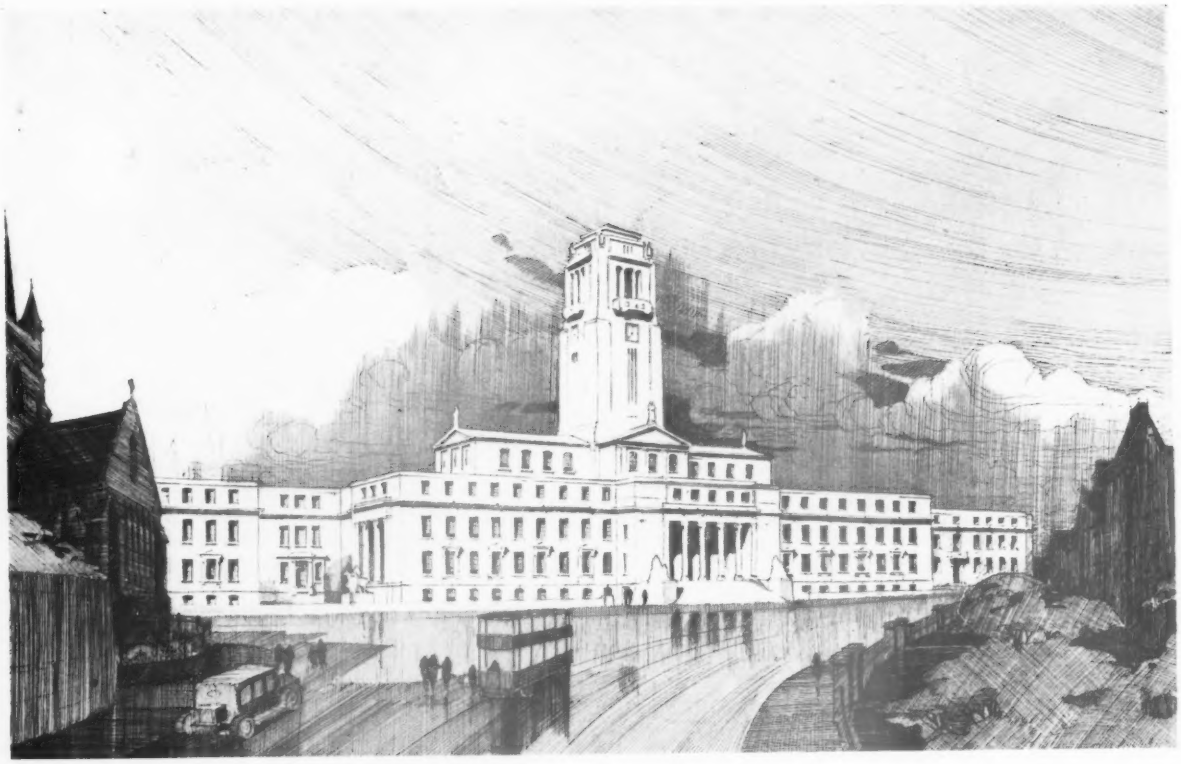
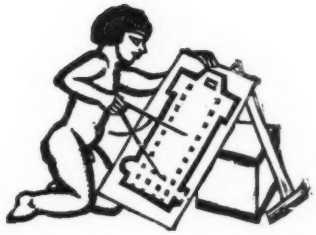
NEW PEOPLE'S PALACE

MILE END ROAD, E.

A GENERAL view of the new People's Palace in the Mile End Road, E., which has been erected on the site of the old assembly halls which were burnt out in 1931. The architects for the exterior are Campbell Jones, Sons and Smithers; and the architect for the interior planning and decoration is George Coles.



Mr. Frank Parkingson, a former student of the University of Leeds, has given £200,000 to the university authorities to enable them to carry out a portion of the university's reconstruction scheme. The section for which this money will be used is the central block, which will contain the administrative offices, council and senate chambers, and committee rooms. Above is a perspective of the proposed new block.



CHRISTMAS EVE

IN one or two of those clear-cut no-nonsense plays which are said to have had heavy public support in the last century, a lot of time was saved by a very simple device. After the villain had halved the caste with the usual axe, he did not have to waste a whole scene in putting Remorse Awakening across the footlights. Not a bit of it. Twenty minutes of soliloquy, sorrow-drowning and fist-shaking was saved by the introduction of an additional character, or perhaps property, which (or who), tastefully dressed in black and heavily veiled, moved a few steps behind Sir Jasper while the baronet's splendid nose and twisted lip were continuing to work out their destiny. This time-saver was known as Remorse Follows After, and on a dimly-lit stage must have been too moving for words.

In something the same way one of those responsible for the views expressed on this page has felt now and then that a Question stood close at his elbow—a spectral uncertainty as to whether anyone, ever, has read what is called a leading article. This interrogatory shadow is tirelessly efficient. To wait till the last possible moment or to rise—well, fairly early—are equally useless essays in escapism. No sooner is the pen raised than a metaphorical shoulder is icily tapped : " Do you think anyone will read that stuff ? "

It is a terrible uncertainty, prompting now and then to the last refuge of practitioners in advertising who simply cannot think how to start one more campaign : The large white area labelled " Watch This Space," or, in the case of a leading article, " Did You Read the Last One ? "

But today, at last and if only today, the spectre is on holiday. On all other Thursdays there is the chance that someone, tired, cynical or in a partially derailed train, might find himself reading this page of the JOURNAL. On Christmas Eve such long chances can be ruled out. The final, glorious certainty is beyond question. No one, anywhere at all, will read this article.

This is an intoxicating state of affairs. Anything may be chosen for a subject and anything written about it.

And then, immediately, the columnist's Utopia is found to have its blemish. What topic shall be chosen out of all that might be preserved, for ever unread, in a Christmas Eve leading article ?

To ask this question might at other times place a livelihood in jeopardy. For can one believe that popular writers ever know what they are writing about till their space is filled ? Certainly not. They learnt too thoroughly in their youth that the cheerfulness of " Well !—what shall we talk about ? " is a prelude only to silence in which words, besides having no meaning, have also ceased to exist. They know better than that, those highly-paid veterans. When two thousand words (at sixpence each so they say) have been placed in sequence, it will be time enough to learn what they are about. No reasonable person can ask more.

But in his new freedom discussion of what he should write about has no terrors at all for the present writer. He might almost say that he welcomes it, and is prepared to give every suggestion full consideration.

A sound and seasonable beginning would naturally be " This is Christmas Eve. . . ." But it would not, in point of fact, be true. Determined to be no blackleg amongst those who will not read his article on publication, the author has been careful to write it several days beforehand.

The loss of Christmas Eve as a topic, however, still leaves others available. There is, for instance, Christmastide. Pantomimes, furtive enquiries from contractors about private addresses, Christmas cards (architects' *v.* the rest), the buying of last-minute presents, the agonizing questions of ethics over fifty-seven boxes of cigarettes which have mysteriously appeared in the office of an architect who has just placed a large contract, and the question of why holly never seems to have any berries on it nowadays—these are all thrilling subjects for monographs. And amongst the persistent rain, twinkling lights, crowded trains and really fascinating toy stalls of the present week, he must be of poor spirit who does not feel ready to write well on any one of them.

The general press has so thoroughly caught the spirit of the times that it is just as well that no one will see the same things touched on here with so much greater finesse. Bargains in hand-painted calendars, the rise in temporary employment, strenuous days for shop assistants, early carol singers and possible improvements in cracker rhymes—all these new features of Christmastide have had their half columns, and all contribute to the mood which makes leader writing difficult.

In fact, and on second thoughts, it may be better to keep this page a general reflection of a seasonable spirit and the hope that architects with the rest will find a four-days' holiday quite enjoyable.

The Architects' Journal
Westminster, S.W.1
Telephones: Whitehall
9212-7
Telegrams
Buildable
Parl
London

NOTES & TOPICS

PROMOTERS' THOUGHTFULNESS

QUITE a minor sensation enlivened last Thursday night and Friday morning, when a telegram from the Newport Council was received by each competitor in the Newport Civic Centre Competition.

*

The telegrams read : "FIRST PRIZE WITHDRAWN FROM EXHIBITION UNTIL 29TH." At that time competitors were examining the first illustrations of the winning designs with the absorbing interest and mingled twinges of mortification, hopelessness and indignation, which most of us know only too well.

*

So the promoters' telegram, occasionally distorted by being delivered by telephone, acted as a splendid detonator to all sorts of hopes and mild cynicisms which were just being battened down again in preparation for "the next one."

*

By 10 a.m. on Friday speculation had gone so far as to make it almost certain that (1) Cecil Howitt had got tired of winning competitions and had retired in favour of the next men, or (2) that the Council had decided that the whole competition had been a mistake and that the architect who was really the man for the job was the Town Clerk's niece's husband.

*

In fact, it was almost a tragedy in the way of lost scoops when the real reason for the wires emerged.

*

Which was that the promoters wished to proceed as soon as possible with the scheme, and for that reason had asked Mr. Howitt to withdraw his drawings from the exhibition of designs. And, therefore, thinking that some competitors might go to Newport to see the drawings, they decided to wire them all that the winner's design would not be on view until December 29.

*

An extremely courteous thing to have done. It is not all promoters who are so thoughtful for those from whom they have had three months' very hard, and unpaid, work.

ARCHITECTURE MEDAL

The town of Harburg in Germany has become architecture-conscious to the extent of wishing to encourage the employment of first-class architects—whilst not, of course, intending to do anything except to *describe* the buildings which result from such employment.

*

The exact point at which description—terse, heartfelt and emphatic—merges into criticism within the meaning of Dr. Goebbels' new decree, will become a delicate business when awards are being made for the five best buildings of the year in Harburg. The awards will take the form of medals ; the medals will take the form of . . .?

*

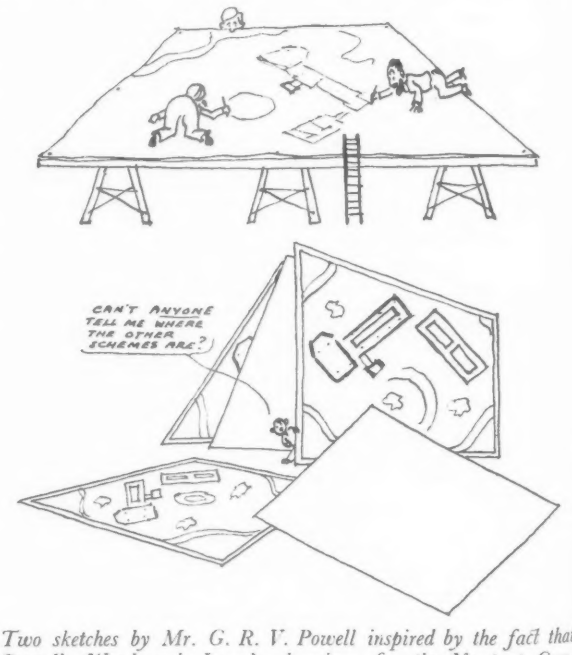
Yes, the solution is easy. But the whole business does seem very strangely unfortunate in a country which has done great things for architecture in the last eighteen years.

CHARTERED SURVEYORS AT DINNER

I have seldom listened to such prolonged applause as that given to Mr. Winston Churchill when he rose to reply to the toast of "the guests" at the annual dinner of the Quantity Surveyors' Committee of the Chartered Surveyors' Institution at the Savoy last week.

*

And Mr. Churchill didn't let his admirers down—for never have I heard him make a better speech. Although dealing mainly with politics, Mr. Churchill also touched upon building. He said that a few days previously he had been reading a letter written by one of his ancestors, the Duke of Marlborough, who, in reply to a letter from his wife, Sarah, stating that she wished to build a house,



Two sketches by Mr. G. R. V. Powell inspired by the fact that Connell, Ward and Lucas's drawings for the Newport Competition, measuring about 8 ft. by 9 ft., not only secured the second prize, but were some of the largest ever entered for a competition.

Major T. Cecil Howitt receiving the congratulations of Mr. C. F. Ward, Borough Architect of Newport, on his success in the competition for the new Civic Centre, Newport.

replied : " It is better to buy a house than to build one. To build will cost you double."

*

Mr. Churchill also gave us the " low-down" on his bricklaying abilities. He said that when he was helping to build his house a few years ago, he was invited to become a member of the appropriate Trade Union. Directly he had paid his fee his membership was cancelled. But he found out afterwards that his cheque wasn't cashed, but framed and hung in the Union's offices.

AND THE D.I.A.

The D.I.A. too, had a good show at the Café Royal. The Surveyors went on talking too long for me to be able to hear the D.I.A.'s speeches, but I gathered from various people that they'd been pretty bright and cheerful, Professor Constable's remarks about the " butter pat " school of design being repeated with great joy.

*

But I *was* asked one very pertinent question by a particularly intelligent guest. " I see all the industrialists, but where are the young designers ? "

*

And try as I would, I couldn't think of an answer.

19TH CENTURY RESTRICTION !

Mr. Percy J. Waldram and I being old friends, I have long found his letters to the press to be both stimulating and amusing.

*

But exception must be taken to his letter to *The Times* last week in which he defends the " 7 ft. minimum height for opening windows " clause in the proposed new L.C.C. Bye-laws.

*

In his letter he states that this clause is a long overdue reform.

*

On the contrary, every architect I have spoken to on the subject regards the clause as quite unnecessarily restrictive—and many have pointed out (as I did some weeks ago) that the clause was first drafted and used about the middle of the 19th century.

*

Since that time, storey heights, especially in domestic and hotel work, have gradually reduced, and the " 7 ft. " sub-sub-clause has not been enforced for years.

*

In working-class flats, the L.C.C. and other authorities have ignored the clause, except when old-fashioned wood double hung sash windows have automatically been tall and narrow.

*

Under access balconies and other projections, the continuance of the clause (and its enforcement) would add considerably to structural costs without any increase of light and air.

*

Why, therefore, continue with a 19th-century clause which by common consent has outlived its necessity ?

JERRY-BUILDING AGAIN

Ratepayers' Associations are weekly becoming more conscious of the troubles brought about by the smooth words of the jerry builders and their less soothing and generally undesirable villas.

*

Standards for this unfortunate class of work have become so low that the modern jerry-built house requires more repair after a year or two than even a pre-war jerry-building does now.

*

The public generally are strangely ignorant in the matter and continue to buy or hire-purchase the most appalling rubbish.

QUIS CUSTODIET . . .?

Odd that nearly every high-minded group which disapproves so whole-heartedly of overcrowding should be itself so overcrowded. Most groups depend, of course, on a good measure of charity, and the basements and corners of other people's offices are perhaps inevitable.

*

But the *Star* has lately been revealing that the Ministry of Health is itself grossly overcrowded, and even suggests that the staff are carefully measured up to see whether they can be fitted into disused fireplace openings.

*

Will the Ministry take proceedings against itself, or is there an opportunity for our old friend the common informer ? I seem to remember that somebody got a fairly useful sum for " informing " officially that a cinema was not only open on Sunday, but that people were actually going to it.

MORAL FOR MANUFACTURERS

" The sea and the pseudo-nautical have always been a popular decorative theme—but, in selecting gifts with nautical atmosphere for the yachtsman's home it is well to remember that it takes more than a casual acquaintance with an anchor, for example, to work it into a pair of book-ends and preserve an air of authenticity."

*

Thus the American paper *Yachting*, by way of suggesting that Christmas presents as often as not get a big laugh of the wrong kind.

*

I endorse every word of it. Would that all manufacturers could have their noses rubbed in such an admirably terse statement. It may be slightly comforting to know that even American design is not as good as it might be, but there's still no excuse whatever for the execrable taste of a good deal of the stuff I've had flaunted at me these last few weeks.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

AIR RAID PRECAUTIONS

A scheme to build an air raid shelter at a new maternity and child welfare centre was rejected last week by a committee of the Paddington Borough Council.

The Committee, in its report, stated: "It appears that the additional cost of a suitable shelter would be in the neighbourhood of £11,000. We have also considered other proposals for alternative schemes of less practical utility, which would involve additional expenditure in the neighbourhood of £2,500 to £3,000. But, in view of all the circumstances, we do not feel justified at the present time in recommending the Council to incur additional expenditure for air raid protection."

THE HEALTH CONGRESS

The Right Hon. the Earl of Dudley has consented to act as President of the Health Congress of the Royal Sanitary Institute, which is to be held at Birmingham from July 12 to 17, 1937. He will deliver his inaugural address on Monday afternoon, July 12.

The Minister of Health, the Right Hon. Sir Kingsley Wood, will address a general session of the Congress on Tuesday.

The deliberations of the Congress will include sections dealing with engineering, architecture and town planning.

In addition, there will be conferences of representatives of local authorities, medical officers of health, engineers and surveyors, and sanitary inspectors.

D.I.A. DINNER

The Design and Industries Association held its annual dinner at the Café Royal on Wednesday last week, with Sir Frederick Marquis in the chair. Proposing the toast of the Association, Professor W. G. Constable said he was dismayed by the rumours he had heard of the proposed decorations for the Coronation, and remembered that Rubens had designed and carried out the decorations for the whole of Antwerp for the triumphal entry of the Infante Ferdinand in 1635. Dreadful stories were also current as to the new designs for stamps and coins, the reduction in size of large-scale designs leading to what he termed the "butter-pat" school of design.

Replying, Mr. John Gloag pleaded for a certain amount of individualism, and suggested that the cold Continental logic would never be wholeheartedly accepted in this country, largely because of the climate but mainly because of the people themselves.

THE ARCHITECTS' DIARY

Monday, December 28

BUILDING CENTRE, 158 *New Bond Street, W.1. Exhibition of designs submitted in the Timber Development Association's Competition for designs for a tourist camp.*

ELECTRIC ILLUMINATION EXHIBITION. *At the Science Museum, South Kensington, S.W. Until April 25. Weekdays: 10 a.m. to 6 p.m. Sundays: 2.30 to 6 p.m.*

Thursday, December 31

LE PLAY SOCIETY. *Sixth Annual Conference to be held at the University of London, Malet Street, W.C.1. Until January 6.*

Monday, January 4

SOCIETY OF CHEMICAL INDUSTRY. *London Section. At Burlington House, W.1. "The Zinc Industry." By S. Robson. 8 p.m.*

Tuesday, January 5

ARCHITECTS' AND SURVEYORS' APPROVED SOCIETY. *Annual General Meeting to be held at 66 Portland Place, W.1. 6.30 p.m.*

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Evening to be arranged by the Students' Club. 8.30 p.m.*

LONDON SOCIETY, *Lancaster House, S.W.1. Children's New Year Party. 4.15 p.m.*

Wednesday, January 6

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. *At the Institution of Mechanical Engineers, Storey's Gate, S.W.1. Discussion on Effects of Water-vapour content in the atmosphere of interest to heating and ventilating engineers," to be opened by J. A. Macintyre. 7 p.m.*

Friday, January 8

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. *Liverpool and District Branch. At 312 India Building, Water Street, Liverpool. Annual Meeting. 7 p.m.*

Monday, January 11

R.I.B.A., 66 *Portland Place, W.1. Award of Prizes and Studentships. Criticism by H. Austen Hall on works submitted for prizes and studentships. Announcement of the Council's nomination for the Royal Gold Medal, 1937. 8.30 p.m.*

CHARTERED QUANTITY SURVEYORS

The annual dinner of the Chartered Quantity Surveyors' Committee of the Chartered Surveyors' Institution was held at the Savoy Hotel, W.C.2, on Wednesday of last week under the chairmanship of Mr. E. C. Harris. Some 350 members and guests were present, including the following:

The Rt. Hon. Winston Churchill, M.P., Lord Stanhope (First Commissioner of Works), Sir James West, Sir Malcolm McAlpine, Sir Cyril Kirkpatrick, Sir Arnold Thornely, Sir James Hawkey, Professor Walter Gropius, Messrs. W. H. Ansell, T. P. Bennett, W. T. Benslyn, E. T. Burt, S. Chermayeff, Wells Coates, A. Connell, R. Coppock, K. M. B. Cross, Louis de Soissons, W. T. Granger, John Grey, P. D. Hepworth, G. Hicks, M.P., Charles Holden, C. Lucas, C. Beresford Marshall, Frank Scarlett, Sydney Tatchell, G. Grey Wornum, and Major A. H. Killick (secretary of the Chartered Surveyors' Institution).

Lord Stanhope, proposing the toast of the Chartered Quantity Surveyor, said that building, like every other industry in these days of research and invention, was rapidly changing. New materials, new methods, mechanization, new requirements in buildings, such as air-conditioning and the like, had made the work of the quantity surveyor more complicated than it used to be. He had to keep abreast of the times, and he was glad to hear that the Institution was giving earnest attention to the technical education of the young men who were now entering the quantity surveying profession. It was essential that there should be maintained, and if possible increased, the high standard of the great reputation which the Institution had achieved.

"Although," he continued, "I believe you number only some 1,000 members out of the 8,000 who belong to the Chartered Surveyors' Institution, a quantity surveyor is president this year. Since the work of the quantity surveyor depends primarily on the orders given by the building owner, I think that I can say that there is every prospect of a very prosperous year in front of you. The work of my department (the Office of Works), the Defence Programme, the campaign for the abolition of slums and overcrowding, the rising tide of prosperity which is encouraging the private owner to embark on new buildings, make it look as if you have a very busy time before you."

Lord Stanhope referred to the work which his department is undertaking in Westminster Abbey in preparation for the coronation. "Quantity surveyors," he stated, "are helping us in this work and I believe I am right in saying that this is the first time that quantity surveyors have been engaged on work connected with any such occasion."

The chairman, responding to the toast, said:

"In the proposer of this toast we have a notable representative. Not only has Lord Stanhope had a very distinguished military career and has filled many important posts at the Admiralty, the War Office and at the Foreign Office, but in his present position I should describe him, in transatlantic idiom, as 'Building Owner No. 1.' He and the great department he controls are responsible for the promotion of more building operations than any other single authority in the country."

Referring to progress during the past year, Mr. Harris said:—"I am happy to record, since we last met here, a year of exceptional building activity during which an unemployed quantity surveyor or even an assistant has been a rarity. Many of us are asking ourselves: Will it last? Is this but another of those booms to which the industry is prone or are we on the threshold of a sustained effort to replace all obsolete buildings with modern structures more suited to their purpose?' Shall we not in the near future be called upon to follow pursuits similar to those which occupied us from 1914 to 1918, and be asked to devote our special attention to the construction of shelters either deep in the earth or of special design above ground to withstand the effects of high explosive, of incendiary or gas bombs?"

