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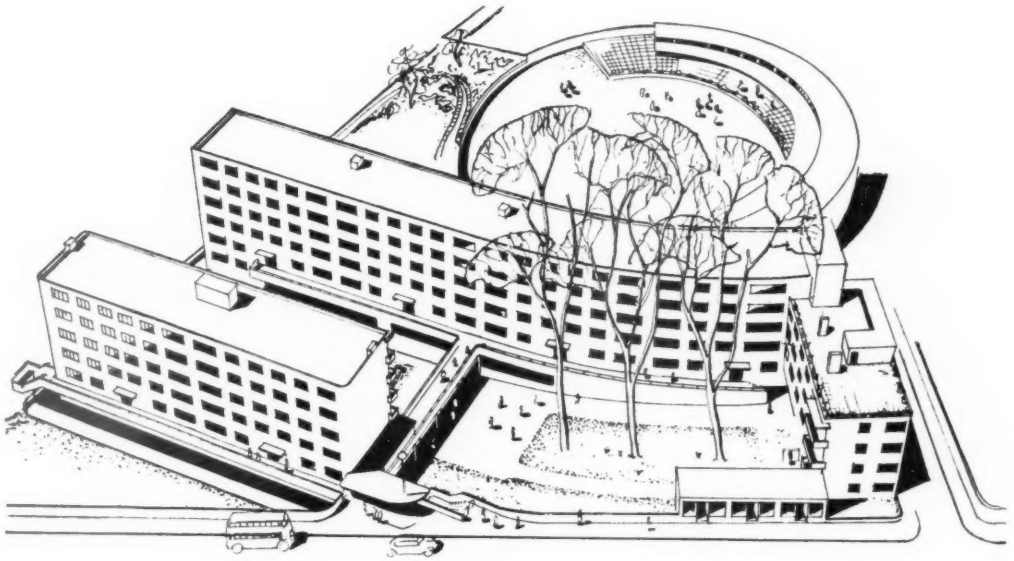
The Editor will be glad to receive MS. articles and also illustrations of current architecture in this country and abroad with a view to publication. Though every care will be taken, the Editor cannot hold himself responsible for material sent him.

PRINCIPAL CONTENTS

* *The Working Details are temporarily suspended until the conclusion of this series.*

