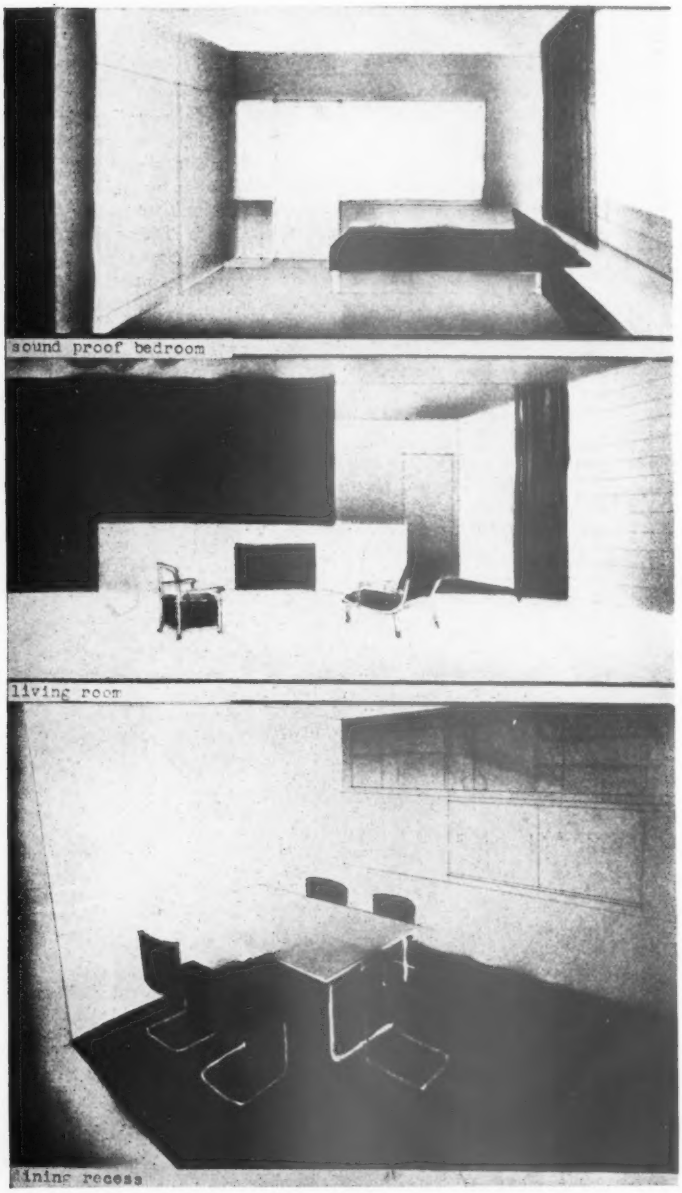
Side elevation.

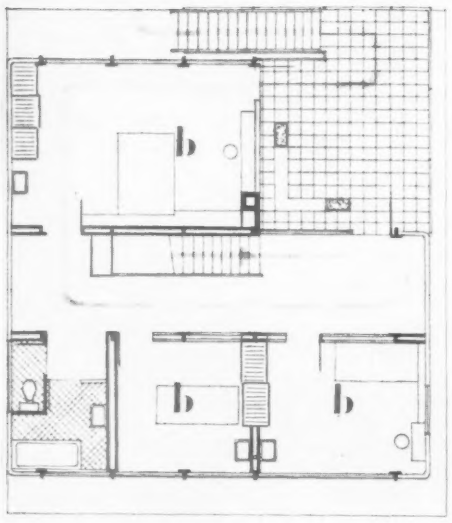


Back elevation.