Mr. Harris concluded: "Linked with the question of continued building activity is the question frequently asked by a parent when considering a career for his son: 'What are the prospects if he be articled to a quantity surveyor?' He may be assured, I think, that in the quantity surveyor's calling there is always the prospect of a good livelihood, once the candidate is qualified. The ultimate rewards and emoluments may not compare with those of the law or of architecture, but they are by no means to be despised. Again, it is

Perspective of the winning design, by C. B. Pearson and Son, in the competition for a new hospital at Llandudno. The plans and elevations were reproduced in last week's issue.

not an overcrowded profession. There is ample room, not only on the lower rungs of the ladder, but also at the top.

"In the hope that this one remark may reach a wider audience, I should like to remind my colleagues that it is the duty of every surveyor to facilitate in every way the entry of the right type of young man into the profession and, even at some temporary inconvenience to himself, to devote some part of his time to the training of those who must fill the ranks in the future, thus providing for the increasing demands which I am confident will be made upon our services."

The toast, "Our Guests," was proposed by Mr. R. T. Dadson, and responded to by Mr. Winston Churchill and Mr. George Hicks, president of the National Federation of Building Trades Operatives.

BLUE CIRCLE PLAYERS

Sweet Aloes was exceedingly well received by a capacity audience, when it was presented recently at the Arts Theatre by Mr. Macaulay Eicke. Besides producing this play by Mr. Jay Mallory, Mr. Eicke himself played the inimical role of Tubbs to Miss Mary Davies' interpretation of Belinda. This latter part requires much dramatic force which reaches the peak in the last act, and shows Miss Davies' ability to create a sincere feeling of tragedy, accentuated by the lightness with which various scenes are played. The remaining members of the cast were admirably suited to their parts, and included Miss Roma Stone, Miss Phyllis Knapp, Miss Daisy MacKenzie, Mr. W. Robertson Barlow, Miss Joan Walder, Mr. H. Frank Nelson, Mr. Ronald A. King, Miss Brenda Kerrison, Miss Lavender Studd, Mr. Alan A. Laing and Miss Deidra Studd.

The proceeds from the sale of tickets will be given this year to the Builders' Clerks' Benevolent Institution.

EXHIBITION: "AIRPORTS AND AIRWAYS"

Lord Swinton, the Secretary of State for Air, is to open an exhibition entitled "Airports and Airways," at the R.I.B.A., on Friday, February 19, 1937. This—the principal exhibition to be organized by the R.I.B.A. during next year—will deal with civil aviation, its growing influence on the life of the Empire and the necessity for proper planning to meet its requirements.

The exhibition will consist of several hundred photographs, models and diagrams, and will be in four sections. The first will deal with airport siting, planning, design and equipment, and show how the needs of the public, the staff and the machines are met. It will also illustrate safety and control measures and considerations of town planning.

The second section will show by means of models and photographs the newest types of aircraft used today in civil aviation. The third section will deal with the services rendered by aviation in map-making, survey and archæology.

The fourth section will be pictorial, and consist of a collection of air views of such places and things as Mount Everest, parts of cities such as London and New York, desert oases, well-known buildings and landmarks, the "Queen Mary," and Central North America—the last taken from the stratosphere.

As with previous exhibitions organized by the R.I.B.A., this one has been arranged to meet a specific request from leading municipalities in the country. Many of these are either considering creating their own airports, or, where they already have them, wish to cultivate air-mindedness in their citizens. Thus they have asked for an exhibition which shall have a direct appeal to the public.

Already, the exhibition has been booked to appear, after being shown in London, in the following towns and cities: Bristol (April), Sheffield (May), Liverpool (July), Birmingham (August), Manchester (October), Derby (March, 1938), Wolverhampton (May, 1938), and arrangements are at present being made with six other towns.

The central feature of the exhibition will be a 12-ft. wide model of an illuminated and fully-equipped modern airport. This has been designed for the exhibition by a group of architect-specialists.

To accompany the exhibition there will be an illustrated descriptive handbook, for which a preface has been written by Lt.-Col. F. C. Shelmerdine, Director of Civil Aviation.

The exhibition will emphasize how civil aviation can draw the peoples of the world into closer contact. The air organizations of numerous other countries are contributing photographs, diagrams and information, in addition to the active help that is being received by the R.I.B.A. from organizations concerned with civil aviation in Great Britain.

COMPETITION NEWS

NEW COTTAGE HOSPITAL, DAWLISH

Conditions of the competition for a new cottage hospital at Dawlish are obtainable from the Honorary Secretary, Dawlish Cottage Hospital, Dawlish, Devonshire (Deposit £1. 1. 0). The competition is limited to architects of British nationality practising within 200 miles of Dawlish. Mr. Leslie T. Moore, F.R.I.B.A., has been appointed assessor; and the following premiums are offered: £100 (to merge), £75, and £50. The last day for questions is February 6.

OPEN COMPETITION

The Tenby Town Council decided last week to invite architects of British nationality to submit designs in open competition for a scheme estimated to cost £5,000, and to include an extended promenade on the North Beach, shelters and other amenities, and to offer a premium of £50 for the best design submitted. The assessors will include the Mayor (Colonel Harold Allen), the Borough Surveyor (Mr. Morley), Alderman William Davies, and others.

ANNOUNCEMENTS

The partnership between Erich Mendelsohn and Serge Chermayeff, F.R.I.B.A., has been dissolved by mutual consent as from October 1, 1936. Erich Mendelsohn will practise at 17 Berkeley Square, W.1. Serge Chermayeff will continue to practise at 173 Oxford Street, W.1, until the early spring.

The partnership between Messrs. Ivor Jones and Percy Thomas will be dissolved by mutual consent as from December 31, 1936. Mr. Ivor Jones will open new offices at 6 & 7 St. John's Square, Cardiff, in partnership with Mr. John W. Bishop, A.R.I.B.A. Mr. Percy Thomas will continue his practice at No. 10 Cathedral Road, Cardiff.

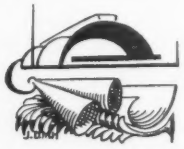
Messrs. Mitchell and Bridgwater, Chartered Architects, have moved their

offices to No. 42 Bruton Place, Berkeley Square, London, W.1. Telephone numbers (unchanged) : Mayfair 6391-2.

Mr. L. A. Culliford, F.R.I.B.A., F.S.I., will be taking into partnership as from January 1 next, his two chief assistants, Messrs. V. C. L. Saunders, A.R.I.B.A., and L. A. Chackett, A.R.I.B.A. The firm will then be known as Messrs. L. A. Culliford and Partners, and the practice continued at 58 Theobalds Road, London, W.C.1, for the present.

A CORRECTION

The JOURNAL greatly regrets that, in its issue for December 10, Helena Rubinstein's shop in Grafton Street was described as an exclusive furniture shop. This shop is a beauty specialist's, and was designed by Erno Goldfinger and A. Szivessy.



EXHIBITIONS

There seems to be very little sculpture on view at the moment, but there are several interesting exhibitions of painting, some of them well worth seeing.

•

The Lefèvre Galleries are showing sculpture and drawings by R. P. Bedford, and paintings by the East London Group, and by Lord Hastings.

Bedford's sculpture, even in its most abstract form, is based almost entirely on plant shapes. The virtue of this singleness of inspiration is debatable, but its use is, within its more restricting limits, as justifiable as the more common sculptor's basis of the human form. It tends to narrow his range of expression in most cases to a sensuousness faintly reminiscent of Indian work—a sensuousness that, curiously, is almost completely absent from his preliminary sketches. Personally I prefer the small bust (No. 24) to the exotic convolutions of plant growth. Still more debatable is the use of two or more coloured stones in the same group, but the sculptor undoubtedly has a great feeling for his material. On the whole this is a very interesting collection.

The East London Group show does not seem to be so representative as usual, and the heightened use of colour noticeable in nearly all the work is not necessarily a change for the better. There are some interesting paintings by Steggles and Hawthorne, and the work of Osborne shows considerable development.

Lord Hastings' work suggests that he is susceptible to mediæval influences—but lacking the depth of mediæval piety and superstition, this technique seems rather superficial and affected, and expresses nothing that could not be stated more colloquially.

•

There is an extremely good exhibition of Children's Paintings at the London Gallery, 28 Cork Street. The ages of the exhibitors varies from 2¼ to 17, but the standard of work from seven or eight years old upwards is infinitely above that of the average adult exhibition.

From Dora Russell's school some mural decorations and some amazingly competent three dimensional designs, painted with their fingers, in primary colours, by very small children, make one regret enviously the hours wasted in one's own childhood in painfully drawing the hated fragments of classical mouldings. These, and all the paintings in the exhibition, are free and happy and inquiring, and give a direct child's-eye view of the world that in only very few of the more individual painters has survived their training. But the surprise of the exhibition is the work sent from Haileybury. From the uninhibited atmosphere of Beacon Hill, and schools of similar outlook, one expects much and takes much for granted, but that a public school, however progressive, should produce, under public school conditions, work of this standard, is a more hopeful portent than anything produced by our art schools in this generation. Very lively and competent examples of work in this exhibition are "Embankment" by P. R. Bridges (age 13), Swettenham's "Balloon" (age 14), Polunin's "Paintings" (age 8).

At the same exhibition there is a collection of peasant paintings on glass. These, though very naive and charming, lose considerably by contrast with the children's work. They seem to be faint echoes of things seen in churches, presented traditionally and perhaps copied several times, whereas the children's work, though superficially much the same in outlook, is spontaneous, and clean and adventurous in colour.

In sophisticated contrast are paintings, also on glass, by Kandinsky and Lily Hildebrand. In composition and deliberate accenting of design these cannot possibly be compared with either children's or peasant's work, but there is a certain similarity of outlook that makes them very suitable for this exhibition.

Marcel Duchamps' visual gramophone records must be seen to be believed. Asymmetric colour designs are revolved on a gramophone turn-table and as they turn they gradually acquire the depth of a third dimension, and in their rhythmic movements almost suggest a fourth.

This exhibition ends on December 24.

•

At Tooth's, 155 New Bond Street, Epstein is showing flower paintings, which give an immense feeling of life and movement, entirely unlike the usual rather posed and self-conscious flower piece. Attention is never focussed on the flowers, as flowers, though they completely fill the canvas, but on the movement of the design. This exhibition may close on December 19, and is definitely to be recommended.

•

The Redfern Gallery, 20 Cork Street, is also showing a collection of flower paintings by various well-known contemporary artists. This is an interesting show, and individually many of the pictures are very satisfactory, but nearly all of them would have appeared to greater advantage away from the 48 other variations on the same theme. Hung so closely they tend to kill each other.

The passage is very restful after the inevitable conflictions of the main gallery, for here are hung some good examples of the more general work of such contemporaries as Sickert, Dobson, Christopher Wood and Skeaping.

Wood engraving is, and looks like remaining, the most satisfactory medium for book illustration, and the Society of Wood Engravers have a good show in the second room at the same gallery. Particularly good are the wood-cuts of Gwen Raverat.

Ronald Grierson is also showing hand-tufted rugs in pleasant designs and at very reasonable prices.

This Exhibition closes on January 2.

•

The Royal Society of British Artists are holding their usual winter exhibition at Suffolk Street, Pall Mall. This exhibition is much what one would expect, and contains few surprises, It epitomizes a safe and unquestioning outlook, and will appeal to many.

•

Everyone should go to the "Artists Help Spain" Exhibition at 46 Frith Street, Soho. This has been got up to provide International Column ambulances and kitchens by the Artists' International Association, and all the pictures have been given by the artists—John, Moore, Nicholson, Baines, Gill and others equally well known. As a collection of contemporary work it is worth seeing, and the enthusiasm that pervades this show must be as encouraging to the painters as it is to the cause. The exhibition ends on December 24.

•

At Knoedler's, 15 Old Bond Street, there is the Winterhalter Loan Exhibition. Winterhalter's work, done mostly about the middle of the 19th century, is that of the court painter par excellence. All his sitters were of the court, all were viewed with the eye of flattery, and one cannot help feeling that a greater artist would not, even under those conditions, have lost his personality so completely and become to all intents and purposes a court photographer. Nevertheless some of the pictures are very charming and should be seen as a historical commentary.

This seems to be an extremely popular exhibition.

•

The Mayor Gallery, Cork Street, covers a wide range, Paul Klee, Joan Miró, Roy de Maistre, Graham Sutherland, Keith Baines, Georges Rouault and Duncan Grant.

To those to whom Surrealism and abstract art do not appeal I would suggest an immediate ascent to the comparative safety of the first floor, but they will be missing some of the best work of its kind.

•

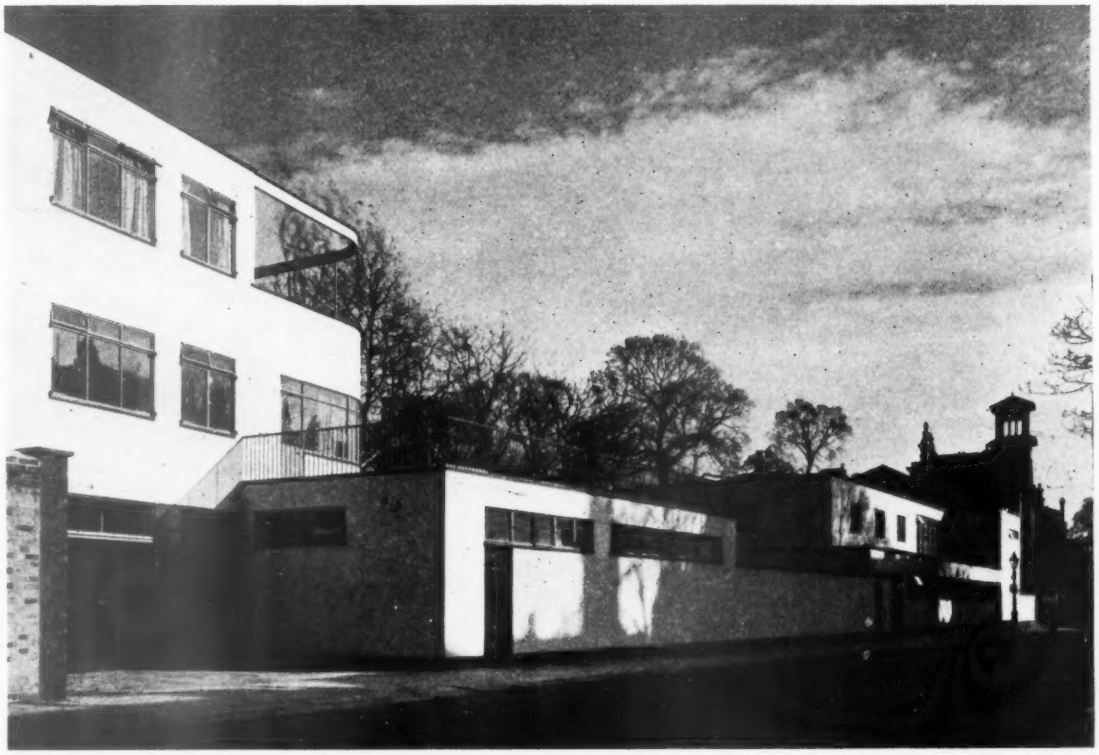
There is also an Exhibition containing some fine examples of late nineteenth century French painting at the Leicester Galleries.

The Wilderstein Gallery, 147 New Bond Street, are showing the work of Ethel Walker.

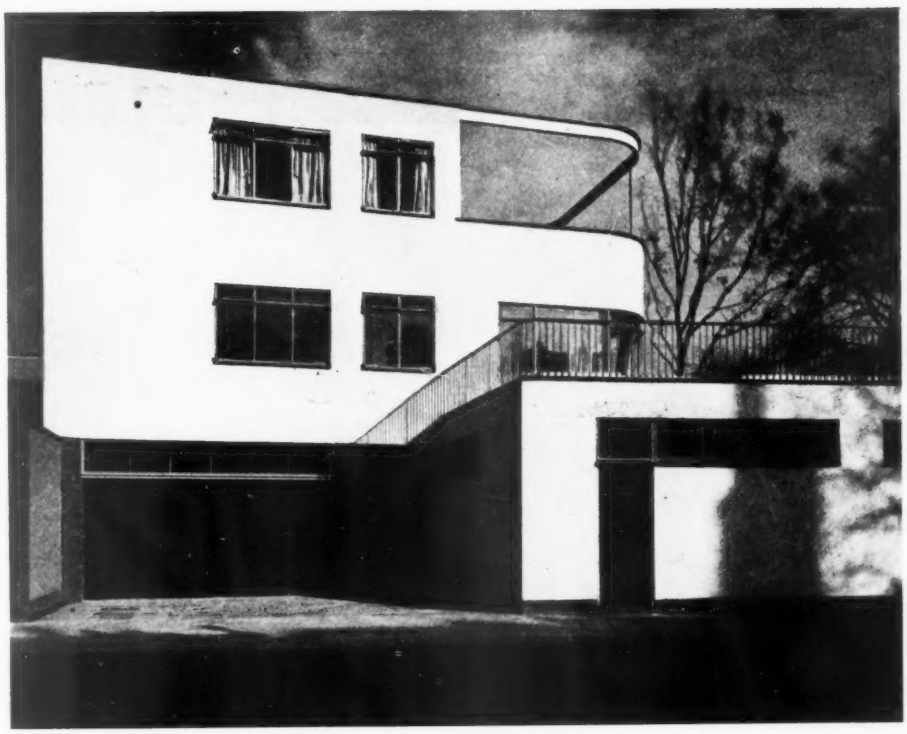
At Colnaghi's, 144 New Bond Street, Drawings by old masters.

D. COSENS

TWO HOUSES IN CHURCH STREET, CHELSEA



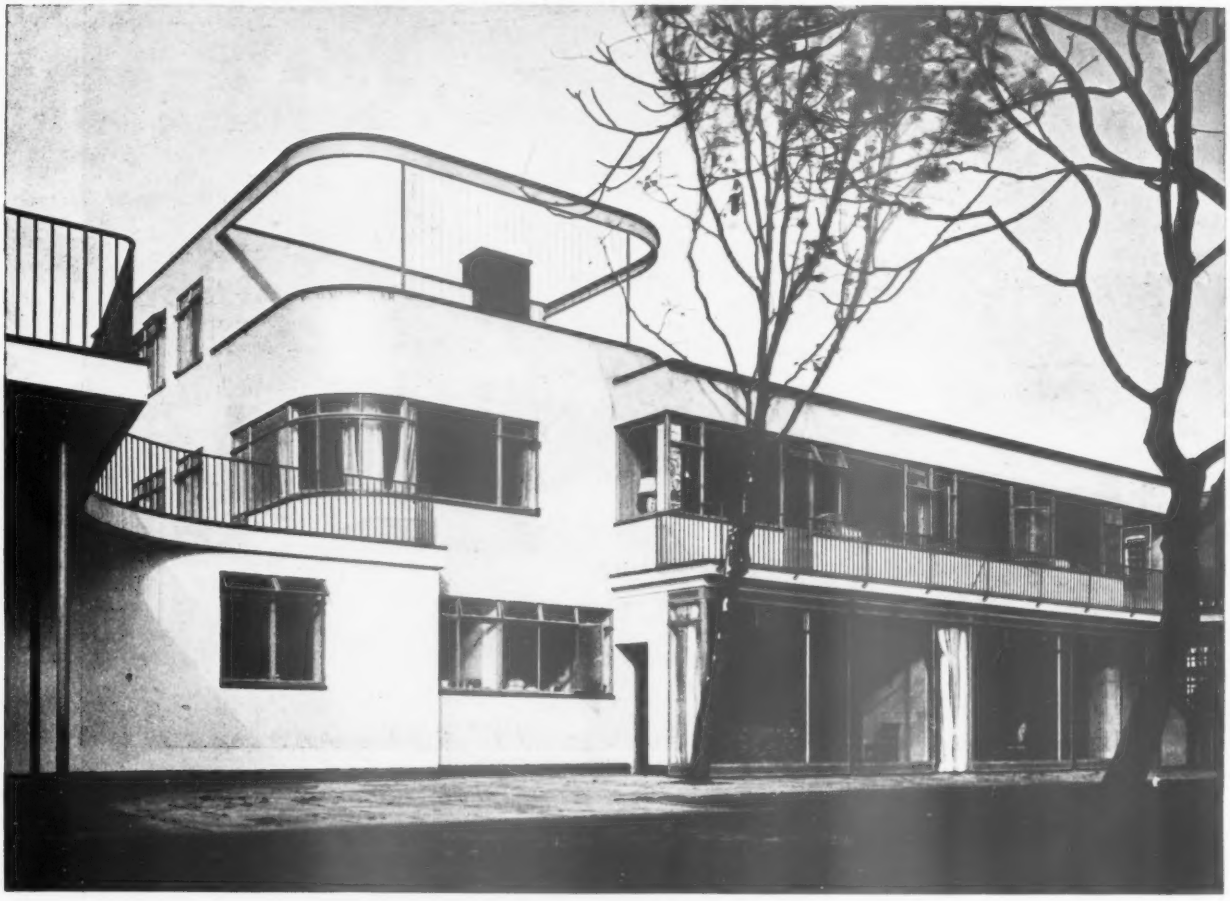
1: DESIGNED BY WALTER GROPIUS AND E. MAXWELL FRY



GENERAL PROBLEM—*House to provide accommodation for parents, three children, a butler and two or three maid-servants. It is built close to the pavement on the west to obtain a maximum amount of garden. In order to face the living-rooms on to the garden on the south it was necessary to plan the house with its length at right-angles to the road, and to place the entrance on a narrow side of the house.*

The photographs show : bottom, the Church Street front ; top, a view of both houses, the one beyond and adjoining is by Mendelsohn and Chermayeff, and is illustrated on pages 872-874.