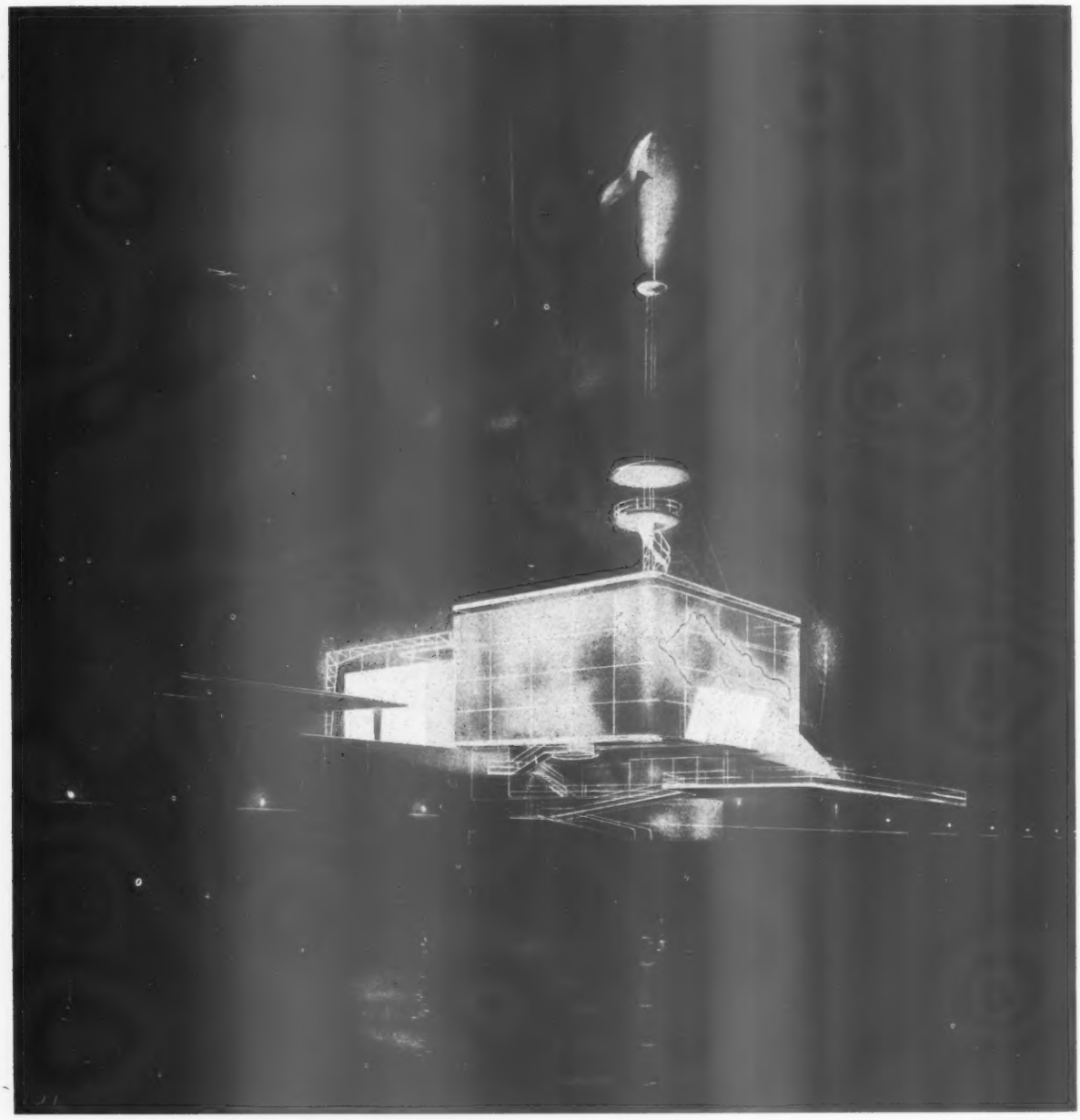
OPENED LAST MONDAY

KENSAL HOUSE, LADBROKE GROVE, W.10.



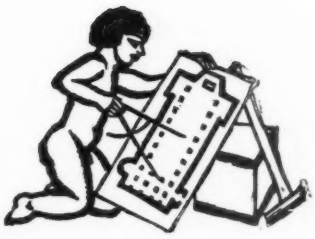
AN axonometric of Kensal House, Ladbroke Grove, W.10, which was opened on Monday last by Sir Kingsley Wood, Minister of Health. It comprises 68 flats and a nursery school and has been built by the Capitol Housing Association (Gas, Light and Coke Co.). The Executive Architect was E. Maxwell Fry, who worked in consultation with Robert Atkinson, C. H. James, Michael Tapper, G. Grey Wornum and Elizabeth Denby (Housing Consultant).

Further illustrations of the scheme are given on pages 466–468.



PAVILION AT THE PARIS EXHIBITION

A drawing of the Czecho-Slovakian pavilion at the Paris Exhibition which opens in June this year. The view shows the building as it will appear from the Seine at night.



BUILDING AND DEFENCE

THE sum of £1,500,000,000 which the Government contemplate spending on defence during the next five years has been taken calmly by those who will have to pay for it. The public have shown that they do not feel that this expenditure outruns the necessities of our present situation—whatever they may think about the statesmanship which has led to the international position today.

But an admirable superficial calmness over finding £300,000,000 a year does not hide a dual uneasiness about the results of its expenditure. There is the primary uneasiness concerning the end of international rearmament on so grotesque a scale, which does not come within this JOURNAL's comment ; and the secondary and more immediate uneasiness of the ordinary citizen over the effects of the defence programme on his own livelihood.

If it is assumed that rearmament expenditure will be successful in preventing war, this secondary uneasiness is of enormous importance. For it deals with the sole really modern contribution to international affairs. When all the inhabitants of a nation are likely to be directly involved in a war, it is only logical for all of them to help in preparing to defend themselves. Today the larger countries in Europe are in just this situation, which some of them have met by organizing all production on a war basis.

Great Britain, in turn beginning to rearm, has rejected this total industrial mobilization with all its certainties of terrible wastefulness, industrial dislocation and purely destructive aims. It is trying instead to defend the peace-time livelihood as well as the lives of its inhabitants. It is employing its existing munitions factories to capacity, preparing a "shadow scheme" for hugely increasing their production should a greater emergency arise and still give time to do so, and hopes that while doing these things its normal industrial life will be disturbed as little as possible.

The solution is one of compromise, a typically British solution which for once seems none the worse for being British. But it possesses at least one grave danger—that it depends for its success on exceptionally skilful arrangement and co-ordination between the industries of peace and war. And British industry, shapeless, haphazard, still mostly subscribing to the policy of enlightened self-interest and disliking any form of interference, is not likely to prove very easy to guide and to regulate.

The Government has recognized the need for industrial regulation by the appointment of a Minister for the Co-ordination of Defence. It made a virtue of two evils by arranging for the "shadow scheme" munitions factories to be placed in distressed areas, and has tried to evolve a system of preventing outrageous profiteering. But in its determination to interfere as little as possible with normal industry it is questionable whether the Government realizes the extent to which modern methods of warfare have changed the industries of peace into part of the munitions of war, or the degree of co-ordination which will be necessary in those of any size.

The building and allied industries is one of the largest and most peaceful in the country. Four years after one of the worst slumps in its history it is enjoying general prosperity, and by its stabilizing influence is doing much to guarantee the taxation which is necessary for defence expenditure. For its stability to continue it must avoid a sudden restriction of output and equally it must avoid a large volume of new work being offered to it which can only lead to a boom in prices at a time when the industry is already working at something near capacity. In fact, its output for the next few years must be very carefully planned.