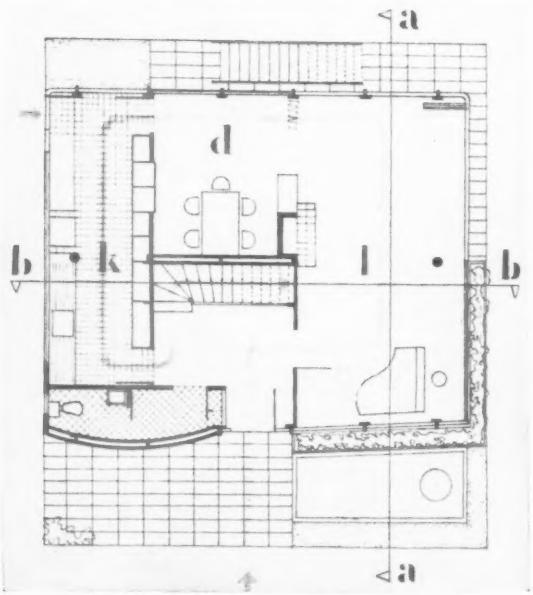


Section A-A.





(Above) First Floor Plan; (below) Ground Floor Plan



WINNING DESIGN: BY N. H. CUTHBERTSON AND D. W. NOTLEY

Extracts from the

WINNERS' REPORT

PLAN—In this house an attempt has been made to synthesize the functions of an ordinary dwelling-house and an exhibition building, for which reason the circulation has been carefully considered. Visitors enter on the main axis of the gallery in which the building stands, and leave on the same axis. Internally the circulation moves, uninterrupted, in an anti-clockwise direction. On the ground floor all rooms are passed through, and in the living-room clear glass has deliberately been avoided on the side facing the main exhibition hall, in order to concentrate all interest in the room itself. On the upper floor a wide corridor acts as a gallery,. The third bedroom, however, is itself used for circulation.

CONSTRUCTION—Great attention has been paid to the fact that the house should have a precast reinforced concrete frame. The stanchions are of Tee section, carried through two floors.

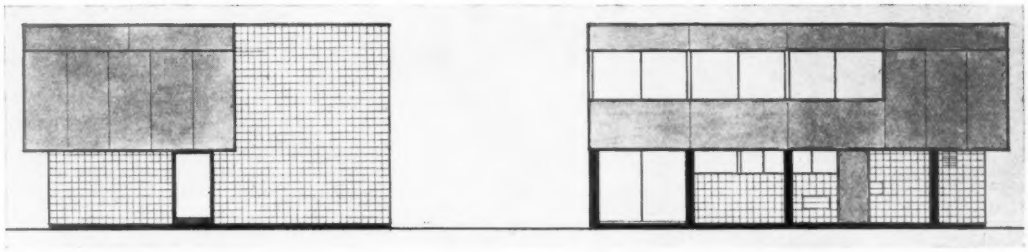
Beams are carried on flanges cast integrally with the stanchions. Suggested methods of jointing beams and columns are shown alongside. A precast reinforced concrete floor may be used. The roof will be constructed in a similar manner to the first floor, with the addition of circular Lenscrete lights over the stair.

The whole building has been raised 6 ins. above the general floor level of the hall.

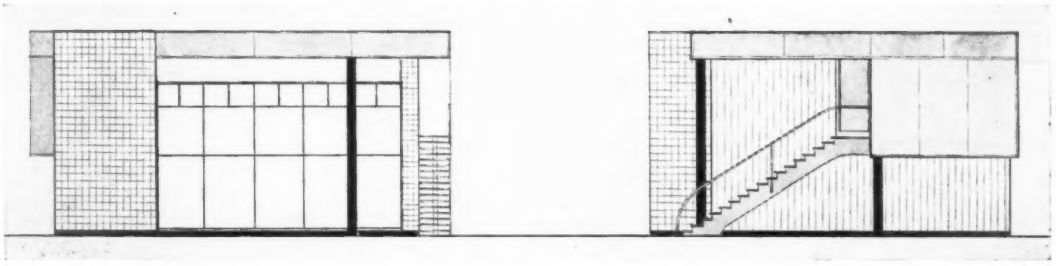
The internal staircase consists of two precast reinforced concrete strings, the treads being concrete, and the risers glass, with provision for their illumination. The external stair has similar strings, but with glass treads and no risers. Balustrades in both cases are of glass in metal frames.

Although a special feature has been made of the sound proofing qualities of glass in one room, sound insulation has been considered in other parts of the building.