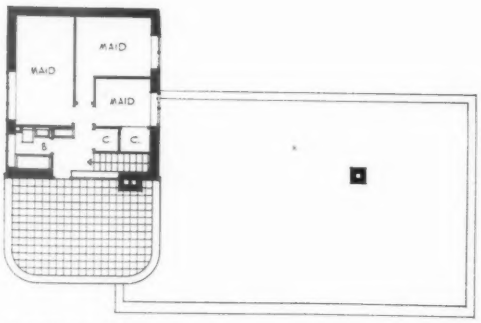
TWO HOUSES IN CHURCH STREET, CHELSEA. 1:



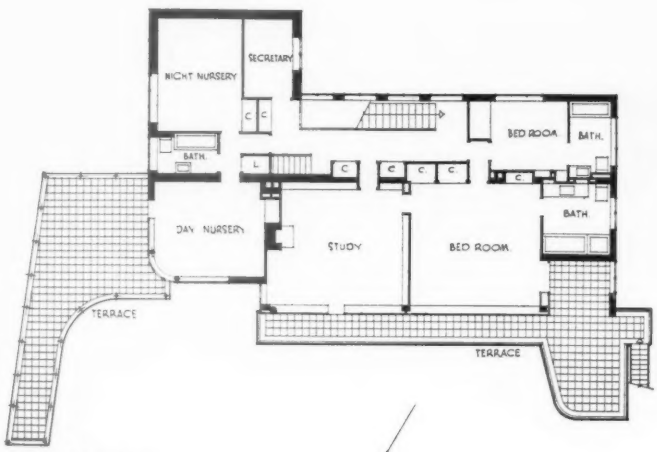
CONSTRUCTION—*Brick walls, partly with steel frame, with balconies in reinforced concrete. Walls are 9 in. and 14 in. brickwork, and partitions are 2 in. pumice concrete blocks. The roof is R.C. hollow tile finished with 2 in. cork slabs and 3-ply bituminous felt with gravel surface. Floors are hollow tile finished with lino. on screed, or teak, or carpet. Windows are: dining-room and living-room sliding metal windows, elsewhere metal casement windows with opening top lights. Doors are flush wood, painted; or veneered in pear, sycamore, or Australian silky oak. The partitions are insulated by lining with wallboard. External finish is a special rendering mixed with mica.*

The photographs show: above, the south garden front; left, detail of the south front

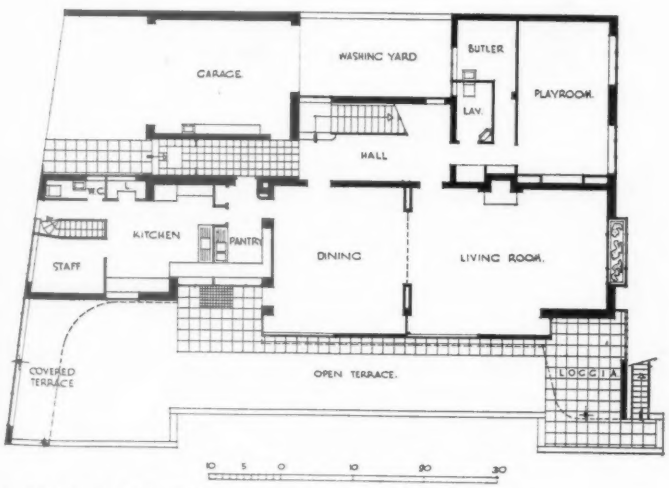
BY WALTER GROPIUS AND E. MAXWELL FRY



ROOF PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

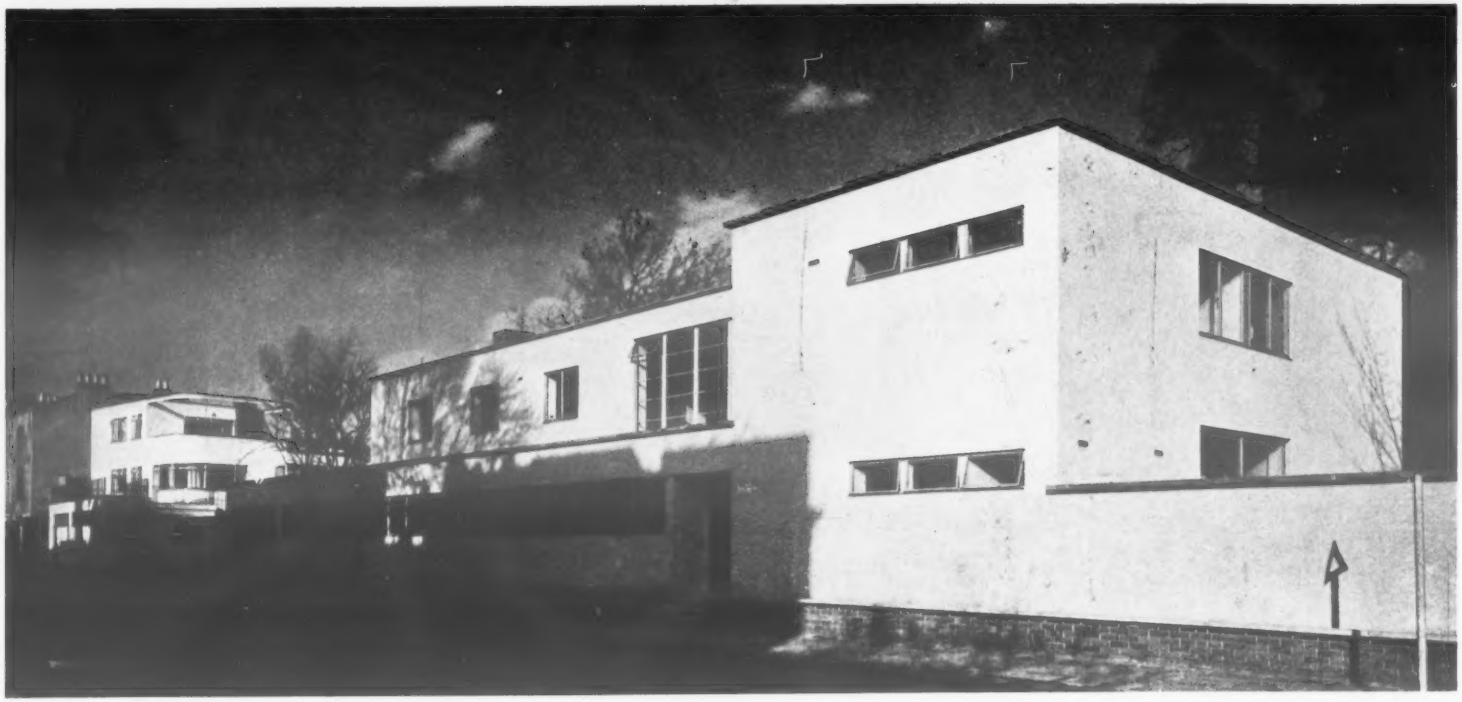
INTERNAL FINISH—*The walls are plaster, distempered, and panelling is in sycamore and Australian silky oak. The built-in deal cupboards and wardrobes are partly veneered in sycamore or Australian silky oak.*

SERVICES—*Heating is by low temperature panels in ceilings. The electric light fittings are of standard round pattern. Some of the lighting is indirect.*

For list of general and sub-contractors see page 888.

The photograph is of the upper part of the hall taken at first-floor level.

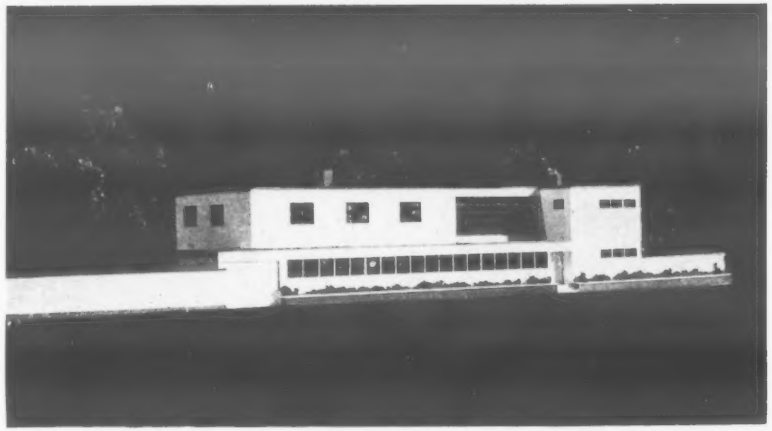
TWO HOUSES IN CHURCH STREET, CHELSEA

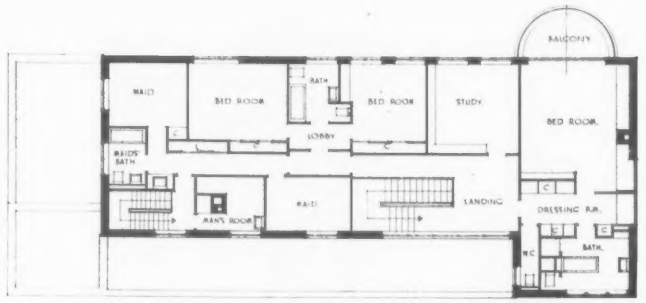


GENERAL PROBLEM — *The service rooms are planned on the street front and living-rooms face a garden on the east and loggia on the south. The accommodation includes a squash court, with its playing floor below ground-floor level, so that an extension to the dining-room becomes a spectators' gallery for the court.*

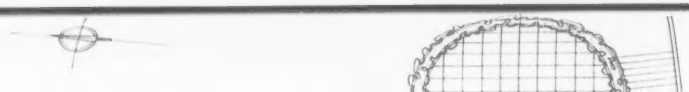
The photographs show : left, the Church Street front, looking towards the adjoining house by Walter Gropius and Maxwell Fry ; below, a view of the same front of a preliminary model.

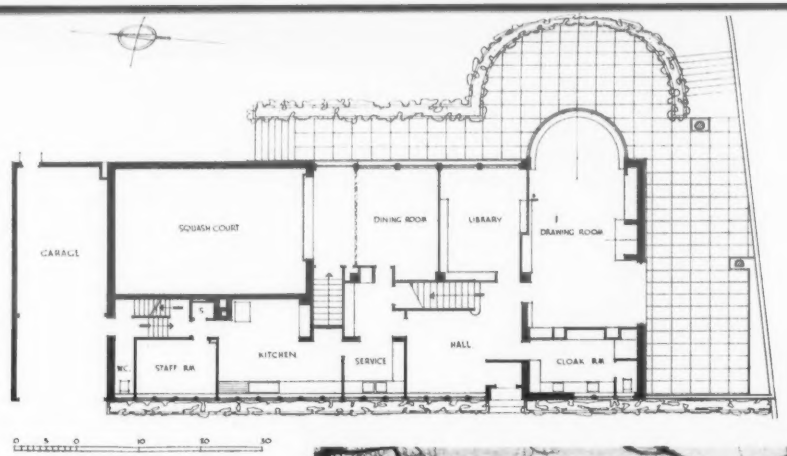
2 : BY MENDELSOHN AND CHERMAYEFF





FIRST FLOOR PLAN





GROUND FLOOR PLAN

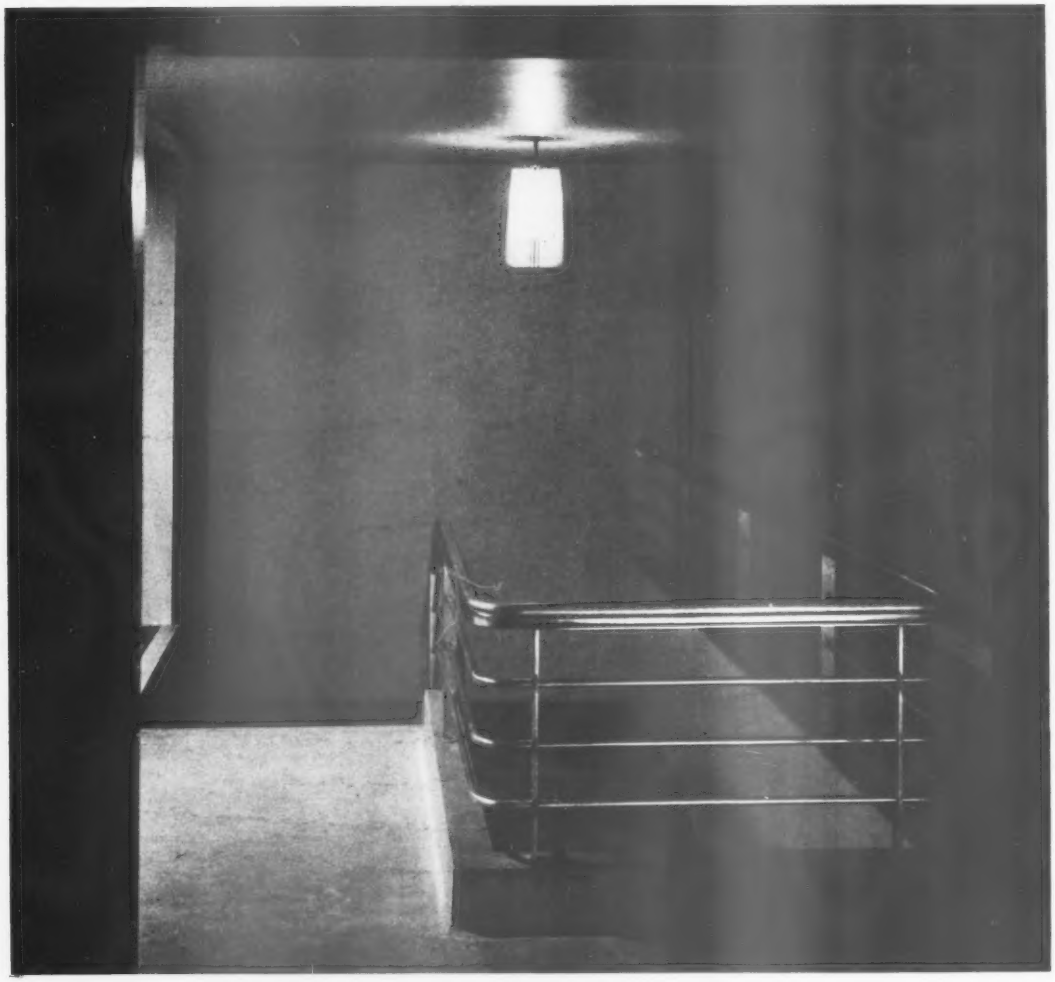
CONSTRUCTION — *External walls are brick with internal steel stanchions ; floors and roof steel-framed with hollow tile filling; and partitions are 2 ins. and 3 ins. pumice concrete blocks and 4½ ins. brick. External walls are insulated by an air space. Internal partitions are insulated with insulation board or with 2 ins. cork on pumice concrete block and brick ; roof 2 ins. cork. The roof is steel and hollow tile, screeded to falls, with asphalt finish. Floors are hollow tile ; maple, birch, teak strip flooring on fillets; jointless flooring; and marble. Windows are steel frame ; friction pivot casements, sliding casements, sliding and folding casements. Doors are solid, flush, in steel trim or veneered wood linings.*

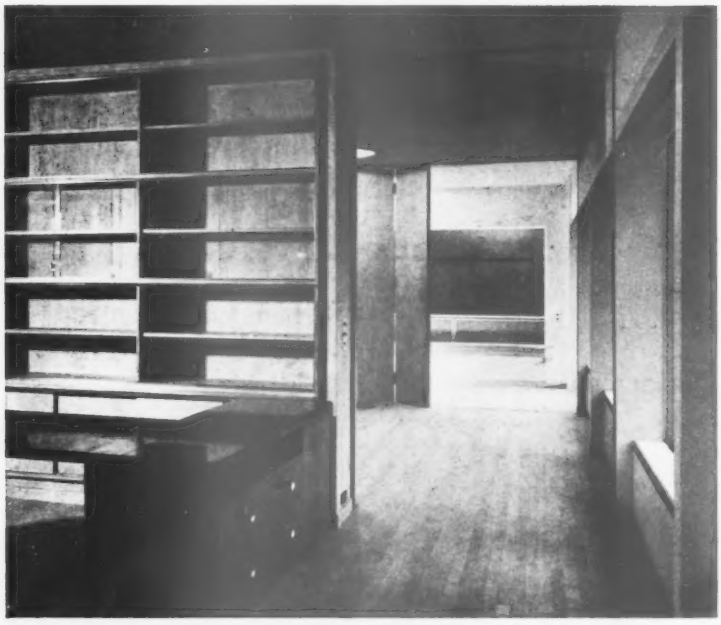
EXTERNAL FINISH — *Walls rendered white ; dark brick plinth ; dark and white reconstructed stone copings.*

The photographs show a view of the garden front of the model, and the garden front.

For list of general and sub-contractors, see page 888.

TWO HOUSES IN CHURCH STREET, CHELSEA





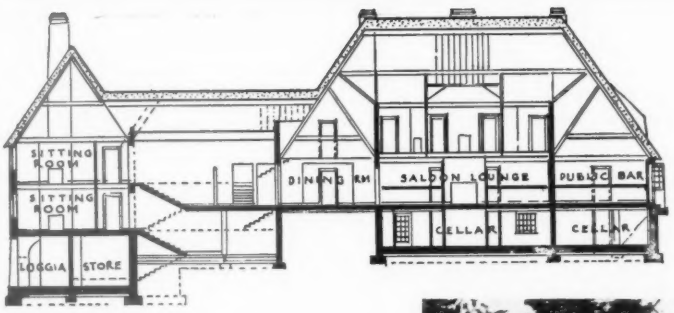
2: BY MENDELSOHN AND CHERMAYEFF

INTERNAL FINISH—*Walls, plaster painted; sycamore and pearwood panelling. The built-in cupboards, wardrobes, dressing-tables, sideboard, showcases are deal and birch: painted and waxed; sycamore: sycamore and mahogany lining, waxed; pearwood: bleached pearwood and mahogany lining, waxed.*

SERVICES—*Heating is on the low-pressure accelerated hot-water system, coke fired boiler; hot water radiators and ceiling panels. Lighting is by electricity; direct, indirect, semi-direct and spotlights.*

Above, the staircase landing; left, looking from the library through the dining-room to the squash court.

THE DRUM INN, COCKINGTON



CROSS SECTION

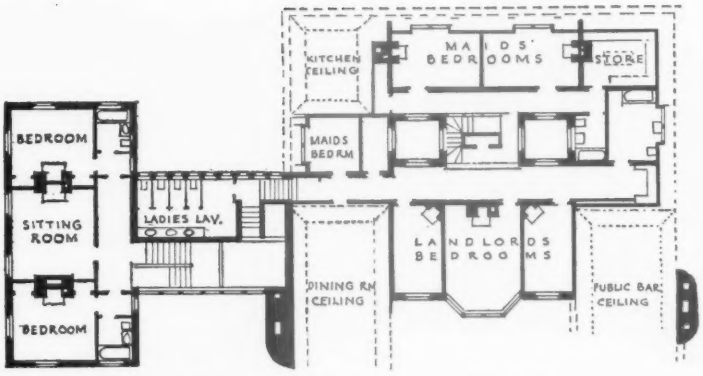
DESIGNED BY SIR EDWIN LUTYENS, R.A.

SITE—*At Cockington, Devonshire, an old village of russet-colour thatched cottages set among trees.*

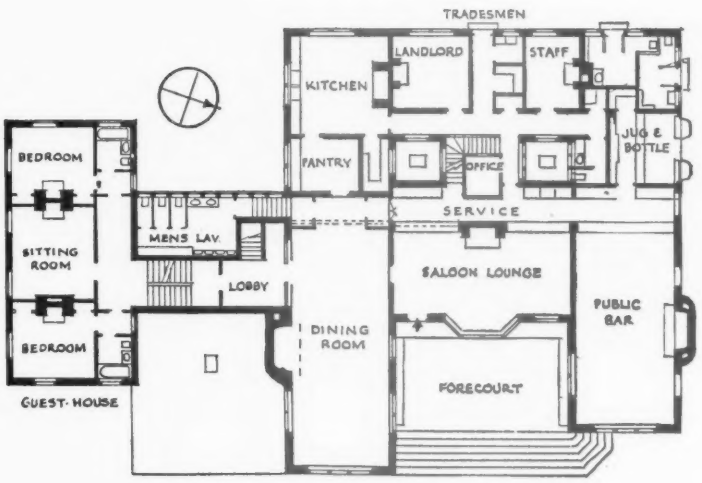
CONSTRUCTION—*The walls are brick, finished externally with a brick base, and rendered in white cement above. The roof is of thatch, made fire- and vermin-resisting. The terrace and steps are stone.*

The photographs show two views of the exterior.

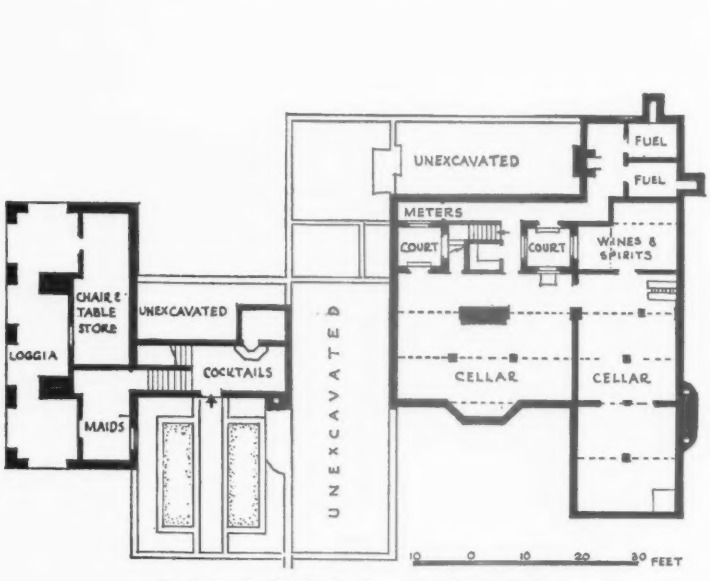
THE DRUM INN, COCKINGTON: DE



FIRST FLOOR PLAN



GROUND FLOOR PLAN



BASEMENT PLAN

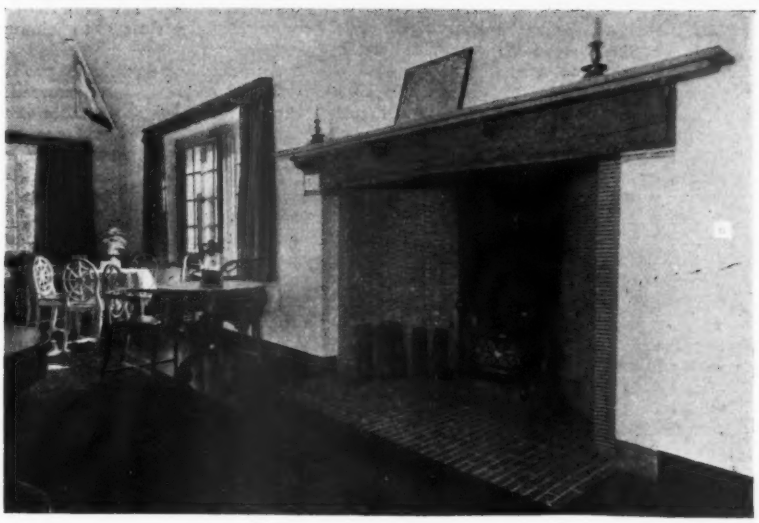
The photographs show: top, the first-floor landing with, on the right the main staircase and, at the end the door leading to the subsidiary staircase down to the dining-room; below, the public bar.