Speaking at Newcastle recently, Sir Thomas Inskip, the Minister for the Co-ordination of Defence, hinted that some restriction of output might be necessary in building in order that rearmament should not be held up. He did not, however, give any details of the way in which regulation was to be carried out, although Government expenditure on building work is likely to rise from about thirteen to about fifty millions a year for the next few years.

It would therefore seem wise for the industry to take thought for its own future; for architects, builders and the Building Industries National Council (who have been working for years on this very problem) to suggest to the Government that some co-ordination to secure a steady volume of building might be started at once. There are three great building clients in this country : the Government, local authorities, and the general public. The work offered by the first two to the industry can be exactly controlled without fuss or panic ; that of the public cannot.

If the service departments want to place an extra thirty-five millions of work with the industry during the next few years they can only avoid a fantastic price boom by arrangement. Post offices, exchanges and county courts can be delayed, as well as all municipal work other than slum clearance and schools, until the turnover of the industry falls sufficiently for them to be placed at an economical price.

And if expert opinion decides, as it may very reasonably do, that a great deal of Government and municipal work is far more urgent than much private building, it is even more essential for a tactful system of control to be thought out before private enterprise becomes frightened by some bogy of control into refusing to build at all.

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NOTES & TOPICS

REGISTRATION UPSET

THE progress of the Architects' Registration Bill, 1937, on what had seemed an encouragingly smooth passage to the Statute Book has been abruptly checked. The Incorporated Association of Architects and Surveyors has circulated to Members of Parliament a letter and a memorandum, the former demanding an enquiry into the Registration Council's administration of the 1931 Act; and the latter claiming to give chapter and verse.

*

Architects will be very dismayed by this occurrence. To protect those now practising as architects, to ensure by examination a sound minimum standard of all-round ability in future architects and to restrict the name of architect to those so qualified seemed a development which was both necessary and inevitable.

*

The view of the I.A.A.S. seems to be that the Registration Council is run by the R.I.B.A. for the R.I.B.A. and that the Association's own qualifying examination has been unfairly refused recognition because of the determination of the R.I.B.A. to create an architectural monopoly.

*

The profession in general may hold other views, but the memorandum which the I.A.A.S. has sent to M.P.s should be replied to.

*

If the statements made are true the obvious deduction of an outsider would be that the majority of the Registration Council got tired of the I.A.A.S. and, confident of the support of most architects and nearly all the public, proceeded to speed things up with an engaging high-handedness.

The allegations may be individually petty, but in the aggregate they are probably weighty enough to alarm M.P.s.

ROME AND TITE PRIZES

My remarks last week about the attitude of the A.A. School and the Liverpool School to the Rome Scholarship and to the Tite Prize have been rather misunderstood in Liverpool. Professor Budden's letter, together with my own reply, appear elsewhere in this issue.

DARTS AND THE ARTS CLUB

Darts are gradually taking a major place in the world of sport. However many records Britain may have lost to America and the Continent during the last twenty years, it still holds true to its tradition of giving new games to the world.

*

Darts have long since spread from the village inn to the town pub. That is not all—this week the more solemn precincts of 40 Dover Street, in modern phrase, went Darts. The Arts Club played the A.A. a home match, and if most of the players might have qualified equally well for either side, it was, nevertheless, a grand evening. F. R. Yerbury always did throw a pretty dart, and John Easton provided the element of surprise. Some members of the club enjoyed a new thrill, and as one old R.A. said, his gardeners played the game and so it was interesting to know what it was all about.

A TOWN MANSION

There is, rather surprisingly, to be another great club in Piccadilly. The lease of 148 is falling in and the contents are to be auctioned next week. Number 148 is, perhaps, famous chiefly because it was there that Nathan Meyer Rothschild said to a stout visitor: "Take two chairs." The sort of joke our grandfathers chuckled over for hours.

*

At any rate, this mansion has for long been the London

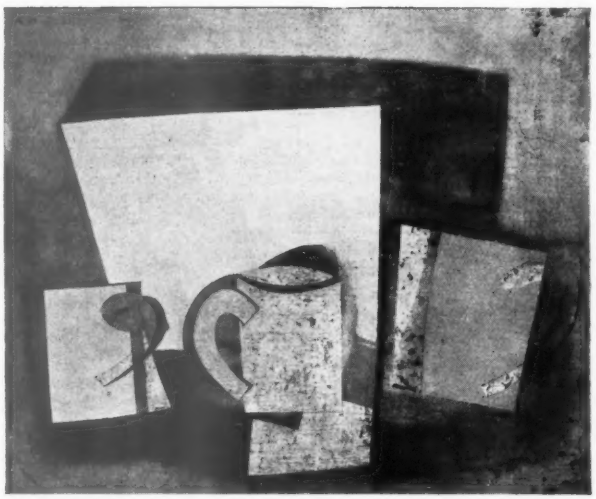
ARCHITECTS
REGISTRATION

A Memorandum for Members of Parliament

N.B. It is highly undesirable that so important a matter should be made to appear largely a struggle between two professional interests in the same territory.

The main question is the public need in this matter and the public interest.

The Memorandum which has been sent to Members of Parliament by the Incorporated Association of Architects and Surveyors. See Astragal's note on this page.