MATERIALS—Glass bricks have been used extensively on the external elevations. These are set in lime mortar for ease of demolition. Lenscrete has been used for one external wall of the living room, and vitreous facing tiles on the external face of the curved wall to the cloakroom, and as a plinth to the kitchen. Thermolux glass is used on the balcony wall of the principal bedroom.

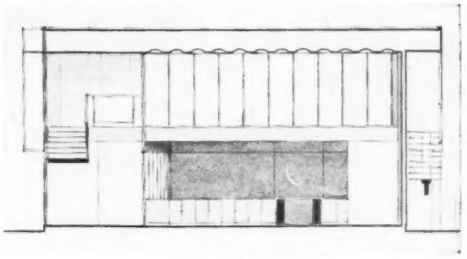


Elevation A. *Elevation D.*



Elevation B. *Elevation C.*

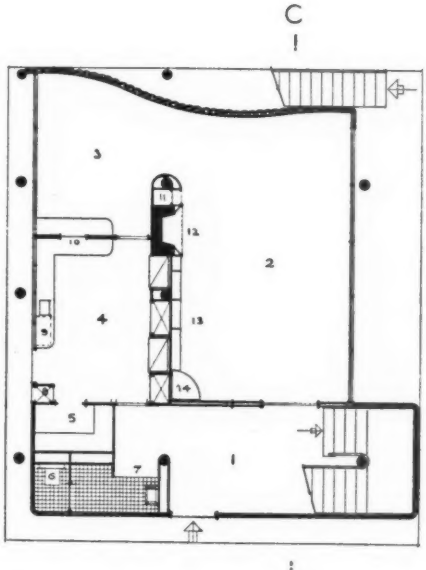
DESIGN PLACED SECOND: BY C. A. L. LEVICK



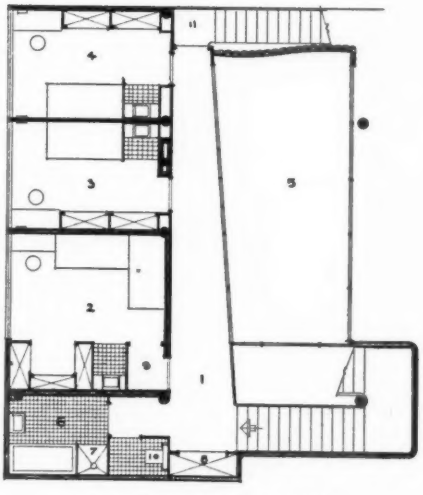
Section A—C.

GROUND FLOOR PLAN
1 : Entrance hall
2 : Living area
3 : Dining area
4 : Kitchen
5 : Larder
6 : W.c.
7 : "Cloaks"
8 : Trades hatch
9 : Fuel box under
10 : Serving hatch
11 : Fuel
12 : Open fireplace
13 : Low bookshelves and radio
14 : Corner-horn type loudspeaker

FIRST FLOOR PLAN
1 : Corridor
2 : Bedroom (sound proof)
3 : "
4 : "
5 : Upper part of living area
6 : Bathroom—sliding glass roof
7 : Shower
8 : Linen
9 : Sound lock
10 : W.c. (top light and vent)
11 : External stair