DESIGNED BY SIR EDWIN LUTYENS, R.A.

INTERNAL FINISH—*The furniture in all the public rooms has been designed by the architect. In the saloon lounge, colour prints and grey mirror glass form the decoration on the end wall, the mirror glass being repeated in the surrounds to the bars. In the dining-room the colour scheme is orange vermilion, and the circular-back chairs are ash. In the public bar the counter is mahogany, the furniture natural oak. In the dining-room and in the public bar the light fittings on the exposed hip rafters are designed as heraldic beasts, painted in bright colours.*

For list of general and sub-contractors see page 889.

The photographs show: top, the saloon lounge; top right, the fire-place in the saloon lounge; bottom, a general view of the dining-room taken from the doors leading to the saloon lounge; right, the fire-place in the dining-room.



IN THAT CONTINGENCY

The following abstracts of inquiries represent a number of those recently submitted to the Building Research Station. The information given in the replies quoted is based on available knowledge. It has to be borne in mind that further scientific investigations may in the course of time indicate directions in which the replies might be supplemented or modified. Moreover, the replies relate to the specific subject of each inquiry, and are not necessarily suitable for general application to all similar problems.

Dampness in New Buildings

¶ A LARGE number of inquiries are received at the Building Research Station regarding dampness in new buildings. In many cases it is incorrectly supposed that the dampness is due to direct penetration from outside, or to some hygroscopic material in the plaster. Frequently it is due to condensation of moisture. A particular example is provided by a group of buildings, examined recently, in which trouble of the above type had occurred. The buildings formed part of an estate consisting of small blocks of flats, and it was stated that those in which there was dampness had been built during rainy weather.

The buildings were of two floors, the external walls being constructed with 9-in. solid brickwork, some areas of which were rendered externally. All the floors were of concrete construction. Open fireplaces were provided in the living rooms, and small panel gas fires in the bedrooms.

Dampness was worst in the external walls, but partitions also showed signs of it. The ceilings were dry. Both rendered and unrendered walls were affected. Mould growth was visible on the backs of pictures, and on furniture which was placed near the walls. The dampness was worse in the bedrooms than in the living-rooms or kitchens. Some of the walls had been replastered with a different plaster in the hope of curing the trouble, but no beneficial results had ensued.

In considering the origin of the dampness the following possibilities had to be borne in mind :—

(*a*) Damp penetration from outside ;
(*b*) The presence of hygroscopic salts in plastering ;
(*c*) Normal drying out ;
(*d*) Condensation.

To discuss these in order :—

(*a*) It is unlikely that penetration of damp was the cause, for no definite signs of it were observed, although with solid brick walls of the type used there can be no assurance that under conditions of heavy driving rain damp penetration will not occur.

(*b*) The presence of hygroscopic salts in plastering can be ruled out for the dampness does not occur in ceilings and moreover occurs irrespective of the type of plaster used.

(*c*) Normal drying out is probably a factor, for the dampness was greatest in the flats built in extremely wet weather. The amount of water in the building is therefore greater than usual. In addition, some of these flats were rendered externally and most of the drying out in these buildings would take place internally. The use of concrete in floor construction would increase the amount of water in the structure. All this conduces to high humidity of the air in the building, a condition favourable to condensation, which falls next to be discussed.

(*d*) The air in a flat and especially in rooms infrequently used tends to become stagnant. The staircase of the ordinary house assists in preventing stagnation. It is noticeable that the rooms most frequently used—kitchens and living-rooms—are not so badly affected as the bedrooms. The appearance of the gas fires in the bedrooms indicated that they were rarely used, so that the only real heating in the flats is afforded by the living-room fireplace. None of the external walls was heated. The concrete floors and solid walls, in some cases with cement undercoats to plastering, are factors to be considered in connection with the possibility of condensation.

Condensation occurs when moist air is brought into contact with a cold surface. If the surface is dry and absorbent the condensation may not be apparent as it will for a time be absorbed as quickly as it is formed.

Two types of condensation may take place on wall surfaces. These for convenience are termed *permanent* and *temporary* condensation. Permanent condensation occurs when the outside air is colder than that inside, and the latter is humid. The amount of moisture deposited upon the walls and the speed with which condensation occurs, after a fall in the external temperature, are governed by the ability of the walls to resist transfer of heat. Thus a wall of high heat conductivity will be liable to heavier condensation and be more sensitive to quick changes in atmospheric temperature than one of lower conductivity. Temporary condensation occurs when walls have been cooled by a spell of cold weather and a sudden rise of temperature takes place unaccompanied by any corresponding fall of humidity. The heat capacity of the wall is the governing factor in this case. A wall which can be quickly heated or cooled will be less liable to this form of condensation than one which responds only slowly to change of air temperature.

In this particular case, probably both forms of condensation occurred, but the primary cause of the trouble was that the walls still contained a large quantity of water introduced during erection. The effects of the water are: first, to increase considerably their heat conductivity, thus increasing their liability to permanent condensation ; secondly, to increase their heat capacity, thus increasing their liability to temporary condensation. In addition, wet walls naturally absorb less moisture than dry walls, which makes the condensation more apparent. Hard impervious plaster also renders condensation more evident and lack of heat and ventilation prevents rapid drying.

It was thought that a thorough drying out of the flats would probably be a cure for the permanent condensation and would decrease liability to temporary condensation, though the latter is common to most buildings unless they are kept warm by some form of heating. Drying may be expedited by keeping doors and windows open as much as possible and by lighting fires. In unoccupied houses coke braziers are very effective, provided there is good ventilation while the heating is used.

It should be mentioned, however, that modifications could be made in the construction of future buildings to give security from this trouble. Cavity walls require less drying than solid walls and are more effective in respect of heat insulation. Plastering with a gauged lime undercoat and finish, or two coats of gypsum wall plaster would be more absorbent and provide better insulation than a dense coat of cement and sand finished in gypsum cement.

Paint and Plaster Failure

¶ *An architect reported that considerable trouble had been caused by failure of plaster on the walls of a cinema. The finishing coat of a neat calcium sulphate plaster had parted from the backing consisting of a sanded mix of the same plaster. The work had been carried out under bad weather conditions ; severe frost and wet weather had occurred during the progress of the work, and the plasterers reported that some parts had obviously been affected by frost. Braziers were introduced to prevent damage. Samples of the plaster showed further that disintegration of the paint had occurred.*

The failure experienced appears to be of a two-fold nature. In the cases where the finishing coat of plaster has left the backing there can be little doubt that the surface of the undercoat had become friable and this caused lack of adhesion. This friability, though possibly due to the action of frost, might also have been caused by extremely wet conditions. Other plaster samples appear to be quite sound except for slight disintegration at the surface of the finishing coat.

The other failure is not primarily a plaster failure, but has been caused by premature decoration. From the description of the conditions under which the work was carried out, it is obvious that all walls must have contained a large amount of moisture when the impervious paint was applied. This has arrested the natural drying out process and moisture has collected behind the decoration. This moisture has caused disintegration of the plaster surface with consequent failure in the adhesion of the paint and also disintegration of the paint itself. In addition, moisture would tend to push the decoration from the plaster or, if it contained salts dissolved from bricks or other materials, it might deposit them in the form of an efflorescence at the plaster surface with a similar effect.

Where the plaster is sound, there appears to be no reason to think that further decoration might not be safely applied as presumably the walls have completely dried out. Neither slight disintegration of the plaster surface nor the presence of small quantities of salt crystals are necessarily signs that the plaster is unsuitable for decoration, but all loose plaster, paint and all efflorescence should be carefully brushed from the walls before further decoration is commenced.

The Architects' Journal Library of Planning

SHOPS

Windows and Signs

[By Bryan Westwood and Norman Westwood]

The Façade

HAVING dealt with the general layout of the shop plan in our previous article, we now proceed to the next element, the façade.

Windows

Unless a special effect is required necessitating the use of very small panes of glass, ¼-in. plate is almost standard for glazing. (In their own interests, and also on account of insurance companies' requirements, jewellers' shops must have ½-in. or thicker glass.) The largest practical size is 250 sq. ft. It is not generally necessary to provide glazing bars for structural reasons, hence the use of slips and cement for joining sheets rather than glazing bars which distract attention.

Frames should be of non-corrodible metal, lined with felt and large enough to allow for expansion and contraction. Glazing should be carried out from the outside because plates can be unloaded and placed straight in position, and renewals do not necessitate clearing the windows. Beads should have a good cant outwards to throw off water.

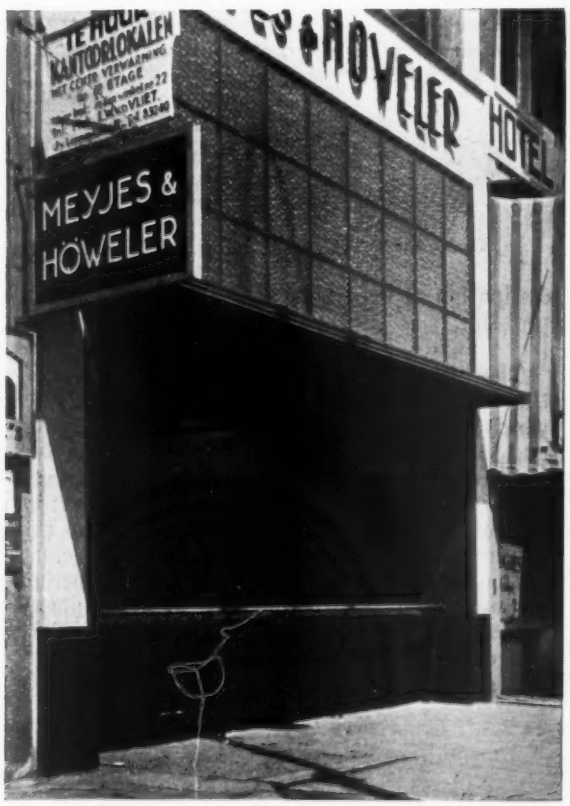
Straight windows are not only desirable because they are cheaper, but also because they are not so liable to acute reflection and are easier to replace. It should be borne in mind that it is not so much the expense of replacements which is troublesome as the delay in making special curved sheets and the higher insurance charges.

Non-Reflecting Windows

The curved non-reflecting window, although it obviates reflections and seems to intensify the colouring of articles displayed and gives generally greater "sparkle," has only met with partial success for various reasons. But it is particularly suitable for large premises such as motor showrooms, where the goods can be inspected very clearly even though they are far from the window. In smaller windows the absence of reflections is not noticed to the same extent, and shopkeepers object to the necessity of keeping goods back from the building line as they cannot be seen until the passer-by is almost opposite the window.

The pocket in the base of the window necessitated by the dark baffles is an obvious disadvantage. These defects are mitigated to a certain extent by the newer type of window using straight glass only, having no pocket in front and having splayed mirrors at the sides in which the goods are reflected towards the passer-by long before he is actually in front of the shop.

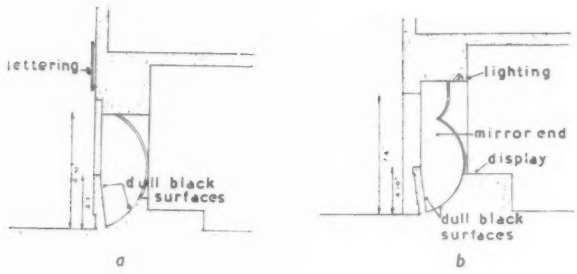
The only other method of eliminating reflections is to light the windows artificially to such a high intensity that reflections are not apparent. This is done in America; but cost is very high even there and quite prohibitive here, whilst the



Above, a dress shop in Berlin, designed by O. R. Salvisberg; an example of first-floor windows used for display. Right, a cycle accessories shop in Amsterdam with a grey granite plinth, R.C. hood with granite aggregate bush-hammered finish, bronze guard-rail and supports and end walls of painted stucco.

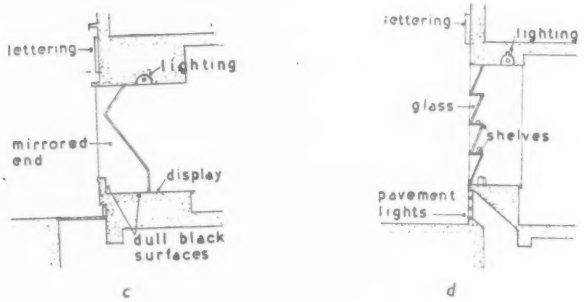
(*a*) Original form of non-reflecting window.

(*b*) Later development which reduces the depth required for the window, thus bringing the display nearer the street and making it more visible to the approaching customer.



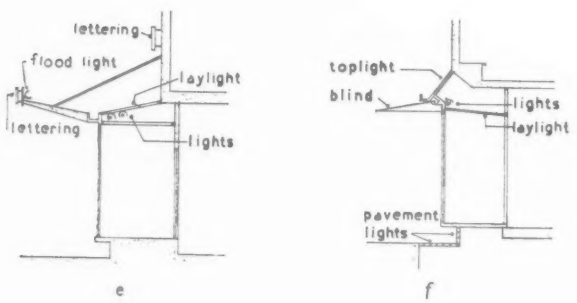
(*c*) The latest development of non-reflecting window design which has only been used, up till now, in two or three shops. By avoiding curved glass it reduces cost by approximately 60 per cent.

(*d*) Shelves with dull black surfaces underneath and sloping glass combine display and non-reflecting properties. Suitable for bakers' or confectioners' shops.



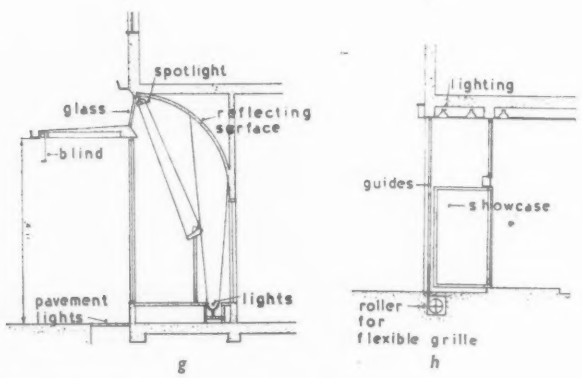
(*e*) The diagram shows a scheme where a solid canopy has been projected over the pavement whilst the top of the show window is formed by a lay-light. This arrangement gives brilliant natural light to the window.

(*f*) A similar principle to (*e*) but achieved by means of a sun-blind instead of a canopy. Note that the top light is used to light both the window and the shop.



(*g*) A section through the new show windows of Peter Jones's shop, showing interesting lighting arrangements by day and night.

(*h*) Scheme where flexible grille, for use at night, is placed below ground level.



Various types of modern developments in window treatment.

dissipation of heat from the lamps is a difficult problem.

Condensation

The main principle to be observed is to keep the atmosphere on both sides of the glass as nearly as possible at the same state of humidity and temperature. Placing radiators near the window enclosures should be avoided and care taken to ventilate the tops of the lamp reflectors so that at least part of the air escapes from the window enclosure.

In most shops it is not necessary to take further precautions, but in restaurants or other places where warm damp air is unavoidable the only real cure is to seal the windows from the shop and allow filtered air from outside to circulate freely within. Mechanical ventilation, heated glass and dry air streams across the glass, have all been tried, but they are palliatives rather than cures.

Glass Data

Polished Glass

(*a*) Usual quality for shop windows GG.

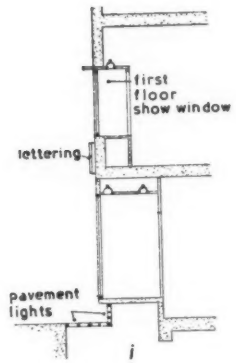
(*b*) Thickness, $\frac{1}{4}$ in. usual—minimum $\frac{1}{8}$ in., maximum $1\frac{1}{2}$ in.

(*c*) Weight—$\frac{1}{4}$ in. weighs c. $3\frac{1}{2}$ lbs. per sq. ft.

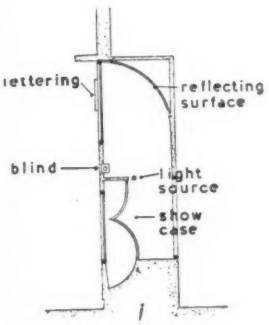
(*d*) Cost—Rapidly increases as superficial area is increased, e.g. :—

10 ft. by 14 ft.—7s. 6d. per ft. super, supplied and fixed.

10 ft. by 10 ft.—5s. 9d. per ft. super, supplied and fixed.



i: First floor show window for use in streets on bus routes, etc. Now generally considered unsatisfactory.



j: Diagram of principle used in a shoe shop at Ealing by Clive Entwistle. The showcases fronting on the street are lit during daytime both directly and also by light which, entering the continuous window above the fascia, is reflected downwards from its curved and polished inner surface. Displays are thus amply lighted during daylight without artificial aid. At night the showcases are illuminated from behind the fascia immediately over them, and this light, filtering upwards, also illuminates the surface behind the upper window; thus the whole front is efficiently lighted from the showcases alone.

An example of the use of straight non-reflecting glazing combined with mirrors.

6 ft. by 3 ft.—3s. 6d. per ft. super, supplied and fixed.

It will be noted that if the maximum size listed, viz., 250 sq. ft., were used the price would be prohibitive for any ordinary shopkeeper.

(*e*) Sand blasting or acid processes.

Prices vary from about 3s. to 7s. 6d. per ft. super, according to the work necessary.

WINDOW DATA

Type of Shop	Average Dimensions		Notes
	Depth	Height from Pavement	
Tailor's shop ...	3′–5′	1′ 6″	Should be two types: (1) Low window for display of overcoats, etc. (2) High window for ties, gloves, etc.
Jewellery shop ...	1′ 8″–3′ 0″	3′ 6″–4′ 0″	Non-reflecting window. Provision for metal grilles.
Furniture shop ...	10′ 0″	6″	No necessity for a permanent back to window.
Car showrooms ...	10′ 0″	Level with Pavement	Open into showrooms. Non-reflecting windows. Provision should be made for some small showcases for spare parts.
Ironmonger's shop	2′ 6″–3′ 0″ 6′ 0″	2′ 6″ 1′ 0″	Two types. No need for a background for second type.
Flower shop ...	3′ 0″–5′ 0″	1′ 0″–2′ 6″	Window should be terraced towards back and constructed of tile or marble with drain for water. Efficient shelter from sun.
Book shop ...	2′ 0″–3′ 6″	2′ 6″	Fitted with adjustable shelves.
Shoe shop ...	3′ 0″–5′ 0″	2′ 6″–4′ 0″	Usual to form an arcade with showcases. Small showcases for special models are desirable.
Baker's or confectioner's shop.	1′ 8″–3′ 0″	2′ 6″	Glass background usually of sliding panels. Adequate protection from sun.
Grocer's shop ...	3′ 0″–6′ 0″	1′ 9″–2′ 6″	Terraced tile: drainage. No background.

Pavement Lights

Pavement and stallboard lights have been used in this country for about sixty years, to admit light into basements.

There are two types—

(a) *Lenses in Cast Iron Frames*

This was the first type, and is now not as much used as type (*b*), because of corrosion and

damage to the metal frame. In spite of this drawback, and also higher upkeep costs, these frames still have to be used in some districts, owing to municipal restrictions, and sections are shown in diagram (*a*). Prismatic lenses of the type shown are commonly used.

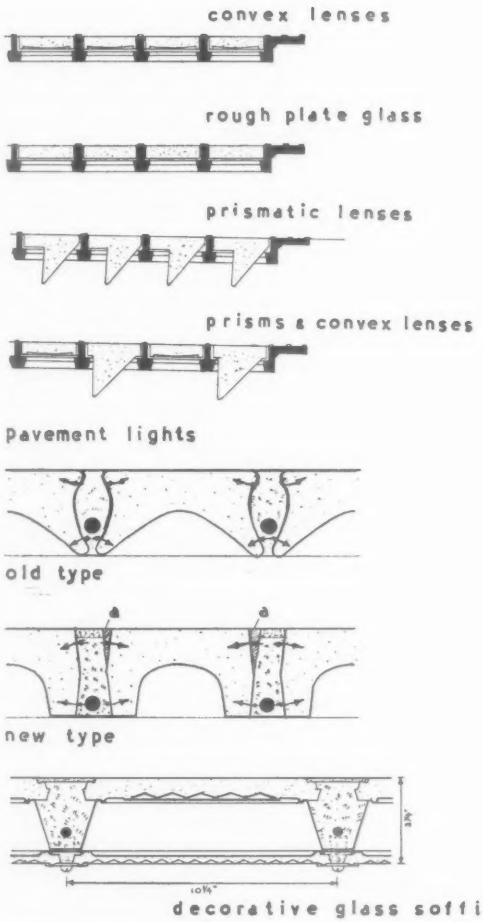
(b) *Lenses in Reinforced Concrete Frames*

Advantage—frame withstands shock better than cast iron, and owing to the coefficient of expansion of glass and concrete being similar, less strain is likely to result. The whole unit does not expand and contract as much as the cast iron one, whilst leakage is not so likely to occur at the junction of the frame and the general building structure.