From an exhibition of paintings by Ben Nicholson at the Lefèvre Galleries. The picture is in the collection of Mr. Whitney Straight. *(See review on page 460.)*

headquarters of the great cosmopolitan family. I do not know whether the contents will fetch great prices, perhaps they are too "late," but one looks forward to the ormolu and bibelots that will soon become indecently public—the Directoire mirrors and the third Empire gasoliers.

*

That short but rather magnificent group of mansions in Piccadilly is losing feather. Apsley House—"Number One, London"—seems scarcely lived in, another has been turned into "exclusive" flats, and number 145 having achieved glory as a temporary palace is now deserted. In exchange for these lost sentimentalities we have, of course, the simplicity of Athenæum Court a few doors away.

THE NEWER SIGNPOSTING

I have heard Mr. Eric Gill more than once on the subject of sculpture and architecture, but, judging by press reports, he seems to have elaborated his theories slightly at a meeting last week in Dublin. While he still maintains that sculpture has really no place at all in machine-made building, he none the less admits that "there *is* a kind of sculpture, not, strictly speaking, architectural, but nevertheless connected with architecture.

*

"This is the sculpture of images, which are not required by the architect as an embellishment for his building, but which the building owner needs to signify the purpose of his property."

*

In other words, the shop sign. Now that the Building Centre has had quite a successful show of inn signs, it is up to somebody to arrange a display of shop signs. But anyone invited to collaborate in their selection might remember that the preliminary research will not be *quite* so interesting.

*

WIRELESS IN FLATS

A friendly law action between the Postmaster-General and a Mr. Bell has produced a ruling that tenants of flat blocks, or, for that matter, anyone else who has a loud-speaker and a programme distributed from a central station, must take out a wireless receiving licence at the usual rate of ten shillings a year.

*

There was a good deal of complicated legal argument as to what precisely constituted "working" a wireless set, but common sense and justice were, for once, upheld by the law.

*

The ruling is simple enough, but I foresee some mild fuss and bother. Does the landlord or the tenant pay, and, if the landlord, what happens over empty flats? Too complicated, I think, so it's more likely that the charge will be passed on to the tenant, and, from what I know of the fantastic rents which are asked even in suburban flat blocks, the extra ten shillings won't make the slightest difference.

BAYSWATER

Those mute white terraces of the Bayswater Road, strongholds of Victorian domesticity (did not Timothy Forsyte die in one of them at the age of 101?) are being demolished, only to be replaced by unimpressive small brick houses.

*

A former president of the R.I.B.A. set the example to the neighbourhood with his own house, and his design, however excellent in itself, never I imagine even pretended to be in sympathy with its surroundings. Perhaps Sir Giles thought Bayswater a little too late to be good, and now, his own work seems to be the model for the neighbourhood.

"Q" HOUSE?

Ever since the television programme told an area of England, containing more than a quarter of the total population of the country, that a white house is a nice house in which to live, I have listened to arguments for and against whiteness.

*

A man who is always reduced to a sentimental beatitude on mention of the white cliffs of Dover or the white cottages of Capri, stares in bristling horror at the white walls of new England.

*

But last week-end I met a wealthy widow who actually wanted a white house—but dare not order one. What, she said, would happen to the house, on her own little hill-top in Kent, if some enemy aeroplanes came over; They would of course immediatly see the place, make a slight detour and destroy it.

*

I sympathized, of course, and murmured something about "Q" ships during the last war, and even offered to work out a camouflage scheme to half-inch scale. Her handymen-about-the-stables could do the job in half a day—and it would look rather fine.

FRIERN BARNET

In the conditions for the municipal buildings at Friern Barnet the promoters state that they do not require a "modern building," but one that is "simple and efficient." So now we know.

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

THAMES BRIDGE PLAN

The Gravesend Town Council has appointed a committee to consider the practicability of a bridge over the Thames from Gravesend to Tilbury.

TUBE PROTEST

A considerable number of local authorities and societies are joining in protests against the proposal to place the terminus for the proposed Elstree extension of the Edgware Tube at the junction of the Watford By-pass and the Bushey–Elstree Road. It is pointed out that the site is in a purely agricultural area which it is proposed to add to the Green Belt, and that the building of a station would lead to immediate building development.

STEPNEY HOUSING

The Duchess of Gloucester last week opened Searle House, the third block of flats built by the Stepney Housing Trust at a cost of nearly £10,000.

NEXT YEAR'S B.I.F.

The British Industries Fair of 1938 will be held in London and Birmingham from Monday, February 21, to Friday, March 4. The total attendance at this year's Fair in London was 223,398, as against 221,383 last year, and in Birmingham, 152,649, as against 143,783 for 1936.

TOWN AND COUNTRY PLANNING

The Minister of Health, Sir Kingsley Wood, has circulated to all local authorities preparing planning schemes a revised edition of the Model Clauses on which the schemes will be based. Following the coming into operation of the Town and Country Planning Act, 1932, the present Model Clauses were issued provisionally in February, 1934, and finally, after examination and some amendment by the Town and Country Planning Advisory Committee, in January, 1935. The recent revision has been carried out with the concurrence of the Committee.