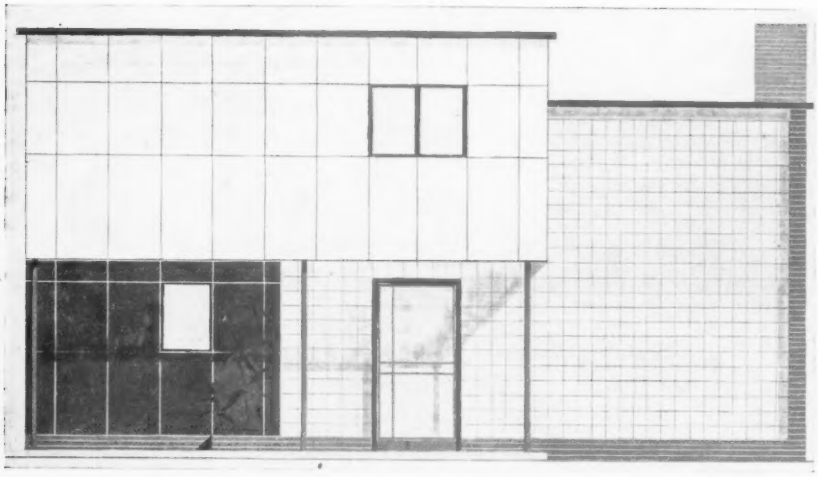


GROUND FLOOR PLAN

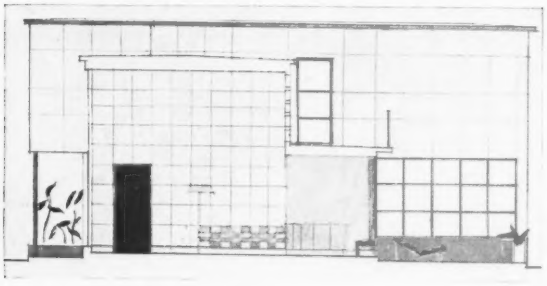


FIRST FLOOR PLAN

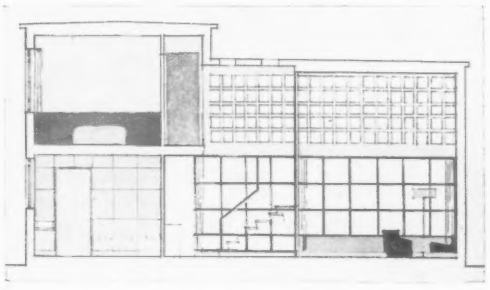
DESIGN PLACED THIRD



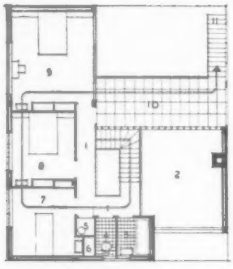
Half-inch of entrance front.



Cross Section



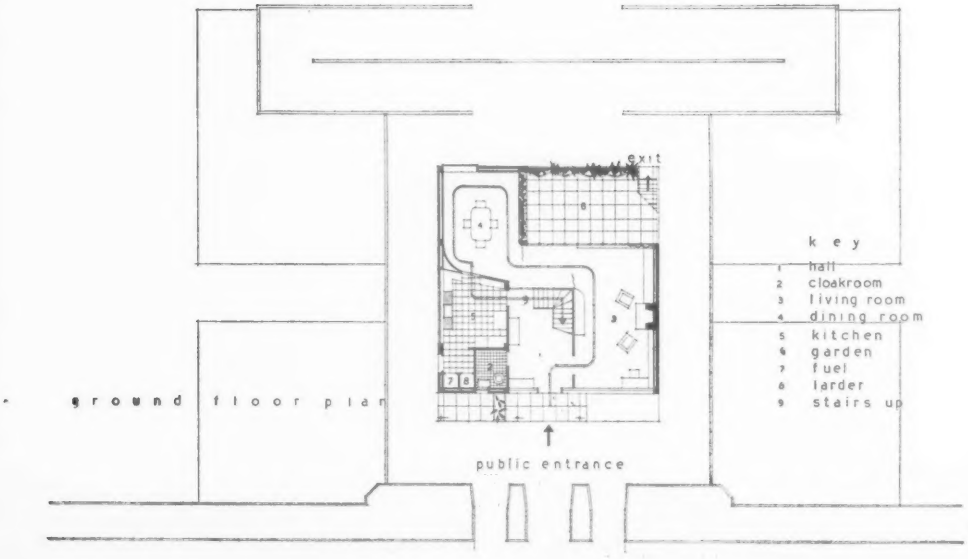
Longitudinal Section



first floor plan

key

1 gallery
2 upper part of l r
3 bathroom
4 w c
5 linen cupboard
6 tanks
7 bedroom 1
8 bedroom 2
9 bedroom 3
10 terrace
11 stairs down



ground floor plan

key

1 hall
2 cloakroom
3 living room
4 dining room
5 kitchen
6 garden
7 fuel
8 larder
9 stairs up

BY RICHARD SHEPPARD AND JEAN SHUFFLEBOTHAM