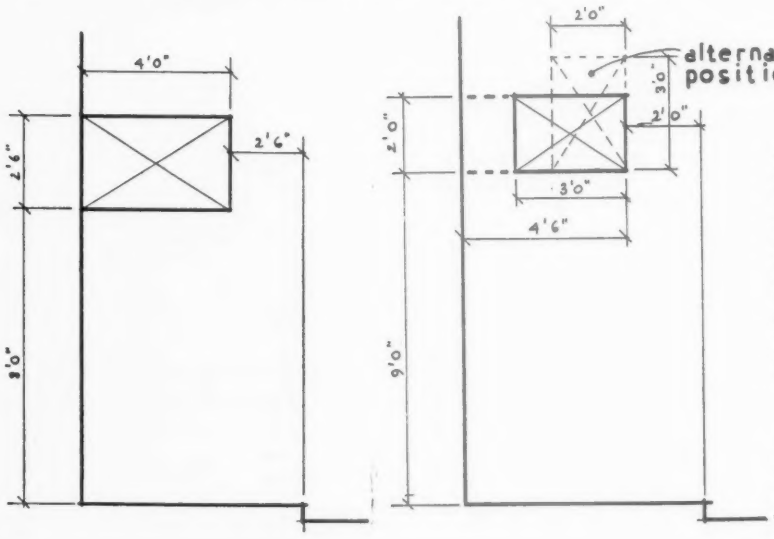
Much improvement has been made in the quality of the glass and design of the lenses themselves. Formerly, white glass was universally used, but since the introduction of concrete lights, highly resistant lenses have come into favour. The natural colour of the glass, to its advantage, is not removed, and after casting it is carefully annealed. The resultant glass is proof against lamination and disintegration.

The sectional shape of the lens has been evolved to combine properties of strength, lightness and easy replacement. The arrows on the diagrams show the direction of the stresses set up. In the later type of lens these tend towards the centre, and the lens is less likely to be broken. The earlier sections necessitated breaking the concrete frame in order to extract the broken light, but as shown on the diagrams, the latest type can easily be replaced without serious damage or difficulty. The standard sizes of these lenses are 4-in., 6-in. and 8-in. square.

A further development is the use of double glazed construction, as shown in diagram (*c*). soffit lenses of decorative glass are used to make an attractive ceiling without the use of laylights.



(*a*) Types of lenses in iron frames.
(*b*) Lenses in reinforced concrete frames. The arrows show the directions of stresses set up by longitudinal pressure. In the later type these tend towards the centre of the lense and lessen likelihood of breakage. The shaded portion (*a*) is all that needs to be removed in order to effect renewals. (*c*) Method of treating soffit. Decorative glass lenses are used to avoid the use of a laylight while still giving a satisfactory appearance below.



The diagrams show the sizes generally permitted in London, but each case has to be considered on its merits. Widths, parallel to the shop front, are also controlled. Usually the best procedure is to submit drawings of the design, as desired, to the authority concerned, and then make modifications if necessary. In the L.C.C. area applications are made under Section 164 of the London Building Act, 1894, whilst in the City the Public Health Department of the Corporation is the authority concerned. It is quite impossible for the ordinary architect to keep pace with the detailed rules which are continually being changed.

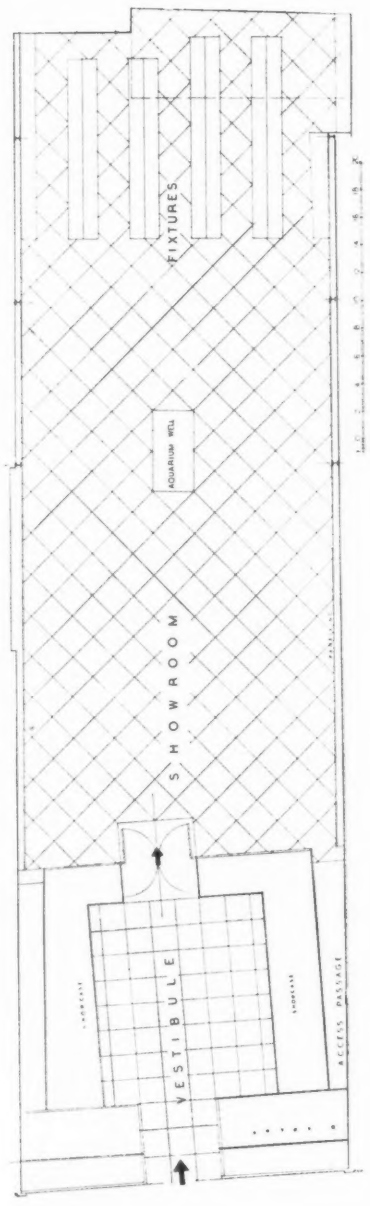
Notes

Sometimes a secondary means of support is required.

Maximum weight is a controlling factor in some cases.

It is important to remember that maximum projection is measured from the building line and not from the front face of any projecting band or other "architectural feature."

SHOPS SHOE SHOP AT EALING • By Clive Entwhistle



The requirements asked for were a large amount of show space, readily accessible storage and a large area, unobstructed by shelving, where customers might sit while choosing shoes. Shop is single-floored with a two-floored stock room.

Steel girders and wood joists carry laylights and roof ; remainder of constructional work being only fixings for front and decorative treatment.

The shop front plinth is of black granite and the stallboards and fascia of bronze-veneered plywood, butt-jointed and sealed behind with bituminous strip, and secured with aluminium rivets. The showcase windows are of the non-reflecting type. The blind-lath and glazing frames are of bronze, the cornice of stainless steel, satin-finished, and the curved reflecting surface of anodized aluminium. A battened catwalk behind the fascia allows the upper window and the reflector to be easily cleaned.

The design of this shop front is further described in the accompanying article.

Signs

Detailed information on signs is contained in the *Digest of Laws, Bye-laws and Regulations governing erection and retention of advertising signs, etc.*, published by the Master Sign-makers' Association, 1933.

They are controlled by: Metropolitan Police Act, 1839; Town Police Clauses Act, 1847; Towns Improvement Act, 1847; (Structure) Public Health Act, 1925; (Disfigurement) Advertisement Town and Country Planning Act, 1934. Below are a few examples taken at random showing the type of restriction which is in force in different towns:—

Town	Projection	Height above Pavement	Remarks
Accrington	3′ 0″	9′ 0″	
Aylesbury	3′ 0″	8′ 0″	
Birmingham	3′ 0″	8′ 0″	Illum. only
Blackburn	3′ 6″	8′ 6″	
Blackpool	2′ 0″	8′ 0″	
Bournemouth	—	8′ 0″	The Corporation do not approve of sky signs
Carlisle	4′ 0″	10′ 0″	
Chichester	8′ 0″	8′ 0″	
Colchester	18″ from kerb	9′ 0″	
London—			
City	2′ 0″ from kerb 4′ 6″ max. roof	9′ 0″	No flashing
County	2′ 6″ from kerb 4′ 0″ max. roof	8′ 0″	Various detail requirements, all of which can be waived in special cases
Manchester	3′ 0″ to centre of sign	10′ 0″	
Southampton	2′ 6″	8′ 6″	
Sheffield	3′ 6″	8′ 0″	
Oxford	2′ 0″	9′ 0″	

Heights and projections vary from place to place, but general principles on which regulations are based are as follows:—

Projection.—Either definite maximum given or depends on relation to the edge of pavement or width of street, or sometimes varies with height.

Height.—Varies between 8 ft. and 10 ft., except in few cases—Fowey 18 ft., for ordinary projecting signs. Flashing signs are usually required to be considerably higher (16 ft. to 25 ft.).

Notes

(1) Red or green sometimes prohibited near traffic lights.

(2) Area of signs often limited.

(3) Drawings must be submitted to authorities and landlords.

(4) Swinging signs sometimes prohibited.

(5) Sometimes fees of £1 or £2 are charged annually for each sign.

Types of neon and other signs will be referred to in a later article on electrical equipment.

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(1) Plain block lettering in Neon is very legible and therefore does its job. The metal box is simple and large enough to house the transformer.

(2) This signature is also legible and makes greater use of the possibilities of neon as it does not necessitate blacking out much of the continuous tube.

The background is constructed of black armour plate glass, which has great physical strength and withstands changes of temperature satisfactorily.

(3) This sign is not as legible as the other two, but for its particular purpose it does show a blaze of light which is arresting at night, in spite of the great abundance of signs in the vicinity.

(4) A bronze sign with opal glass letters. The Gothic lettering is not immediately legible but it probably interests the passer-by. It is effective by contrast to its neighbours and gets attention without clamouring for it.

Cover of a brochure produced by Saward, Baker and Co., advertising agents, in three colours. From "Modern Publicity."

L I T E R A T U R E

POWERS OF PERSUASION

[BY JOHN GLOAG]

Modern Publicity, 1936-1937. Edited by F. A. Mercer and W. Gaunt. London: The Studio Limited. Paper wrappers, 7s. 6d. net. Cloth, 10s. 6d. net.

WE shave, we dress, we work, we laugh, we play, accompanied by an orchestra that we never acknowledge, and which many of us never suspect is there, although it is giving a continuous performance. Its theme song is "Night and day, you are the one!" *The* one to ask for, buy, use and recommend one or more of the thousand-and-one things the orchestra is playing about with such subtle, unwearying and non-stop persuasiveness. Unlike the American citizen, the British subject is not critically conscious of the powers of persuasion that surround his life. He will seldom admit that he reads advertisements, although he may unconsciously act upon their promptings.

Architects as a professional class probably observe advertisements more critically than any other section of the public; but they criticize them as experts on design and not as experts on propaganda. A beautifully balanced layout in a press announcement, with type chosen to blend exquisitely with the studied manner of the illustration, and the smooth elegance of the phrasing, may delight an architectural observer: he may even be faintly shocked to find that it is proclaiming the instant relief from incomplete elimination afforded by somebody's pills, tablets or what-not; he may even fail to perceive that this æsthetic gem of typography is advertising anything at all: what he misses is the fact that such an advertisement has been designed by some artistic nitwit to please himself and not to sell goods. Advertisements, whether they are in the form of press announcements, posters, leaflets, booklets, films or broadcast programmes, have a hard-boiled job of work to do; but they haven't got to be blatant, vulgar and strenuously ugly to do it efficiently. First-class advertising has made some unforgettable contributions to the modern movement in design, and has produced designers of the calibre of Ashley Havinden.

Modern Publicity is an annual check-up on international achievements in advertisement design. It has now largely outgrown its early bad habit of including only the pretty-picture-nice-gent's-typography school of advertising, and architects and other design-lovers who look through these pages may find their teeth set on edge by some piece of effective and almost too human appeal. We are shown work from America, Austria, Denmark, France, Germany, Great Britain, Greece, Holland, Hungary, Poland, Spain, Sweden and the U.S.S.R. Two things emerge from this quick, illustrated survey. Firstly: advertising ideas are being translated more and more in realistic terms, generally by photography, not stunt photography, but brilliantly posed and intensely humanized photography. Often photographs are used as a basis for scraper-board drawings, which secure clean and powerful reproduction on coarse newsprint. Secondly: there is a tendency to humanize symbols. The robot, mechanistic phase is fading out; but the symbolic presentation of ideas is gaining strength, at the expense of long "copy."

The people who make advertisements are realists. Quite often the people who employ them as experts are not: for advertising has so long suffered from an amateur status in the trades and professions that trail after commerce. But this book shows what good rousing stuff can be done when experts are trusted to handle a job their own way; and what good taste, too, can be called to the service of selling things. But it should be scrutinized, not for its agreeableness as a collection of designs, but as a series of problems in persuasion, solved effectively.

There are 128 pages, many of them in colour. The editors know how to produce a book that has splendid lucidity. You can find your way about in it quickly, and the index to the contributors is classified and altogether exemplary.

PLACES IN THE COUNTRY

[BY E. H. W. ATKINSON]

Modern Small Country Houses. Edited by Roger Smithells. London. Country Life, Limited. Price 15s.

"THE design of this house was the outcome of the client's wish to have an environment in conformity with the contemporary manner of living." The Editor of *Decoration* has collected here nearly 50 houses, but to how many of them could that opening sentence apply? How much evidence is there of an authentic enduring style emerging? Practically all of the houses illustrated here are very recently-built,

House at Wimbledon Common: the garden front. By F. Halliburton Smith. From "Modern Small Country Houses."

so that such evidence as the book offers is up to date.

On the whole, it is modestly encouraging. Period-pieces abound, of course, whether the aim of building a period-piece is avowed—as in the numerous neo-Georgian efforts that people with a few thousand pounds to spend on building a house so often lean to—or whether it is just present unconsciously—as in the almost as numerous bits of gallimanfry work that have arisen to display little more than the expensive and occasionally ingenious eclecticism of their owners. Fairly enough, since his aim is to show what small country houses built nowadays are like, Mr. Smithells has included these among the rest. But we find no more of a contemporary style among them than arises from a not too discriminating respect for other centuries and countries than this. Fortunately, that respect is becoming a little shaky on its drawing pins. Demands for more light, more air, and severely practical plans have inspired a healthy attack on it. The client must be becoming a little less rare who believes that plain walls need not a barracks make nor vita glass a cage.

But how well is this enlightened client served? About half of the book is concerned with houses that would be called, colloquially, modern. A few—Mr. Yorke's house at Hatfield (which gives rise to the sentence at the beginning of this review), Howe's and Lescaze's "High Cross Hill" at Dartington, Mr. Hill's "Holthanger" at Wentworth, Mr. Checkley's "Thurso House" at Cambridge, notably among

Press advertisement by the Merchandise Mart, Chicago. From "Modern Publicity," reviewed on the preceding page.

them, are thoroughly successful. Most of the others are measurably superior to the kind of thing that might have been built ten or twenty years ago and is still being built today; but sureness, even dexterity, of touch in building up the proportions, in synthesizing exterior with interior, is not always among their principal distinguishing features. Nevertheless, the good work goes on.

The problem of materials, of course, is most serious for the designer of a country house. Mr. Smithells makes reasonable mention of it in his Foreword—the only sentence to which one would take exception in a sound enough piece of quiet advocacy against native conservatism masquerading as æsthetic judgment, is an extraordinary one in which he says that " . . . . there are secluded sites where steel and concrete can be wedded as happily to their surroundings as more traditional materials." Concrete and steel may not be the only wear for country gentlemen, but must they hide from sight under the bushes? Domestic architecture is the last subject on earth, anyway, on which thought or argument should be served up pre-cast.

CHRISTMAS PRESENT FOR PARTNER'S OFFSPRING

Johnny and Marytary. By H. B. Creswell. Illustrated by D. L. Mays. London : Faber & Faber. Price 5s.

MR. CRESWELL has the enviable capability of turning from the drawing board to the author's desk and being more fanciful at his second craft than any architect ever dare be at his first.

Apart from those of his writings which one means no offence in calling grown-up novels, Mr. Creswell is already the author of a children's book about the heroine of this one. He has the most felicitous and imaginative touch possible. The child's book of logic, too, is open to him, so that actions that might otherwise appear capricious are properly explained. He has made this, to borrow a phrase from a child who would enjoy it, " a good book to be read to out of from," and, moreover, he has solved the puzzle of what Christmas present to give one's partner's offspring, or, indeed, one's own. A.

TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Fire Escapes

A NOTE on fire escapes which appeared in this column a few weeks ago has led to a positive spate of leaflets from different manufacturers. Another make, new to me, is produced by the Inaflash Fire Escape Co., of Bromsgrove Road, Birmingham, and is illustrated on the right.

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The device consists of a steel ladder concealed within a case of lead-covered steel, non-rusting ; the ladders are composed of stripped steel, 14 ins. by $\frac{7}{16}$ in. by $\frac{1}{8}$ in., drilled at each end. The side strips or supports are composed of 5 ins. by $\frac{7}{16}$ in. by $\frac{1}{8}$ in. mild steel drilled at each end.

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The complete appliance is held in position by two steel brackets or arms secured under the eaves, with a control wire which holds the folded ladder in either a vertical or horizontal position when not in use. This wire is operated by a push or pull knob within the room, thus immediately releasing the ladder.

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The steel used in the construction of the ladder is sherardized, and adjacent surfaces are held apart by sherardized brass washers and collars, thus eliminating the possibility of the ladder rusting up and refusing to open when released.

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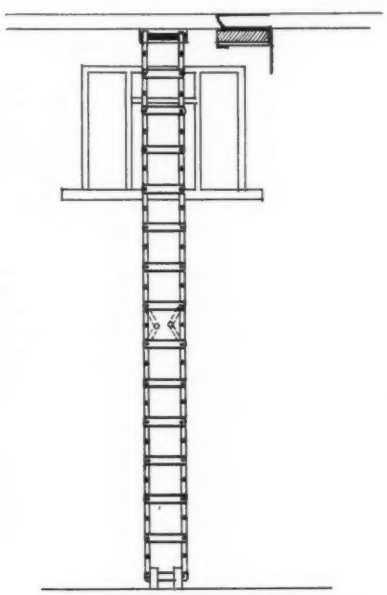
The price of this escape, suitable for a two-storey house, including the brackets and case, is £5 5s.

Welding Technique

Welding as a means of joining two pieces of metal together is such a logical method of doing the job that it is by no means surprising that its use in all forms of metallic construction is steadily increasing, and ousting other methods. Consider, for example, the connection of two flat strips of steel to resist a pull. The old method of joining involves drilling holes, thereby weakening the strips, and then filling these holes with pins or rivets. In addition, cover-strips are usually required. With welding, the ends, after suitable preparation which does not weaken the strips, can be butted and made one bar. When connections have to be made between plates at right angles to one another the simplicity of the welded, as compared with the riveted method of connection, is even more marked.



A cord-controlled escape ladder which packs away under the eaves. (*See note on this page.*)

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Since it is useful in so many industries welding has naturally developed many branches—there are at least seven distinct commercial processes, and each of these is divided into at least as many methods, each involving its own technique. The first of the two books* under review covers in a general way the whole subject of welding, while the second deals exhaustively with one application.

The Year Book contains chapters dealing with the present position of oxy-acetylene, electric arc, atomic hydrogen, forge, thermit, carburetted water gas and electric resistance welding. It then considers the metallurgy of steel, welding of special steels and other metals, the " mechanics of welds," testing, eye protection and the training of welders. In most cases a good general summary is given in simple language.

•

An unfortunate exception is the chapter headed " Mechanics of Welds." The authors, at the beginning of this chapter, use the following sentence : " Workmanship has rapidly outstripped the technical side of the evolutionary factors, but this in turn has had to take second place to the metallurgical factor." The obscurity of meaning of this sentence is typical of much of the chapter. To make things more difficult the diagrams are too small to be clear, and the misprinting of the symbols in some of the mathematical proofs renders it impossible to check their accuracy.

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Mr. Kilburn's book deals with a subject which is becoming of increasing importance to the building industry—the welding of copper. With copper at its present low price, more and more is being used for all forms of plumbers' and heating engineers' work. For piping a large portion of the connections are made by welding, and the success of these connections depends on a high standard of craftsmanship. This book should help to improve this standard, since the author is an expert in all branches of copper welding, and his book sets out extremely clearly the right way of doing any job. It should not only be of use to the craftsman, but also to the architect who is concerned with an orderly piping layout in any position where pipes must be exposed.

W. E. J. B.

**The Welding and Cutting Year Book*, 1936-1937. Edited by C. Helsby, C. W. Hamann, F. J. Samuely. The Temsbank Publishing Co., Ltd. Price 5s.

Copper and Bronze Welding. By W. L. Kilburn, M.I.W.E., R.P. The British Oxygen Co., Ltd. Price 5s.

SOCIETIES AND INSTITUTIONS

LIVERPOOL ARCHITECTURAL SOCIETY

On Friday, December 4, before the University of Liverpool Architectural Society, Colonel H. MacGeorge made a comprehensive survey of the technical requirements necessary in architectural design as a precaution against air raids.

It was, he remarked, a case of planning now for the future, and the Government was working closely with the local authorities in this matter.

In order to take all precautions it was necessary to understand the types of missiles that would probably be encountered together with their properties. Bombs, he emphasized, do not drop vertically, so that the sides of a high building were just as vulnerable as the roof, not only from the bomb itself, but from the splinters which fly off at right angles to the axis of the bomb's descent. Dealing with the bombs themselves, he said that these could be divided into three classes; first, the incendiary which burned from seven to ten minutes on the spot upon which it fell, secondly, the gas bomb, and thirdly, the high explosive of which there were all sizes. The gas bomb could be either of the type that gave off a gas lasting but a few hours or containing a liquid which was readily absorbed by any surface upon which it fell, and with which it was dangerous to come into contact, and which could only be removed by the plentiful use of water or such a chemical as chloride of lime.

Dealing with the first type, the incendiary, the only precaution which could be taken with existing property was the vacation of the top floor and the covering of the floor proper with two inches of sand or earth which would not allow the destructive fire to penetrate. All woodwork should be treated with a fire-resisting paint. In new work, he said, a concrete roof together with the general use of fire-resisting materials was the wisest precaution. Gas bombs meant either the conversion of one room of the house into a gas proof chamber or the building of a separate and independent chamber which would, he continued, be without windows and have an air lock to form the entrance.

High explosive bombs offered a greater problem structurally, however, as they could inflict damage by either fragmentation or blast. A bomb of the delayed action type was capable of penetrating a block of flats, travelling through the floors and finally exploding in the basement. To avoid this power of penetration a shelter would have to be 60 to 70 ft. below the level of the ground if relying on the soil for cover, or, alternatively, have 12 to 15 ft. of heavily reinforced concrete as a roof.

Regarding general design, a basement, he said, was by far the best place to fortify against an air raid, as it was protected from gas, splinters and blast. If it were necessary to use the ground floor, materials of sufficient strength and solidity must be used, for example, walls of not less than 13½ ins. brick or 1 ft. of reinforced concrete. If walls were not of sufficient strength, they could be reinforced on the outside by the use of sandbags, an essential in the case of door and window openings. Non-inflammable celluloid and wire in the window openings would obviate the risk of glass being fractured by blast, and gas entering. Wherever the room was situated, it should be made as airtight as possible, without ventilators and with screens for the fireplaces and windows. A specially-built shelter should be lined with a material that would absorb all moisture and have alternative lighting and water supplies, together with an emergency exit. It was, however, he stated, inadvisable to shelter more than fifty persons in one spot, and for that reason large communal shelters, which could be used as car parks during normal times, were inadvisable. In conclusion, Colonel MacGeorge said that in general building with regard to air raid precautions, steel framework with panelling or reinforced concrete structures were preferable to the solid form of construction, and, in general, Continental countries were in advance of this country in matters of air raid defence, having put into practice many of the points which we still had under discussion.

The President of the Society, Mr. R. H. Shaw, in proposing a vote of thanks to Colonel MacGeorge on behalf of the Society, said that he himself considered that the greatest difficulty to be overcome in the event of an air raid was panic, and expressed his appreciation of the Government's policy in sending lecturers out in an attempt to obviate this fear of the unknown.