The main alteration in the revised edition is the introduction of new clauses dealing with the control of flats in planned areas, and with the siting of buildings.

The clauses can be obtained from His Majesty's Stationery Office, or any printer, price 2s., with explanatory notes, 1s. without explanatory notes.

THE ARCHITECTS' DIARY

Thursday, March 18

R.I.B.A., 66 *Portland Place, W.1. Exhibition :* " *Airports and Airways.*" *Until March 24.* 10 *a.m. to* 8 *p.m.* (*Saturday* 10 *a.m. to* 5 *p.m.*).

BUILDING CENTRE, 158 *New Bond Street, W.1. Exhibition :* " *Science and Building.*" *Until March* 25. 10 *a.m. to* 6 *p.m.* (*Saturday, March* 20, 10 *a.m. to* 1 *p.m.*).

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Exhibition of linocuts, organized by the A.A. Students' Art Club. Until April* 3. *Also, last of series of lectures to Junior Members :* " *Psychology and Colour Decoration.*" *By John M. Holmes.* 8 *p.m.*

SOCIETY OF ANTIQUARIES, *Burlington House, W.1.* " *The Egerton Genesis and the M. R. James Memorial Manuscript.*" *By Dr. Eric Miller.* 8.30 *p.m.*

INSTITUTION OF CIVIL ENGINEERS, *Storey's Gate, S.W.1. Joint meeting with the Institution of Structural Engineers.* " *The New German Railway Bridges.*" *By Dr. Ing. Schaper.* 6.30 *p.m.*

INSTITUTION OF STRUCTURAL ENGINEERS. *Yorkshire Branch. At the Hotel Metropole, Leeds.* " *Prestcore Piles and their Application.*" *By A. Hood.* 7 *p.m.*

CONFERENCE ON AIR-RAID PRECAUTIONS. *At Essex Hall, Essex Street, W.C.2. Speakers : Professor J. B. S. Haldane, Dr. J. R. Marrack and Miss L. M. Sweet.* 6.15 *p.m.*

Friday, March 19

BRITISH ELECTRICAL DEVELOPMENT ASSOCIATION. *Annual Luncheon. At the Savoy Hotel, W.C.* 1 *p.m.*

LONDON SOCIETY. *Annual Meeting. At the Royal Society of Arts, John Street, Adelphi, W.C.*

Saturday, March 20

ST. PAUL'S ECCLESIOLOGICAL SOCIETY. *Visit to the Mansion House.* 2.30 *p.m.*

Monday, March 22

R.I.B.A., 66 *Portland Place, W.1.* " *The British School at Rome.*" *By Professor W. G. Halford and A. G. S. Fidler.* 8 *p.m.*

Wednesday, March 24

BUILDING CENTRE, 158 *New Bond Street, W.1. Lecture in connection with the* " *Science and Building*" *Exhibition.* 8 *p.m.*

THE GROPIUS DINNER

The farewell dinner to Professor Gropius, who has now left to take up his appointment as Professor of Architecture at Harvard University, was held recently at the Trocadero Restaurant.

There was a remarkable response to the announcement of the dinner and an actual attendance of 140, the full capacity of the room, meant the refusal of a number of late applications for places. Professor Julian Huxley was in the chair and a distinguished attendance included Mr. H. G. Wells, Mr. Ray Atherton (counsellor to the American Embassy), Sir Herbert Samuel and Dr. Siegfried Giedion. A memorial menu was designed by Professor Moholy-Nagy. The speakers, besides the chairman, were Professor W. G. Constable, Mr. Geoffrey Faber, Professor Lionel Budden, Mr. E. Maxwell Fry (Professor Gropius's partner while he has been in England), and Mr. Herbert Read. These speakers were followed by Professor Gropius himself, extracts from whose address are given below :—

The balance and poise of the average man in this country is an achievement which everybody envies you and which is really worth any sacrifice. Each country in the world has, of course, to put up with the particular drawbacks of its particular merits, and the minute we realize that, the door is opened to a complete understanding and mutual appreciation. There is one thing, however, which has worried me now and then, because I could not quite fit it into my own conception of the English as a pioneering and enterprizing nation. It has struck me as an architect that a nation which in the past found a way to express itself so perfectly in its buildings—one need only think of Bath and the beautiful unity of Georgian architecture—does not seem to be so keen now on taking the same chance; that is, to create a style in accordance with its social structure and twentieth century way of living. Our modern life may have and certainly has many drawbacks, but so had former styles of living. This never prevented people from shaping their surroundings into forms, adequate and peculiar to their time and their economical and technical conditions. It has been the mark of our generation to lose confidence and pride in our creative artistic qualities and consequently hang on to the past. This feature is perhaps more conspicuous in England than in other countries because its peaceful development through centuries has preserved all the old beauty and made people very much aware of the fact that mere progress does not necessarily produce culture.

Still, I think that to turn away from the ugly present to soothe our eyes with the lovely past is no satisfactory way out and should not be the attitude of the dissatisfied. That is why I should like to draw your attention to the efforts of those architects in this country who want to face the problems of *our* day and *our* future and want to find a remedy for the wrongs and faults of our present life. I know they find it extremely difficult to introduce their methods of thinking, but I trust that they will succeed eventually. My feelings are very much with the " Mars-Group," that group of English architects who are trying to bring the whole range of their profession again into harmony with our life of today. I think their efforts will soon be appreciated in this country.

ANNOUNCEMENT

Mr. Gilbert H. Jenkins, P.I.L.A., F.R.I.B.A., has taken into partnership his son, Mr. G. Laurence M. Jenkins, A.R.I.B.A. The title of the firm will remain as formerly : Romaine-Walker and Jenkins.

OBITUARY

R. GOULBURN LOVELL

Mr. Richard Goulburn Lovell, whose death at the age of seventy-five was announced in our last issue, was a Fellow of the R.I.B.A., and a member of the Council of that body. He was also the founder of the South-Eastern Society of Architects, becoming successively its secretary and its president, a position which he still occupied at the time of his death. He was a member of the Advisory Panel of Architects for the south-eastern area ; a member of the Architects and Builders Consultative Board ; and an Associate of the Town Planning Institute.

Mr. Lovell was well known for his work in connection with the furtherance of architectural education. He devoted much of his time to lecturing to young architectural students, and he was in the middle of a course of lectures at the Brighton Art

School. He had also given courses of lectures at art schools at Hastings, Canterbury and Tunbridge Wells.

Mr. Lovell was responsible for a large amount of work abroad, including numerous hotels and other large buildings in Spain, South America and Japan.

T. W. FAIRBROTHER

We regret to announce the death of Mr. T. W. Fairbrother, L.R.I.B.A., of Messrs. Fairbrother, Hall and Hedges, Chartered Architects and Surveyors, of Blackpool. We are informed that the practice is being continued in the same name, and in the sole charge of Mr. Harold M. Hedges, L.R.I.B.A.

REGISTRATION

We understand that a circular letter has been addressed by the Incorporated Association of Architects and Surveyors to Members of Parliament, asking that before further powers are given to the Architects' Registration Council of the United Kingdom an enquiry should be held into the administration of the principal Act since it became operative in 1932.

In this letter the I.A.A.S. claims to be prepared to submit evidence of unfair treatment, and defective administration of the Scholarship Fund.

The A.R.C. replies to these statements by showing that in its administration of the Fund in question it is only carrying out the suggestion of the Privy Council that the full amount set aside annually for the Scholarship Fund should not be expended in one year, but that a progressively graduated scheme for scholarships, increasing from year to year, should be instituted in order to accumulate a reserve fund for use in perpetuity, and that in pursuance of this policy the balance of money not expended on Scholarship grants has been carried to a reserve fund and has not been wastefully expended in overhead charges.

SLUM CLEARANCE AND REHOUSING

The most recent figures showing the position of slum clearance and rehousing are summarized below.

Clearance Areas and Orders

During February local authorites declared areas comprising 5,088 houses representing the displacement of 21,401 persons, as compared with 4,336 houses and a displacement of 16,787 persons in January.

The Orders submitted during February covered 5,850 houses and the displacement of 24,654 persons, as compared with 2,802 houses and the displacement of 11,275 persons in January.

The Orders confirmed during February covered 2,832 houses and 11,710 persons as compared with 4,128 houses and 17,240 persons in January. The total number of houses in confirmed Orders is now 131,000 involving the displacement of 566,148 persons.

Rehousing Progress

The latest available figures are those for January. At the end of that month there were 58,140 houses under construction as compared with 56,549 at the end of December and 57,093 at the end of November. 5,761 houses were completed during January as compared with 5,450 during December and 5,620 during November.

The great majority of these houses are being provided for rehousing persons displaced in connection with slum clearance schemes.

New houses approved during February numbered 7,798 as compared with 6,627 in January and 6,204 in December.

A drawing of the U.S.S.R. Pavilion at the Paris Exhibition.

HOUSING PROGRESS : SCOTLAND

In January Scottish local authorities completed 1,086 houses. The number completed in January last year was 1,165. The number of houses, 21,038, under construction by local authorities at the end of January was the highest figure yet reached. In the same month, as the result of action by local authorities under the Housing Acts, 915 unfit houses, occupied by 4,458 persons, were vacated and 431 overcrowded families were transferred from fit houses to larger houses.

THE MARTELLO TOWERS

The Office of Works has informed the Folkestone Town Council, which contemplates the demolition of a Martello tower on the east cliff, that the unnecessary removal of any of the remaining Martello towers would be strongly deprecated.

The preservation of these towers, of which 34 remain of the original 75, is to be considered by the Ancient Monuments Board.