THE CHADWICK TRUST

A lecture entitled "Modern Methods of Building" was given recently by Professor S. D. Adshead, F.R.I.B.A., under the auspices of the Chadwick Trust, at the R.I.B.A. Extracts from his address are printed below :—

Never before has there been such a complete severance from traditional methods of building as is to be seen today, and never before have we experienced such a universal refusal to recognize architectural styles.

Except in the case of types of buildings having exceptional architectural interest which it seems necessary should comply with deep-rooted sentiment, the architecture of today is an experiment with new materials and an attempt to give expression to purely abstract forms and ideals. This completely new change in architectural outlook is very largely, if not entirely, due to the necessity for making use of new methods and materials in building construction.

A modern building compared with its predecessor of fifty years ago is constructed in an entirely different way. Building construction as exemplified in the buildings which were erected during, say, the latter half of last century was, compared with building as we see it today, very simple. Walls were constructed of solid brick or stone; floors, partitions and roofs were constructed of timber; and for wall finishings little else could be used but panelling and plaster. Damp courses were unknown : walls rested on brick or stone footings, and drain pipes were jointed in clay.

Today we build with cement, concrete, and steel wires. This fabrication—unless for sentimental reasons we use brick or stone—is becoming universal and applies not only to walls but also to roofs, partitions and floors.

For finishings we depend upon a great new variety of skins. With new tools to hand we can line buildings with marble at a comparatively insignificant expense. With that wonderful new discovery whereby we are able to produce plywood or laminated woods, we can line walls and floors with solid oak, ash, cedar, mahogany, or pine. With the same material we can construct doors and fittings of all kinds.

With the new processes now available for the treatment of glass and enamels, we can cover walls with every colour and quality of glazed and enamelled surface.

In our ability to manipulate wood fibre we have to hand an innumerable variety of fabricated slabs—such as Celotex, Tentest, etc.—all suitable for covering wall surfaces where plaster is not suitable or would take too long to apply. Indeed, it is quite impossible to enumerate all the new materials which an architect is able to employ in the erection of a building today.

No wonder the bye-laws controlling building construction need to be continually revised, and no wonder in the design of a modern building architects who wish to be modern find it necessary to give up using such antiquated features as bases, architraves, cornices and columns.

THE BUILDINGS ILLUSTRATED

HOUSE IN CHURCH STREET, CHELSEA (pages 869-872). Architects: Walter Gropius and E. Maxwell Fry. The general contractors were John Garlick (1910), Ltd., and the principal sub-contractors and suppliers included : D. Anderson and Sons, Ltd., asphalt for terrace, "Thermotile" roofing and "Triplex" flat roofing ; L. G. Mouchel and Partners, reinforced concrete (design) ; Helical Bar and Engineering Co., Ltd., reinforced concrete (supply of steel) ; Williamson Cliff, Ltd., bricks ; Gilliam & Co., Ltd., old York stone ; Synthetic Stone Co., Ltd., stone copings ; Art Pavements and Decorations, Ltd., artificial stone, hall paving ; H. Young & Co., Ltd., structural steel ; G. R. Speaker & Co., Ltd., Eonit building blocks, partitions ; Lenscrete, Ltd., "Lenscrete" screen ; Turners Asbestos Cement Co., "Decolite" flooring in kitchen and servants' bathroom ; Richard Crittall & Co., Ltd., hot water panels in ceilings, boilers ; Duncan Watson, Ltd., electric wiring, electric bells ; Unity Heating, Ltd., tubular heating in the flower bar window ; Shanks & Co., Ltd., sanitary fittings ; W. N. Froy and Sons, Ltd., sanitary fittings ; Allen and Greaves, Ltd., special shower cubicle, door furniture, external staircase ; Oscar Kanter, "Wehag" lever handles and fittings ; Hilmor, Ltd., special bow handles in silver bronze ; Williams and Williams, Ltd., casements and window furniture ; Haskins, rolling wood shutter to garage (operated with an electric motor) ; J. Starkie Gardner, Ltd., internal stair, steel channel strings and stainless steel balustrade.

HOUSE IN CHURCH STREET, CHELSEA (pages 873–875). Architects : Mendelsohn and Chermayeff. The general contractors were John Garlick (1910), Ltd., and the

principal sub-contractors and suppliers included: Accrington Brick and Tile Co., Ltd., and Williamson Cliff, Ltd., facing bricks and terrace; Helical Bar and Engineering Co., Ltd., reinforced concrete and hollow tile floors; G. R. Speaker & Co., Ltd., partitions; Carbo Plaster, Ltd., external rendering; Synthetic Stone Co., reconstructed stone copings and front steps; Joseph Sankey and Sons, Ltd., door trims and window boxes; Williams and Williams, Ltd., windows and terrace doors; J. D. Beardmore & Co., Ltd., metalwork and sliding door gear; P. C. Henderson, Ltd., sliding door gear; Morgan Brown & Co., Ltd., coal hoppers; Pilkington Bros., Ltd., roof domes; Birkley Co., Ltd., squash court playboard; Jos. F. Ebner, Ltd., wood flooring; Marbolith Flooring Co., Ltd., flooring (jointless); Fenning & Co., Ltd., marble work; John P. White and Sons, Ltd., movable furniture; Wm. Mallinson and Son, Ltd., veneers; Venesta, Ltd., veneers; J. H. Nicholson & Co., Ltd., heating and hot water supply; Broadwall Engineering Co., Ltd., pump; Shanks & Co., Ltd., sanitary fittings; A. Johnson and Co., Ltd., service sinks; Bective Electrical Co., Ltd., electrical installation; Troughton and Young, Ltd., light fittings; G. V. D. Illuminators, Ltd., light fittings; Allom Bros., light fittings; E.M.G. Handmade Gramophones, Ltd., radio and gramophone; Synchronome Co., Ltd., clock; Redpath Brown & Co., Ltd., steelwork.

THE DRUM INN, COCKINGTON (pages 875-877). Architect: Sir Edwin Lutyens, R.A. The general contractors were Sherwell Builders, Ltd. and the principal sub-contractors and suppliers included: G. N. Haden and Sons, Ltd., domestic hot water; Higgins and Cattle, Ltd., electric light fittings; Gaskell and Chambers (London), Ltd., bar counters and back cabinets; Acme Flooring and Paving Co., Ltd., Rhodesian teak flooring; John Bolding and Sons, Ltd., sanitary fittings; Joseph Kaye and Sons, Ltd., locks and door furniture; Samuel Snowdon, Ltd., furniture.

In the list of contractors for the Senate House, London University, published in the JOURNAL for December 10, we omitted to state that Mr. George Mansell was responsible for the lettering in bronze inlay on the War Memorial and the lettering on the doors and corridors throughout the building.

Manufacturers' Items

A twelve-page brochure devoted to the new C.M.A. standard cables, which are to be introduced on January 1 next, has just been issued by the Cable Makers' Association, of Sardinia House, Sardinia Street, W.C.2. Copies of the brochure are obtainable from the firm, free of charge. Following are some extracts from the brochure:—

"From the commencement the standard C.M.A. cable had been insulated with one layer of pure rubber adjacent to the tinned conductor and two layers of vulcanised rubber superimposed thereon. These cables were supplied for the ordinary working voltages up to 250 volts in two grades, namely, 600 megohm grade and 2,500 megohm grade, and there were additional types for higher voltages. In order to meet the demand for a cheaper quality the 'Nonazo' 600 megohm class was later introduced, but this was confined to wiring sizes for working pressures up to 250 volts only.

"In recent years very considerable advances in rubber technology have been made in relation to the application of vulcanized rubber for electrical insulating purposes, and the most important of these advances have resulted from the continuous investigations undertaken by the great research organizations maintained by members of the C.M.A.

"As a result of the great improvements in rubber compounds and processes of vulcanization, together with the attainment of much greater efficiency in the tinning of individual wires of conductors, the layer of pure rubber can now be safely and advantageously omitted.

"For some years past it has been realized that the insulation resistance test afforded little or no indication of the reliability of a rubber insulated cable. In the new C.M.A. standard cables the layer of pure rubber is omitted, and the classification by megohms is discontinued, the cables being classified by the voltage at which they are designed to operate.

"These new standard cables of the C.M.A., represent the results of the continuous co-operative research and experimental work of its members and provide the utmost efficiency and reliability.

"Research, experiments and interchange of experience continue without intermission in the fully equipped laboratories of C.M.A. members, in order to ensure that the C.M.A. standards are kept continually abreast of the latest developments and discoveries.

"The adoption of the new standards cannot fail to be of considerable advantage to the user of rubber insulated cables, and to the electrical industry generally."

●

A brochure devoted to Sterreberg interlocking pantiles has just been issued by Messrs. Langley (London), Ltd., of 161 Borough High Street, London, S.E.1. In the foreword the firm state that these pantiles "are designed to provide not only a beautiful, but a practical form of roof covering, and that they possess an efficient interlock on all four sides, which permits of their use on pitches as low as 30 degrees. Exterior pointing is unnecessary with Sterreberg interlocking pantiles, although they may be safely underpointed (as is usual in the North of England) without fear of condensation trouble arising. In the South of England underfelting is the more general rule, but either underfelting or underpointing is equally satisfactory."

The brochure is profusely illustrated and, in addition to colour blocks showing the different types of pantiles, there are several photographs of buildings on which these pantiles have been used.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICT (15 miles radius)

HIGHGATE. *Tenements.* The London, Midland and Scottish Railway Co. are to erect 120 tenements for persons who will be displaced owing to the reconstruction and extension of Euston Station, on a site in Highgate Road.

HORNSEY. *Water Contact Tank.* The Metropolitan Water Board is to construct a covered filtered water contact tank at the Hornsey works, at a cost of £14,500.

LONDON. *Flats.* The L.C.C. has leased a site in Horseferry Road to Mr. B. Greenall for the erection of a block of flats.

POPLAR. *Flats.* The L.C.C. is to erect 264 flats on the Bow Road island site, Poplar, at a cost of £165,000.

STEPNEY. *Central Depot.* The Stepney B.C. is to erect a central depot adjacent to the Regents Canal, at a cost of £39,262.

SURBITON. *Filter Beds.* The Metropolitan Water Board is to reconstruct two filter beds at the Surbiton works, at a cost of £18,000.

NORTHERN COUNTIES

BIRMINGHAM. *Houses.* The Birmingham Corporation has sold land on the Quinton estate to Messrs. Purdom and Rees, of 36 Great Russell Street, London, for the erection of 100 houses.

BIRMINGHAM. *School.* The Birmingham Education Committee is to erect an elementary school in Paganel Road, on the Stonehouse Farm estate, at an estimated cost of £28,350.

BIRMINGHAM. *Dwellings.* The Birmingham Corporation is to erect 99 dwellings on the Bankdale Road site, at a cost of £42,596.

BIRMINGHAM. *Market.* The Birmingham Corporation is to erect a fruit and vegetable market upon the site bounded by Edgbaston Street, Jamaica Row and Upper Dean Street, at an estimated cost of £127,000, from plans prepared by Messrs. Martin and Martin and W. H. Ward.

BIRMINGHAM. *Estates Department, etc.* The Birmingham Corporation is to erect new buildings for the Estates Department and Weights and Measures Department in Summer Row, at a cost of £41,100.

FLAXTON. *Houses.* Plans passed by the Flaxton R.D.C.: 20 houses, Carlton estate Hull Road, Mr. E. Sherry; six houses, junction of new road and Osbaldwick Lane, Messrs Cowling and Swift.

LEEDS. *Playing Fields.* The Leeds Corporation is to acquire land on the Moor Grange estate for playing fields.

SOUTH SHIELDS. *Remodelling.* The South Shields Corporation has prepared a scheme for remodelling the Harton institution, at a cost of £27,405.

SOUTH SHIELDS. *Isolation Hospital.* The South Shields Corporation is to proceed with a scheme for the erection of an isolation hospital at Cleadon, at a cost of £42,000.

SOUTH SHIELDS. *Stadium.* The South Shields Corporation has prepared a scheme for the erection at Gypsies Green of a stadium, with swimming pool, tennis courts, miniature golf course, etc., at a cost of £21,500.

SOUTH SHIELDS. *Schools.* The South Shields Education Committee has approved plans for the erection of junior and infants' schools for 1,200 at Harton.

SCOTLAND

GLASGOW. *Houses, etc.* The Glasgow Corporation is to erect 330 three-storey and 64 four-storey tenement houses, comprising 222 three-apartment houses, 118 four-apartment houses and 54 five-apartment houses, at North Keppoch; 141 three-storey tenement houses at Rannoch Street; three tenements at Shettleston Road; 192 three-storey tenement houses at Langholm Street, and 60 houses in three-storey tenements at Elmvale Street.

GLASGOW. *School.* The Glasgow Corporation Education Committee has approved plans for a new school at Provanmill.

GLASGOW. *Municipal Printing.* The Glasgow Corporation has approved plans for the municipal printing works on ground at Oakbank Street.

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_1	ABERDARE ...	S. Wales & M.	1 5½	1 1½
A	Aberdeen ...	Scotland	1 6½	1 2
A_1	Abergavenny ...	S. Wales & M.	1 6	1 1½
A_2	Abingdon ...	S. Counties	1 5	1 0½
A	Accrington ...	N.W. Counties	1 6½	1 2
A_2	Addlestone ...	S. Counties	1 5	1 0½
A	Adlington ...	N.W. Counties	1 6½	1 2
A	Airdrie ...	Scotland	•1 6½	1 2
J	Aldeburgh ...	E. Counties	1 2½	11
A	Altrincham ...	N.W. Counties	1 6½	1 2
B_1	Appleby ...	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
B_1	Aylesbury ...	S. Counties	1 4	1 0
B_1	BANBURY ...	S. Counties	1 4	1 0
B_1	Bangor ...	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ...	Yorkshire	1 6½	1 2
B	Barnstaple ...	S.W. Counties	1 4½	1 0½
A	Barrow ...	N.W. Counties	1 6½	1 2
A	Barry	S. Wales & M.	1 6½	1 2
B_1	Basingstoke ...	S.W. Counties	1 4	1 0
A_2	Bath	S.W. Counties	1 5½	1 1½
A	Batley ...	Yorkshire	1 6½	1 2
A_2	Bedford ...	E. Counties	1 5½	1 1½
A_2	Berwick-on-Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ...	Mid. Counties	1 5½	1 1½
B_2	Bicester ...	S. Counties	1 3	11½
	Birkenhead ...	N.W. Counties	•1 7½	1 2½
A	Birmingham ...	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ...	N.W. Counties	1 6½	1 2
A	Blackpool ...	N.W. Counties	1 6½	1 2
A	Blyth	N.E. Coast	1 6½	1 2
B_1	Bognor ...	S. Counties	1 4	1 0
A	Bolton ...	N.W. Counties	1 6½	1 2
A_2	Boston ...	Mid. Counties	1 5	1 0½
A_2	Bournemouth...	S. Counties	1 5½	1 1½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ...	Yorkshire	1 6½	1 2
A_1	Brentwood ...	E. Counties	1 6	1 1½
A	Bridgend ...	S. Wales & M.	1 6½	1 2
B	Bridgwater ...	S.W. Counties	1 4½	1 0½
A_1	Bridlington ...	Yorkshire	1 6	1 1½
A	Brighouse ...	Yorkshire	1 6½	1 2
A_2	Brighton ...	S. Counties	1 5½	1 1½
A	Bristol ...	S.W. Counties	1 6½	1 2
B	Brixham ...	S.W. Counties	1 3½	11½
A	Bromsgrove ...	Mid. Counties	1 5½	1 1½
B	Bromyard ...	Mid. Counties	1 3	11½
A	Burnley ...	N.W. Counties	1 6½	1 2
A	Burslem ...	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury	N.W. Counties	1 6½	1 2
A	Buxton ...	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE...	E. Counties	1 6	1 1½
B_1	Canterbury ...	S. Counties	1 4	1 0
A	Cardiff ...	S. Wales & M.	1 6½	1 2
A	Carlisle ...	N.W. Counties	1 6½	1 2
B	Carmarthen ...	S. Wales & M.	1 4½	1 0½
B	Carnarvon ...	N.W. Counties	1 4½	1 0½
A	Carnforth ...	N.W. Counties	1 6½	1 2
A	Castleford ...	Yorkshire	1 6½	1 2
A_2	Chatham ...	S. Counties	1 5	1 0½
A	Chelmsford ...	E. Counties	1 5	1 0½
A	Cheltenham ...	S.W. Counties	1 5	1 0½
A	Chester ...	N.W. Counties	1 6½	1 2
A	Chesterfield ...	Mid. Counties	1 6½	1 2
B_1	Chichester ...	S. Counties	1 4	1 0
A	Chorley ...	N.W. Counties	1 6½	1 2
B_1	Cirencester ...	S. Counties	1 4	1 0
A	Clitheroe ...	N.W. Counties	1 6½	1 2
A	Clydebank ...	Scotland	1 6½	1 2
A	Coalville ...	Mid. Counties	1 6½	1 2
A_2	Colchester ...	E. Counties	1 5½	1 1½
A	Colne	N.W. Counties	1 6	1 1½
A_2	Colwyn Bay ...	N.W. Counties	1 5½	1 1½
A_1	Consett ...	N.E. Coast	1 6	1 1½
A_2	Conway ...	N.W. Counties	1 5½	1 1½
A	Coventry ...	Mid. Counties	1 6½	1 2
A_2	Crewe	N.W. Counties	1 5½	1 1½
A	Cumberland ...	N.W. Counties	1 5	1 0½
A	DARLINGTON ...	N.E. Coast	1 6½	1 2
A	Darwen ...	N.W. Counties	1 6½	1 2
B	Deal	S. Counties	1 4	1 0
A_2	Denbigh ...	N.W. Counties	1 5	1 0½
A	Derby	Mid. Counties	1 6½	1 2
A	Dewsbury ...	Yorkshire	1 6½	1 2
B	Didcot ...	S. Counties	1 4½	1 0½
A	Doncaster ...	Yorkshire	1 6½	1 2
B_1	Dorchester ...	S.W. Counties	1 4	1 0
A	Driffield ...	Yorkshire	1 5	1 0½
A_2	Droitwich ...	Mid. Counties	1 5½	1 1½
A	Dudley ...	Mid. Counties	1 6½	1 2
A_2	Dumfries ...	Scotland	1 6	1 1½
A	Dundee ...	Scotland	1 6½	1 2
A	Durham ...	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE ...	S. Counties	1 5½	1 1½
A_1	Ebbw Vale ...	S. Wales & M.	1 6	1 1½
A	Edinburgh ...	Scotland	1 6½	1 2
A_2	Exeter ...	S.W. Counties	•1 5½	1 1½
B	Exmouth ...	S.W. Counties	1 4½	1 0½
A_2	FELIXSTOWE ...	E. Counties	1 5	1 0½
A	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ...	N.W. Counties	1 6½	1 2
B_1	Folkestone ...	S. Counties	1 4	1 0
A	Frodsham ...	N.W. Counties	1 6½	1 2
B_2	Frome	S.W. Counties	1 3½	11½
A	GATESHEAD ...	N.E. Coast	1 6½	1 2
B	Gillingham ...	S. Counties	1 4½	1 0½
A_1	Glamorganshire, Rhondda Valley District	S. Wales & M.	1 6	1 1½
A	Glasgow ...	Scotland	1 7	1 2½
A_2	Gloucester ...	S.W. Counties	1 5½	1 1½
A_2	Goole	Yorkshire	1 5½	1 1½
A_2	Gosport ...	S. Counties	1 5½	1 1½
A_2	Grantham ...	Mid. Counties	1 5	1 0½
A_1	Gravesend ...	S. Counties	1 6	1 1½
A	Greenock ...	Scotland	•1 6½	1 2
A	Grimsby ...	Mid. Counties	1 6½	1 2
B	Guildford ...	S. Counties	1 4½	1 0½
A	HALIFAX ...	Yorkshire	1 6½	1 2
A	Hanley ...	Mid. Counties	1 6½	1 2
A	Harrogate ...	Yorkshire	1 6½	1 2
A	Hartlepools ...	N.E. Coast	1 6½	1 2
B	Harwich ...	E. Counties	1 4½	1 0½
B_1	Hastings ...	S. Counties	1 4	1 0
A_2	Hatfield ...	S. Counties	1 5½	1 1½
B	Hereford ...	S.W. Counties	1 4½	1 0½
A_2	Hertford ...	E. Counties	1 5½	1 1½
A	Heysham ...	N.W. Counties	1 6½	1 2
A	Howden ...	N.E. Coast	1 6½	1 2
A	Huddersfield ...	Yorkshire	1 6½	1 2
A	Hull	Yorkshire	1 6½	1 2
A	ILKLEY ...	Yorkshire	1 6½	1 2
A	Immingham ...	Mid. Counties	1 6½	1 2
A_2	Ipswich ...	E. Counties	1 5½	1 1½
B_2	Isle of Wight ...	S. Counties	1 4½	1 0½
A	JARROW ...	N.E. Coast	1 6½	1 2
A	KEIGHLEY ...	Yorkshire	1 6½	1 2
A_2	Kendal ...	N.W. Counties	1 5	1 0½
A_2	Keswick ...	N.W. Counties	1 5	1 0½
A_1	Kettering ...	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn ...	E. Counties	1 4	1 0
A	LANCASTER ...	N.W. Counties	1 6½	1 2
A_1	Leamington ...	Mid. Counties	1 6	1 1½
A	Leeds	Yorkshire	1 6½	1 2
A	Leek	Mid. Counties	1 6½	1 2
A	Leicester ...	Mid. Counties	1 6½	1 2
A	Leigh	N.W. Counties	1 6½	1 2
B	Lewes	S. Counties	1 3	11½
A_2	Lichfield ...	Mid. Counties	1 5½	1 1½
A	Lincoln ...	Mid. Counties	1 6½	1 2
	Liverpool ...	N.W. Counties	•1 8½	1 3
A_2	Llandudno ...	N.W. Counties	1 5½	1 1½
A	Llanelly ...	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12-15 miles radius)		1 7½	1 2½
A	Long Eaton ...	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_1	Luton	E. Counties	1 6	1 1½
A	Lytham ...	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
A_2	Maidstone ...	S. Counties	1 5	1 0½
A_2	Malvern ...	Mid. Counties	1 5	1 0½
A	Manchester ...	N.W. Counties	1 6½	1 2
A	Mansfield ...	Mid. Counties	1 6½	1 2
B_1	Margate ...	S. Counties	1 4	1 0
A	Matlock ...	Mid. Counties	1 5	1 0½
A_1	Merthyr ...	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N.E. Coast	1 6½	1 2
A_2	Middlewich ...	N.W. Counties	1 5½	1 1½
B_2	Minehead ...	S.W. Counties	1 3½	11½
B_2	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe ...	N.W. Counties	1 6½	1 2
A_2	NANTWICH ...	N.W. Counties	1 5½	1 1½
A	Neath	S. Wales & M.	1 6½	1 2
A	Nelson ...	N.W. Counties	1 6½	1 2
A	Newcastle ...	N.E. Coast	1 6½	1 2
A	Newport ...	S. Wales & M.	1 6½	1 2
A	Normanton ...	Yorkshire	1 6½	1 2
A	Northampton...	Mid. Counties	1 6½	1 2
A	North Shields...	N.E. Coast	1 6½	1 2
A	North Staffs ...	Mid. Counties	1 6½	1 2
A_1	Norwich ...	E. Counties	1 6	1 1½
A	Nottingham ...	Mid. Counties	1 6½	1 2
A	Nuneaton ...	Mid. Counties	1 6½	1 2
A	OAKHAM ...	Mid. Counties	1 5	1 0½
A	Oldham ...	N.W. Counties	1 6½	1 2
A_2	Oswestry ...	N.W. Counties	1 5	1 0½
A_1	Oxford ...	S. Counties	1 6	1 1½
A	PAISLEY ...	Scotland	•1 6½	1 2
B_2	Pembroke ...	S. Wales & M.	1 3	11½
A	Perth	Scotland	•1 6½	1 2
A_1	Peterborough	E. Counties	1 6	1 1
A	Plymouth ...	S.W. Counties	•1 6½	1 2½
A	Pontefract ...	Yorkshire	1 [illegible]	1 1
A_1	Pontypridd ...	S. Wales & M.	1 6	1 1½
A_2	Portsmouth ...	S. Counties	1 5½	1 2½
A	Preston ...	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING ...	S. Counties	1 5½	1 1½
B	Reigate ...	S. Counties	1 4½	1 0½
A	Retford ...	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A	Ripon	Yorkshire	1 5	1 0½
A	Rochdale ...	N.W. Counties	1 6½	1 2
B	Rochester ...	S. Counties	1 4½	1 0½
A_1	Ruabon ...	N.W. Counties	1 6	1 1½
A	Rugby ...	Mid. Counties	1 6½	1 2
A_2	Rugeley ...	Mid. Counties	1 5½	1 1½
A	Runcorn ...	N.W. Counties	1 6½	1 2
A_1	ST. ALBANS ...	E. Counties	1 6	1 1½
A	St. Helens ...	N.W. Counties	1 6½	1 2
B_2	Salisbury ...	S.W. Counties	1 3½	11½
A_1	Scarborough ...	Yorkshire	1 6	1 1½
A	Scunthorpe ...	Mid. Counties	1 6½	1 2
A	Sheffield ...	Yorkshire	1 6½	1 2
A	Shipley ...	Yorkshire	1 6½	1 2
A_2	Shrewsbury ...	Mid. Counties	1 5½	1 1½
A_2	Skipton ...	Yorkshire	1 5½	1 1½
A_2	Slough ...	S. Counties	1 5½	1 1½
A_1	Solihull ...	Mid. Counties	1 6	1 1½
A_2	Southampton	S. Counties	1 5½	1 1½
A_1	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ...	N.W. Counties	1 6½	1 2
A	S. Shields ...	N.E. Coast	1 6½	1 2
A_1	Stafford ...	Mid. Counties	1 6	1 1½
A	Stirling ...	Scotland	1 7	1 2½
A	Stockport ...	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud ...	S.W. Counties	1 4½	1 0½
A	Sunderland ...	N.E. Coast	1 6½	1 2
A	Swansea ...	S. Wales & M.	1 6½	1 2
A	Swindon ...	S.W. Counties	1 5	1 0½
A_1	TAMWORTH ...	N.W. Counties	1 6	1 1½
B	Taunton ...	S.W. Counties	1 4½	1 0½
A	Teeside Dist. ...	N.E. Counties	1 6½	1 2
A_2	Teignmouth ...	S.W. Coast	1 5½	1 1½
A	Todmorden ...	Yorkshire	1 [illegible]	1 2
A_1	Torquay ...	S.W. Counties	1 6	1 1½
B_2	Truro	S.W. Counties	1 [illegible]	11½
A_2	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall ...	Mid. Counties	1 [illegible]	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD ...	Yorkshire	1 6½	1 2
A	Walsall ...	Mid. Counties	1 6½	1 2
A	Warrington ...	N.W. Counties	1 6½	1 2
A_1	Warwick ...	Mid. Counties	1 6	1 1½
A_1	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s.-Mare	W. Counties	1 5½	1 1½
A_2	Whitby ...	Yorkshire	1 5½	1 1½
A	Widnes ...	N.W. Counties	1 6½	1 2
A	Wigan ...	N.W. Counties	1 6½	1 2
B	Winchester ...	S. Counties	1 4½	1 0½
A_2	Windsor ...	S. Counties	1 5½	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ...	Mid. Counties	1 5½	1 1½
A_2	Worksop ...	Yorkshire	1 5	1 0½
A_1	Wrexham ...	N.W. Counties	1 6	1 1½
A	Wycombe ...	S. Counties	1 5	1 0½
B	YARMOUTH ...	E. Counties	1 4½	1 0½
B	Yeovil ...	S.W. Counties	1 4½	1 0½
A	York	Yorkshire	1 6½	1 2

The rates for every trade in any given area will be sent on request.

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

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	8
Carpenter	,,	1	8
Joiner	,,	1	8
Machinist	,,	1	8
Mason (Banker)	,,	1	8
,, (Fixer)	,,	1	9
Plumber	,,	1	8
Painter	,,	1	7
Paperhanger	,,	1	7
Glazier	,,	1	7
Slater	,,	1	8
Scaffolder	,,	1	4
Timberman	,,	1	4
Navvy	,,	1	3
General Labourer	,,	1	3
Lorryman	,,	1	5½
Crane Driver	,,	1	7
Watchman	per week	2	10

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	18	6
Hydrated Lime	,,	3	0	9
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.	4" d.	6" s.	6" 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:

		£	s.	d.
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	,,	9	0	15	0
Single junctions	,,	8	9	18	0
Double junctions	,,	13	6	30	0
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
,, and ,,	,,	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	,,	5	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
2½" ,, ,, ,,	,,		1	10
3" ,, ,, ,,	,,		2	1
4" ,, ,, ,,	,,		2	6

MASON

The following d/d F.O.R. at Nine Elms:		s.	d.
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	lb.		1	4
,, copper	,,		1	6

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
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, ¾"	Sq.		18	6
,, 1"	,,	1	1	6
,, 1¼"	,,	1	2	0
,, 1½"	,,	1	5	0
,, 1¾"	,,	1	10	0
Deal matchings, ¾"	,,		14	0
,, 1"	,,		15	6
Rough boarding, ¾"	,,	1	4	0
,, 1"	,,		16	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup. Thickness	¼"	⅜"	½"	¾"	1"
Qualities	A B BB	A B BB	A B BB	A B BB	A B BB
	d. d. d.	d. d. d.	d. d. d.	d. d. d.	d. d. d.
Birch 60 × 48	4 2½ 2	5 3 2½	7 5 4	8 6 5	
Cheap Alder	– 2 1½	– 3½ 2	– – –	– – –	
Oregon Pine	– 2½ –	3 2½ –	4 3½ –	5 4½ –	
Gaboon Mahogany	4 3½ –	5 4½ –	7 6½ –	8 7 –	
Figured Oak	6½ 5 –	7½ 5½ –	10 8 –	1/– 9 –	

Scotch glue lb. 8d.

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"	½"	¾"	1"
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"–11¾" long ,,	7	9	1/3	1/8	3/–
Long screws, 12"–23¾" long,,	11	1/3	2/2	2/10	5/3
,, ,, 3" M–1½" 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	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½

	Fittings.		
Gas	57½	Galvanized gas	47½
Water	52½	,, water	42½
Steam	47½	,, steam	37½

		s.	d.
Rolled steel joists cut to length	cwt.	12	9
Mild steel reinforcing rods, ¾"	,,	10	6
,, ,, ½"	,,	10	3
,, ,, ⅜"	,,	10	0

SMITH AND FOUNDER—*continued*

		s.	d.
Mild steel reinforcing rods, ¼"	cwt.	9	6
,, ,, ⅜" ,,	,,	9	6
,, ,, ½" ,,	,,	9	6
,, ,, ¾" ,,	,,	9	6
,, ,, 1" ,,	,,	9	6

		4" s.	4" d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.	8	10
Shoes	each	2	0
Anti-splash shoes	,,	4	6
Boots	,,	3	0
Bends	,,	2	7
,, with access door	,,	—	6
Heads	,,	4	0
Swan-necks up to 9" offsets	,,	3	9
Plinth bends, 4½" to 6"	,,	3	9
Half-round rain-water gutters of ordinary thickness metal	F.R.	5	6
Stop ends	each	6	6
Angles	,,	1	7
Obtuse angles	,,	2	0
Outlets	,,	1	9

		3" s.	3" d.	4" s.	4" d.	6" s.	6" d.
Plain cast	F.R.	1	0	1	2	2	6
Coated	,,	1	1	1	3	2	8
Galvanized	,,	2	0	2	6	4	6
Holderbats	each	3	10	4	0	4	9
Bends	,,	3	9	3	3	10	3
Shoes	,,	2	10	4	4	9	6
Heads	,,	4	8	8	5	12	9

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	26	3	
,, drawn pipes	,,	25	9	
,, soil pipe	,,	28	9	
,, scrap	,,	16	9	
Solder, plumbers'	lb.		9½	
,, fine do.	,,	1	0	
Copper, sheet	,,		8½	
,, tubes	,,		11	

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	2 6	4 6
Holderbats each	3 10	4 0	4 9
Bends ,,	3 9	3 3	10 3
Shoes ,,	2 10	4 4	9 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	,,	3	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, 21 oz., squares n/e 2 ft.	F.S.					3½
,, ,, 26 oz. ,,	,,					3
Flemish, Arctic, Figures (white)*	,,					7
Blazoned glasses	,,				2	6
Reeded: Cross Reeded	,,					11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	,,					6
Crown sheet glass (n/e 12" × 10")	,,				2	0
Flashed opals (white and coloured)	,,	1	0	and	2	0
¼" rough cast; rolled plate	,,					5½
¼" wired cast; wired rolled	,,					9½
¼" Georgian wired cast	,,					11
¼" Polished plate, n/e 1 ft.	,,	†10	to	‡1	1	
,, ,, 2 ,,	,,	†1	2	,,	‡1	4
,, ,, 4 ,,	,,	†2	3	,,	‡2	6
,, ,, 8 ,,	,,	†2	9	,,	‡3	2
,, ,, 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 ½"	,,		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	8	6
Linseed oil	gall.		2	3
Boiled oil	,,		2	9
Turpentine	,,		4	1½
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″ s. d.	6″ 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.	4 9	6 9
Extra, only for bends	Each	10 6	15 6

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
,, raising on old walls	,,	2 0 0
,, underpinning	,,	5 10 0½
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
½″ 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 composition 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 6
,, ,, roofs	,,	6 6
,, ,, trusses	,,	7 6
,, ,, partitions	,,	8 6
½″ deal sawn boarding and fixing to joists	Sqr.	1 14 6
1″ ,, ,, ,, ,, ,,	,,	1 17 6
1½″ ,, ,, ,, ,, ,,	,,	2 3 0
3″ × 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 2
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
1½″ do.	,,	2 10 0
1¾″ do.	,,	2 17 0
1″ deal moulded skirting fixed on, and including grounds plugged to wall	F.S.	1 6
1½″ do.	,,	1 9

CARPENTER AND JOINER—*continued*

		s. d.
1½″ deal moulded sashes of average size	F.S.	1 9½
2″ ,, ,, ,, ,,	,,	1 11½
1½″ deal cased frames double hung, of 6″ × 3″ oak sills, 1½″ pulley stiles, 1½″ 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
1½″ deal four-panel square, both sides, door	F.S.	2 0
2″ ,, ,, ,, ,,	,,	2 8
1½″ ,, but moulded both sides	,,	2 4
2″ ,, ,, ,, ,,	,,	3 0
4″ × 3″ deal, rebated and moulded frames	F.R.	1 0
4½″ × 3½″ ,, ,, ,, ,,	,,	1 4
1½″ deal tongued and moulded window board, on and including deal bearers	F.S.	1 9
1½″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,	2 0
1½″ 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.	16 6
Riveted plate or compound girders, and hoisting and fixing in position	,,	1 0 6
Do., stanchions with riveted caps and bases and do.	,,	19 0
Mild steel bar reinforcement, ¼″ and up, bent and fixed complete	,,	17 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.	2 0 3
Do. in flashings	,,	2 3 9
Do. in covering to turrets	,,	2 9 3
Do. in soakers	,,	1 14 9
Labour to welted edge	F.R.	1½
Open copper nailing	,,	3
Close ,, ,,	,,	4

		½″ s. d.	¾″ s. d.	1″ s. d.	1½″ s. d.	2″ s. d	4″ s. d.
Lead service pipe and fixing with pipe hooks	F.R.	10	1 0	1 3	2 0	2 10	—
Do. soil pipe and fixing with cast lead tacks	,,	—	—	—	—	—	5 6
Extra, only to bends	Each	—	—	—	—	2 0	6 9
Do. to stop ends	,,	6½	8	9	11	1 0	—
Boiler screws and unions	,,	3 3	3 9	5 0	8 0	—	—
Lead traps	,,	—	—	—	6 3	8 9	—
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 0
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 2
Extra, only for shoes	Each						1 3
Do. for plain heads	,,						5 6

PLASTERER AND TILING

		£ s. d.
Expanded metal lathing, small mesh	Y.S.	2 0
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 render on walls	,,	1 2½
Render, float 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″ ,, ,, ,, ,,	,,	1 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 0
Hanging ordinary paper from	,,	2 9

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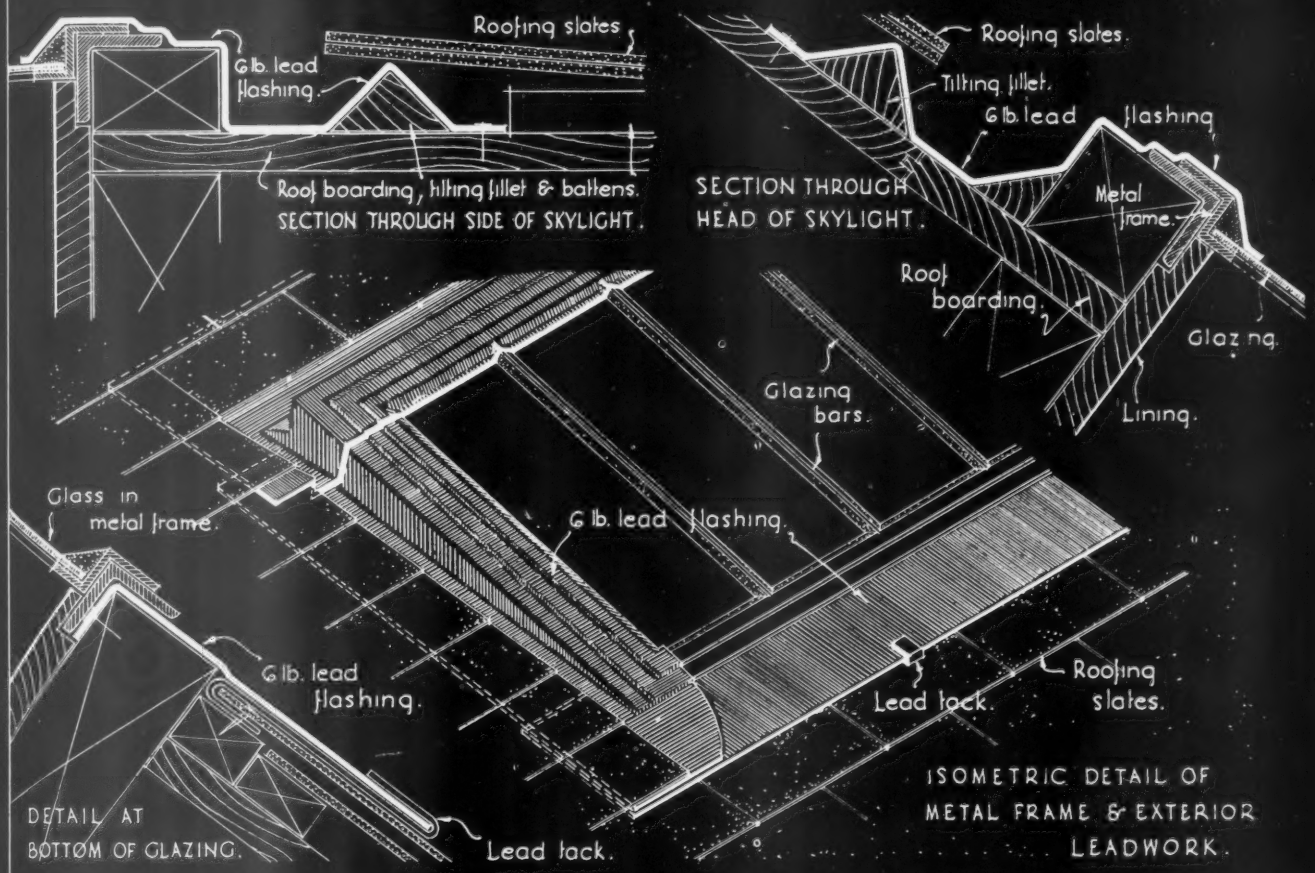
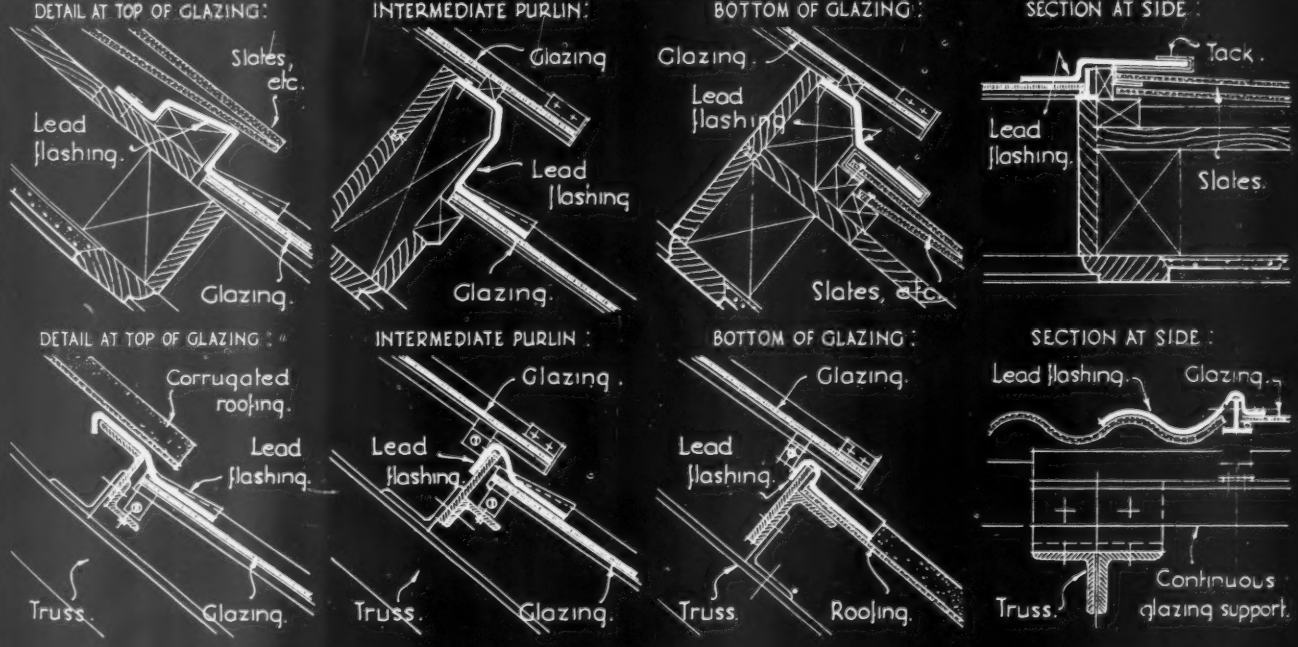
DETAILS OF LEAD FLASHINGS TO A METAL SKYLIGHT IN A SLOPING ROOF • SCALE 1/4 F.S.



1/8 F.S. DETAILS OF TYPICAL LEAD FLASHINGS TO PATENT GLAZED SKYLIGHTS IN WOOD- & METAL-FRAMED ROOFS.



Information from Lead Industries Development Council.

INFORMATION SHEET: LEAD FLASHINGS TO SKYLIGHTS • 29

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Office A. Bayne.

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INFORMATION SHEET
• 448 •
ROOF GLAZING

Subject : Flashings to Skylights, II.

This Sheet gives various details of flashing work to metal-framed skylights and to patent glazed lights set in wood-framed and steel-truss roofs.

Metal-framed Lights :

The isometric and quarter full size details given on the upper half of the Sheet,.show a simple type of metal-framed skylight set in a slated roof of wood construction. The frame itself is formed of standard " Z " and angle sections, welded or bolted together and bolted to the wood trimmers. The glazing is shown flush with the roof surface, and is divided into panels by T or special section metal glazing bars, welded to the top and bottom framing.

The top and sides of the light are completely covered by the lead flashings, these being well dressed and beaten down over the various members of the framing as indicated. The lead flashing is in one piece, carried from the glass over the frame and trimmer, up the roof slope and nailed above the tilting fillet. Flashings to the sides are similar. Bottom flashings are secured with copper nails to the wood trimmer beneath the glazing frame. The lead is carried well down the top course of slating and held down at intervals by 2″ lead tacks carried up under the apron and tucked under the head of the slates.

Patent Glazed Lights :

(a) *Wood-framed roofs :* The details given are typical for fixed skylights in slated or tiled roofs. The lead should be beaten down to a close fit over all woodwork and tiles, and secured with close copper nailing where indicated. At the sides and bottom of the glazing the flashings should be held down by lead tacks at intervals, tucked under the head or side of the roofing.