COMPETITION NEWS

HOUSING AND HEALTH EXHIBITION, GLASGOW

The Glasgow Corporation invites architects to submit designs for a block of semi-detached five-apartment cottage houses, suitable for a corner site, and designs for a flatted block of four four-apartment houses. The following assessors have been appointed : Mr. John Wilson, F.R.I.B.A., Mr. T. G. Gilmour, F.R.I.B.A., and Mr. J. H. Ferrie, L.R.I.B.A. The following premiums are offered : five-apartment cottage : £70, £40 and £25. Four-apartment house : £80, £50 and £30. Conditions of the competitions are obtainable from the Manager, Kelvin Hall, Glasgow. The latest date for submission of designs is May 7 next.

In 1935 and 1936 the competitions were confined to architects in Scotland, but on this occasion the competitions are open. The winning designs and some of the other designs will be exhibited at the Housing and Health Exhibition to be held at Glasgow in October.

R. I. B. A.

INFORMAL GENERAL MEETING

The next informal general meeting will be held on Wednesday, March 24, 1937, at 6.15 p.m.

The meeting will be devoted to a discussion on "Modern Architecture and the Countryside." The discussion will be opened by Mr. E. Maxwell Fry, B.ARCH. (LVPL.) (A), Mr. William Palmer, secretary of the Society for the Protection of Ancient Buildings, and Mr. Stanley C. Ramsey (F.)

DESIGNS FOR HOUSES

The following notice was issued by the R.I.B.A. on March 11 : "The conditions of the competition for designs for houses and bungalows on South Coast Estate are not in accordance with the regulations of the R.I.B.A. The Competitions Committee is in negotiation with the promoters in the hope of securing an amendment. In the meantime members should not take part in the competition." On March 16 the R.I.B.A. informed us that the Seaford Downs Estate Ltd. have decided to withdraw their proposal to hold a competition.

ELECTION OF MEMBERS

At a recent meeting of the Council of the R.I.B.A., the following members were elected :—

As Fellows (8) : Messrs. H. T. Barnard ; W. E. Brooks ; S. Mann ; H. A. Mealand ; W. A. Ross ; L. W. White, B. P. Davies ; and E. D. Griffiths.

As Associates (90) : Messrs. J. M. Aitken ;

A. Akeroyd ; F. J. Amott ; A. H. Antrum ; F. Appleton ; A. J. Ardin ; W. H. Barrett ; T. J. Barrow ; W. J. Bayliff ; P. B. Beard ; S. W. Birnage ; E. W. Blackbell ; A. C. Braven ; (Miss) M. J. Broadbent ; F. H. Brown ; K. C. Brown ; R. G. Brown ; H. S. Butcher ; R. C. Butler ; R. W. Cave ; F. W. Charles ; M. B. Chit ; W. Clarkson ; J. L. Coghill ; C. E. Collyer ; D. M. Craig ; R. H. Crompton ; E. W. Donati ; N. C. Downie ; P. W. Edwards ; E. Farrow ; C. F. Fox ; M. J. Goodchild ; A. Graham ; A. M. Graham ; H. N. Grosvenor ; H. M. Haddock ; D. M. Hall ; H. W. Hawkes ; G. Hay ; R. M. Hewlett ; S. W. Higgins ; D. M. Hodges ; W. R. Hurry ; R. F. Hutchison ; C. H. Jackson ; F. G. Jackson ; C. J. Keates ; J. W. Keeling ; J. Kernohan ; A. E. Knight ; E. G. Knight ; R. B. Lang ; G. Lindsay ; D. E. Lloyd ; A. Low ; M. J. McDermott ; A. D. McGill ; I. McInnes ; E. D. Mills ; (Miss) M. F. Muirhead ; J. Muskett ; A. J. Newton ; G. Owen ; J. L. Parnaby ; R. L. Passmore ; A. Paton ; C. G. Pinfold ; G. W. Pitter ; F. T. Pritchard ; (Miss) H. M. Richards ; T. Rothwell ; A. C. Roy ; A. G. Sinclair ; C. Solomon ; G. Somerton ; K. A. Spare ; J. S. Stedman ; J. A. Tadman ; J. W. Taylor ; I. H. Thomas ; A. J. Tolhurst ; J. E. Toomer ; (Miss) G. M. Turner ; G. Ward ; J. Whittam ; C. P. Williams ; E. F. Wilson ; J. A. Wonnacott ; and A. M. Wright.

As Licentiates (5) : Messrs. J. E. Colley ; H. O. Hawkins ; W. H. Quemby ; T. J. Williams ; and H. A. Woodall.

EXHIBITIONS

For some years Ben Nicholson has been exploring the possibilities of severe and yet severer self discipline in painting, until his present work seems to have reached the final limits of asceticism both in colour and design. Originally a rich colourist he uses mostly, in his latest work, off-white and neutral tones, and the recessions of his compositions have gradually become the flat incised planes that, together with their shadows, form the design. In looking at the work that he is doing now, one asks oneself whether this is not perhaps the ultimate possible development along his chosen lines—whether in fact it is not a cul-de-sac from which he will eventually have to return.

The present exhibition of his Still Life Paintings at the Lefevre Galleries contains no examples of this very recent work, though some of it is dated as late as 1936, and for that reason it is particularly interesting, for here one can see the gradual renunciation of complex designs and colours, which leads inevitably to the final severity of his work to-day. Ben Nicholson is working on parallel lines to the modern architect, in terms of reduction to the simplest forms, but without the architect's practical limitations—and the parallel is provocative, for what happens when the final development of an increasingly ascetic technique has been reached ?