(b) *Metal-framed roofs :* These details are also typical for any form of roof covering or patent glazing. In the examples given the flashings are shown close dressed over corrugated roofing and glazing bars, and held in position by the roofing itself or by the purlin clips on the glazing bars.

At the side of these lights the flashing may be secured by bolting through the web of the raking glazing bar.

Weight of Lead :

It is recommended that lead flashings of the kind shown on this Sheet should be made of lead of weight not less than 6 lbs. per square foot.

Issued by : Lead Industries Development Council
Address : Rex House, 38 King William Street, London, E.C.4.
Telephone : Mansion House 2855

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DATA ON PROSCENIUM WALLS AND SAFETY CURTAINS :

NOTE · In premises seating over 400 persons, in which scenery is employed (unless they are so used occasionally and exceptionally only and on not more than twelve days in any one year), the stage should be separated from the auditorium by a fire-resisting wall or screen as in the following table .

TABLE OF CLASSES OF PROSCENIUM WALLS .

CLASS OF BUILDING AND USER .	CLASS OF WALL .
In new buildings seating more than 400 persons, and existing buildings regularly used with a stage area of over 600 sq. ft.	A = Brickwork at least 9" thick or its equivalent, carried down to a solid foundation, and up to at least 3'0" above roof level unless the roof is of fire-resistive construction.
Existing buildings regularly used, with stage area under 600 square feet, and existing buildings occasionally used seating over 1000 persons .	B. = Hardwood at least 2" thick, or metal lath and plastering at least 2½" thick, metal-clad on the stage side, carried down to a solid foundation, and up to at least 3'0" above roof level unless the roof is of fire-resistive construction .
Existing buildings occasionally used, seating more than 400 but less than 1000 persons.	C = Soft wood, with asbestos covering on the stage side and on the edges of the proscenium opening, carried down to level of floor of stage basement, or, in the absence of a stage basement, to floor level of the auditorium, and carried up to roof level or to ceiling of auditorium where such ceiling is of fire-resistive construction at least 2" thick .

Not more than three openings should be provided in the proscenium wall in addition to the proscenium opening . No such additional opening to be more than three feet above stage level or to have an area exceeding twenty square feet . In new buildings such openings should be filled with double fire-resisting doors ; in existing buildings a single fire-resisting door may be permitted. These may be of deal, unpanelled, at least two inches thick .

TABLE OF GRADES OF SAFETY CURTAIN . (For use in a building as described above .)

CLASS OF BUILDING AND USER .	GRADE OF CURTAIN REQUIRED .
1. In new buildings seating over 400 persons .	A = Rigid one-piece curtain complying with recommendations 59 to 65 . (See back.)
2. Existing buildings regularly used, with stage over 600 square feet in area .	B. = Rigid two-piece curtain complying with recommendations 59 to 65 . (See back.)
3. Existing buildings regularly used, with stage area less than 600 square feet .	C. = Rigid three-piece curtain complying with recommendations 59 to 65 . (See back.)
4. Existing buildings occasionally used, seating over 1000 persons .	D. = Roller asbestos curtain complying with recommendations 60 to 65 . (See back.)
5. Existing buildings occasionally used, seating over 700 but not more than 1000 persons.	E. = Roller or festooning asbestos curtain complying with recommendations 60 to 65.
6. Existing buildings occasionally used, seating over 400 but not more than 700 persons .	F. = Heavy wool curtain complying with the specification on woollen materials (see the reverse side hereof) and having at least 18" overlap if parted in centre, and 18" over proscenium arch

Extract from the "Manual of Safety Requirements in Theatres & other Places of Public Entertainment."
(Home Office 1934.)

INFORMATION SHEET : PLANNING DATA : PLACES OF PUBLIC ENTERTAINMENT. 6 .

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 · Oscar P. Bayne

Supplement to THE ARCHITECTS' JOURNAL for December 24, 1936

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INFORMATION SHEET

• 449 •

PLACES OF PUBLIC ENTERTAINMENT—VI

Subject : Proscenium Wall and Safety Curtain

Proscenium Wall :

In new buildings and in buildings with a stage area exceeding 600 sq. ft., the proscenium wall should be of the highest possible class ; for smaller stages and buildings occasionally used, something simpler and less expensive might be allowed, and it is suggested that three different classes of proscenium wall be provided for different types of building and user as shown in tabular form on the front of this Sheet.

Fire-Resisting Curtain :

It is advised that curtains of varying degrees of fire-resistance be provided for different classes of buildings as set out in tabular form on the front of this Sheet.

The following constructional requirements should be applied in respect of rigid safety curtains :—

(*a*) The framework shall be of steel and shall be covered on the stage side with hydraulically flattened steel sheets of not less than 16 s.w.g. and on the auditorium side with wire woven asbestos cloth with or without a covering of similar steel sheets. The framework shall be so arranged as to form as far as possible a rigid structure, and the steel sheets shall be securely bolted to the framework along each edge, and to any bracing.

(*b*) Steel guides of such a form as to overlap both sides of the edge of the curtain, securely fixed to the wall and fully protected with teak not less than 1¾ ins. finished thickness or other incombustible materials at least 2 ins. in thickness, shall be provided for the vertical edges of the curtain. Such guides shall lap over the stage side of the moving portion of the curtain for a distance equal to its thickness. The side play allowed shall not exceed ½ in.

(*c*) At least two counterweights shall be provided. They shall be attached by means of steel ropes to two or more independent fittings placed symmetrically at a suitable distance apart at the upper edge of the curtain. The counterweights shall run in rigid guides continued to the floor of the stage basement, unless terminated by sufficient cantilever stops securely built into the walls of the building, and shall be protected by hard wood not less than 1¾ ins. finished thickness, metal or other incombustible material continuously from their lowest position to at least 6 ft. above the fly level.

(*d*) The weight of the curtain in relation to the counterweights shall be such as to allow sufficient bias to ensure that the curtain will start its descent and will overcome the effects of wind pressure during descent.

(*e*) (i) The raising of the curtain shall be effected by hand or power gear which shall be so guarded as to prevent misuse or personal injury.

(ii) The hauling ropes shall be of steel and shall be attached to the centre of the curtain, and the strength of such ropes and the rope connected to the air buffer or brake referred to in the following paragraph shall be sufficient to withstand the stresses due to the action of the brake.

(iii) The sheaves of pulleys over which the ropes for counterweights or for raising the curtain pass shall have a diameter not less than 30 times the diameter of the ropes employed.

(iv) Permanent stops shall be provided to prevent the curtain being overwound when being raised.

(*f*) A dash-pot, air buffer or other similar device shall be fitted which shall come into action during the descent of the curtain in such a way as to slow down its descent and allow it to come to rest upon the stage without shock. Where an air brake is provided the rope therefrom shall work in conjunction with the main raising gear in such a manner that over-running of the main lifting cables shall be avoided.

(*g*) A smoke-stop formed by an asbestos roll having a diameter not less than half that of the thickness of the curtain shall be provided so as to form a reasonably smoke-tight seal between the curtain and the stage. A smoke-stop at the top of the curtain when lowered shall be formed by an angle or channel bar resting on a projecting ledge with a soft asbestos pad between or by a vertical fin on the curtain top bedding into a bath of sand fixed to the proscenium wall on the stage side.

Note.—For details of smoke-stops see sheet No. 7 of this series.

(*h*) If it is desired that the height of the working opening should be less than that of the proscenium opening, a fixed valance may be provided. Such valance shall consist of a suitable steel framework covered on one side with wire woven asbestos cloth with a covering of hydraulically flattened steel sheets of not less than 16 s.w.g. and shall be constructed in all other respects as the moving portion of the fire curtain. It shall not exceed 6 ft. in depth at any point and the lap over the moving portion when such portion is in its lowest position shall not be less than 18 ins.

In addition to the foregoing, there are certain other requirements which apply to safety curtains generally whether or not they are of the rigid type :—

Where the use of asbestos fabric is required for fire curtains, it shall be of a quality suitable for the type of curtain in use. (See specification below.)

The lap of the curtain over the brickwork of the proscenium opening shall be at least 18 ins. at the upper and each vertical edge when the curtain is in its lowest position, and the upper and lower edges shall be so arranged as to form reasonably smoke-tight joints.

The average speed of descent of the curtain shall be not less than one foot per second, provided that the curtain shall in all cases completely close the proscenium opening within 30 seconds.

Rigid curtains shall be provided with releasing gear which can be operated from at least two positions one of which shall be near the principal stage exit or near the stage doorkeeper's office and the other at stage level on working side. Where staff are not usually present on the stage this latter release position may be on auditorium side of the proscenium arch.

Roller or festooning asbestos curtains and heavy wool curtains may have one release position at stage level, working side. Where staff are not usually present on the stage, release position may be on auditorium side of the proscenium arch.

The position and purpose of the releasing gear shall be indicated by a permanent fixed notice.

The raising and releasing gear and all moving parts shall be efficiently protected in order to remove the possibility of accidental interference with the descent of the curtain.

Where a rigid fire curtain, or an asbestos curtain of the roller or festooning type is provided the words "SAFETY CURTAIN" shall be painted in lettering complying with Condition 132 (see reverse side of Sheet No. 4, of this series), and not less than 12ins. in height on the auditorium side of the curtain and within the lower third of its depth.

Asbestos Fabric :

For rigid curtains. (*Grades A, B and C.*)

Metallic asbestos fabric containing 5 per cent. of cotton ; double wire warp and weft, 16 ends per inch warp and 14 ends per inch weft ; twill weave; weight not less than 72 ounces per square yard.

For roller asbestos curtains. (*Grade D.*)

Metallic asbestos fabric containing 5 per cent. of cotton ; double wire warp and weft, 14 ends per inch warp and 10 ends per inch weft ; twill weave ; weight not less than 62 ounces per square yard.

For roller or festooning asbestos curtains. (*Grade E.*)

Metallic asbestos fabric containing 5 per cent. of cotton ; single wire warp and weft, 17 ends per inch warp and 10 ends per inch weft ; twill weave ; weight not less than 40 ounces per square yard.

Woollen Fabric :

(*a*) Wool repp, weight not less than 16 ounces per lineal yard ; or

(*b*) All wool serge, weight not less than 20 ounces per lineal yard. (Width of material on which calculated, 50 inches in each case.)

Scene Docks, Workshops and Stores :

In new buildings seating over 400 persons where a scene dock, workshop or store (other than a small property store) is provided it shall be separated from the stage and auditorium by walls of fire-resisting construction and by single fire-resisting doors or a roller shutter, which shall be kept closed except when scenery is actually being taken through it, and shall be arranged to close automatically by means of fusible links.

The material given on this Sheet is taken from the Manual of Safety Requirements in Theatres and other places of Public Entertainment published by the Home Office, 1935. The recommendations given in this Manual and here quoted form a code of minimum requirements for the guidance of Local Authorities.

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...four glazed & two wooden panels to each side

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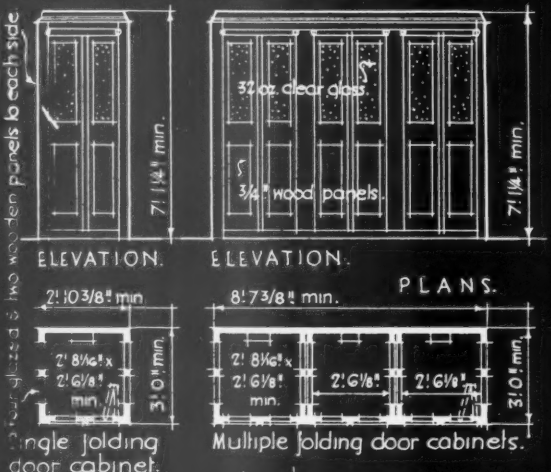
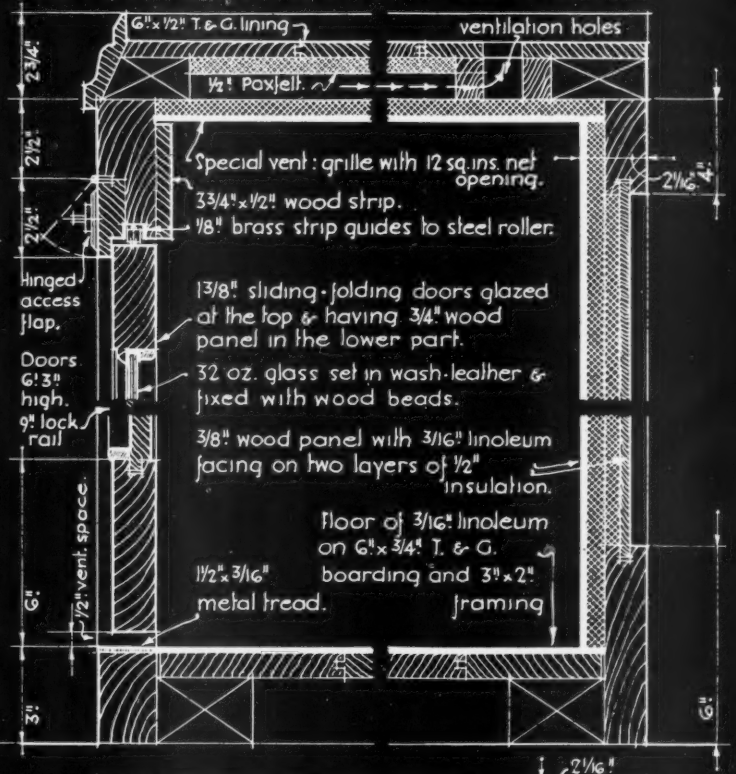
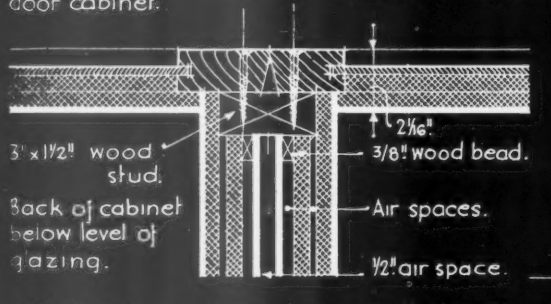
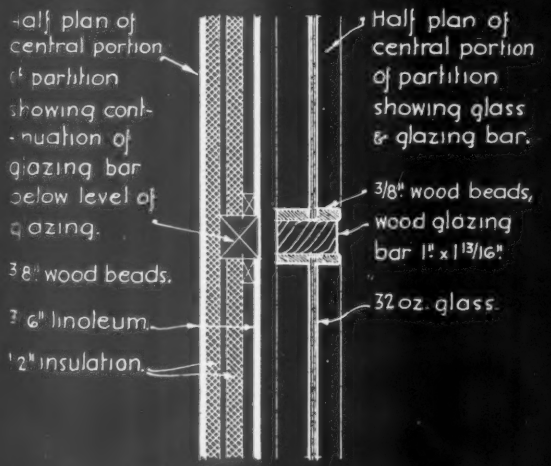
DIAGRAMS OF CABINETS FOR INTERNAL USE SHOWING INTERNAL & OVERALL SIZES.

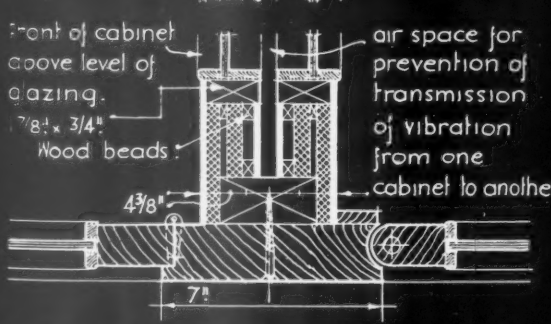


DETAILS OF CONSTRUCTION : FOLDING DOOR CABINETS. SECTION ACROSS CABINET. Scale : 3/16" = 1'

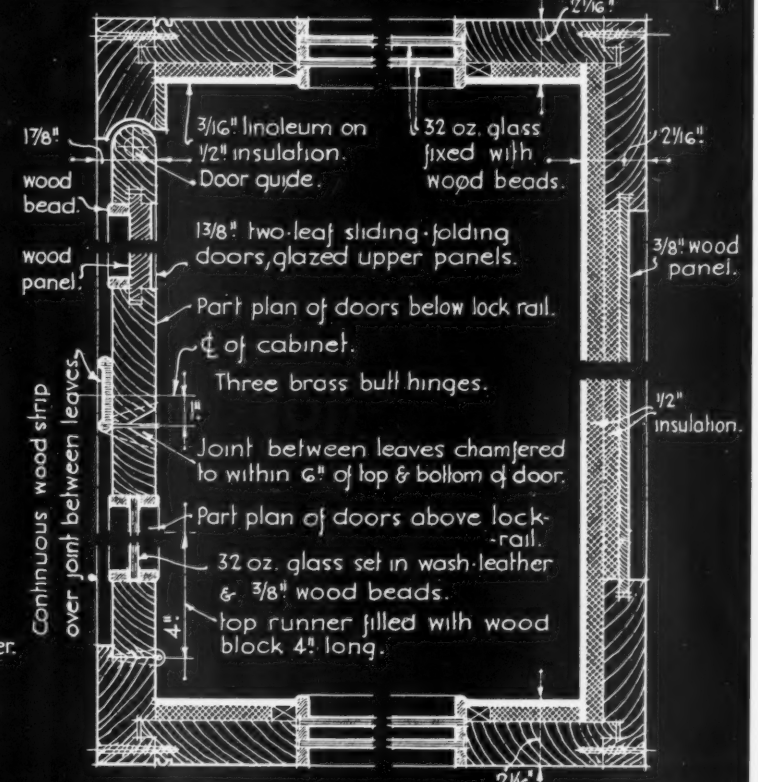








PLAN OF PARTITION BETWEEN MULTIPLE CABINETS. Scale : 3/16" = 1'



PLAN OF SINGLE FOLDING DOOR CABINET. Scale : 3/16" = 1'

Information from the Post Office Engineering Department.

INFORMATION SHEET : THE CONSTRUCTION & SOUNDPROOFING OF TELEPHONE CABINETS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar a. Bayne.

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INFORMATION SHEET
• 450 •
TELEPHONE CABINETS

General :

The details given on this Sheet show the construction and sound proofing methods recommended by the Post Office Engineering Department for telephone cabinets to be installed in buildings or sheltered situations.

The details illustrate the latest practices adopted by the Department, but they should not necessarily be regarded as rigidly standard methods. In its own installations the Department is continually conducting experiments with methods and materials, and improvements thus evolved are incorporated in the design of the cabinets from time to time.

Size of Cabinets :

The internal sizes given on this Sheet are recommended by the Department as minimum dimensions only ; where strict economy is not essential, and space is available, the sizes may be increased with advantage, but dimensions greater than 3′ 0″ × 3′ 0″ inside and 8′ 0″ high are considered to be unnecessary.

Design :

The design of cabinets is controlled by three main factors.

(*a*) The ventilation requirements.

(*b*) The sound-proofing requirements.

(*c*) The desirability of a form of construction which permits all units to be made in the workshops and readily erected at the site.

Types :

The drawings shown are confined to the Department's standard type of folding door cabinet for standing use, and deal with single as well as multiple units.

Cabinets may be designed with a single outward opening and self-closing swing door if desired, fitted with a pull handle on the outside. For this type, no overhead guides or rollers are required, and the hinged access flap at door head level is unnecessary.

When swing doors are fitted by the Department, a special type of lever handle is used to pull the door firmly against the stops. If these handles are not readily available a ball catch or commercial latch may be used, but it would then be desirable to use felt or draught tubing to provide a good seal.

Construction :

Cabinets are constructed of 1⅜″ finished wood framing to sides, back and roof with 1⅞″ finished fronts as shown. The sides are double glazed above and wood panelled below the door middle rail level, while the back is formed of one large wood panel. The partition between multiple cabinets is double glazed at the top to line around with that in the sides and door. The ceiling is framed with 3″ × 1⅜″ members lined above with 6″ × ½″ T. & G. boarding, and the floor is composed of 6″ × 1″ T. & G. boarding on 3″ × 2″'s.

Folding Doors :

These are 1⅜″ finished thickness, clear glazed above and wood panelled below the 9″ middle rail. The two leaves are of slightly unequal width and are hinged together to fold inwards to one side as indicated. The middle hinged stiles are chamfered to within 6″ of the top and bottom on the inside, to prevent clothing being caught when the caller pushes the leaves shut. The doors are hung to the jamb of the cabinet in the ordinary way, but their movement is controlled by a ½″ steel roller running in brass strip guides at the head. This track is filled with a 4″ wood block at the hinge end to prevent the doors from folding right back against the side wall.

The doors are designed so as to be always open when the cabinet is unoccupied, and they may be closed and opened only from the inside. A loop handle is fitted inside on the lock rail of the leading half of the door to allow it to be opened from the inside. In the event of an emergency, or when the occupier is unable to slide the doors open himself, the hinged access flaps on the outside are released, thus freeing the roller from the overhead guides and permitting one leaf of the doors to be opened outwards from the exterior.

Ventilation :

Through ventilation of the cabinets is obtained by means of the ½″ clearance below the doors, in conjunction with a special ventilating grille in the ceiling, with access through the roof to drilled holes at the rear of the ½″ roof lining. The ventilation holes should be at least 12″ from the nearest point of the grille.

Soundproofing :

Both sides, the back and the ceiling of the cabinets are lined inside with ½″ insulating board, the back having two thicknesses, and an additional ½″ thickness of Paxfelt is placed in the roof immediately below the top lining as indicated. The ceiling insulation is pierced for the 12 sq. ins. net of ventilating opening. The whole of these internal insulating surfaces, as well as the floor boards, are lined with 3/16″ linoleum, which is cemented to the insulation during assembly at the workshops.

The partition between multiple cabinets is built up of layers of ½″ insulation and 3/16″ linoleum as shown, each layer being separated by an air space.

Wash leather around the glass in the doors and partitions may also be used if desired.

Assembly :

The front, sides, back, floor and roof of each cabinet is constructed separately, and the whole assembled on the site by means of countersunk screws. Dividing partitions are erected similarly.

Cost :

The approximate cost is £25 per cabinet.

Information from : The Post Office Engineering Department (S. Branch)
Address : G.P.O. (Alder House), London, E.C.1
Telephone : National 6321, Extension 738