The London Group Exhibition at the Leicester Galleries is very much more interesting than usual, as this time it consists entirely of the work of members. The sculpture is on the whole rather disappointing, but many of the painters, amongst them Ivon Hitchens, James Fitton, William Coldstream, Ethel Walker, and Victor Passmore, are showing work of considerable interest.

Still Life Paintings by Ben Nicholson. Lefevre Galleries, 1A King Street, St. James'. Until April 3.

London Group. Leicester Galleries. Until March 25.

LETTERS FROM READERS

The Rome Scholarship in Architecture

SIR,—In your issue for March 11 it is stated that " Two schools are to ignore the Rome Prize." This information is amplified under the heading of " Notes and Topics," where it is made clear that one of the two schools indicated is the Liverpool School of Architecture. As there would seem to be some misunderstanding about the position of the Liverpool School in relation to the Rome Scholarship in Architecture, I should be grateful if you would be good enough to permit me briefly to explain the situation.

Up to 1935, fifth-year students of the Liverpool School, who were admitted to the final competition for the Rome Scholarship, were allowed, in lieu of the thesis design required under the regulations governing the courses leading to the Degree and Diploma, to submit the schemes which they prepare in the final test for the Rome. Since 1935 the work involved in the thesis design prescribed for the Degree and Diploma has been considerably increased : more preliminary research has been demanded and a more comprehensive and thorough development of working drawings. In consequence it has been no longer possible to accept the subject of the Rome competition in place of a thesis subject occupying virtually the whole of a session. It was, therefore, decided that students of the Liverpool School who desired to compete for the Rome Scholarship must defer their candidature till after the completion of their course. This decision has, as far as the Rome Scholarship is concerned, certain positive advantages. It restricts the candidates to those who are relatively mature and therefore better fitted to make profitable use of the opportunities which the scholarship affords ; it also ensures that only those of our graduates enter for the competition who genuinely wish to do so.

The Liverpool School has always appreciated the great potential value of the Rome Scholarship and, so far from wanting to boycott it, counts itself fortunate in being represented again this year in the final competition by two of its recent graduates.

In connection with the observations made about the Rome Scholarship in " Notes and Topics," it is further stated that the Liverpool School has " decided, officially, to concentrate on the more realistic prizes." May I be allowed to add something on this point also ? By " the more realistic prizes " I take it are intended certain of those offered by the R.I.B.A. It is true that we provide facilities in the school for students to enter for the preliminary *en loge* tests for the Soane medallion and Victory scholarships. These tests occupy only one day in each session, and thus do not seriously dislocate our normal curriculum, whilst the final stages of both competitions are arranged by the Institute to take place during the summer vacation. They cause, therefore, no interruption in our regular educational programme and we welcome the interest which a number of our students take in them. But we do not attempt to prepare candidates for these or any other prizes, and would deprecate the suggestion that we propose in future to " concentrate " on such objectives.

LIONEL B. BUDDEN

LIONEL B. BUDDEN
(Principal, School of Architecture, University of Liverpool)

ASTRAGAL

Astragal writes : I am sorry that Professor Budden should have misunderstood my remarks about the Rome Scholarship and the Tite Prize. If he reads them again, I think that he will see that the statement I made about both Liverpool and A.A. students not entering for the " Tite " in future years was made about the " Tite " only, which, I was careful to point out, was " in an entirely different category " from the " Rome."

As to the " Rome," I made certain criticisms of its conditions and of the personnel of the Faculty ; to these I still adhere. I also expressed regret that the " Rome " was not more popular because, to the winner, it ultimately has so much to offer. The reasons for this unpopularity lie partly in my own criticisms and partly in Professor Budden's second paragraph. That Professor Budden, despite these shortcomings in the conditions attached to the " Rome," is able to enter so many successful candidates is a cause for congratulation, and a proof that Liverpool still holds by its fine traditions.

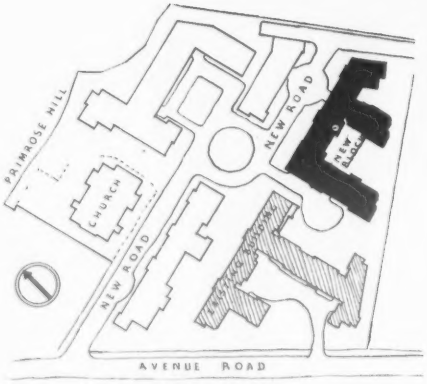
As to Professor Budden's last paragraph, I can only say that I did not intend by the use of the word " concentrate " to imply any undue cramming. Liverpool can, I am sure, take the *en loge* tests for the " Soane " and " Victory " in its stride without holding the absurdly high number of " rehearsal " *esquisses* indulged in by certain other provincial schools.

AVENUE CLOSE: FLATS IN HAMPSTEAD

DESIGNED BY STANLEY HALL AND EASTON AND ROBERTSON

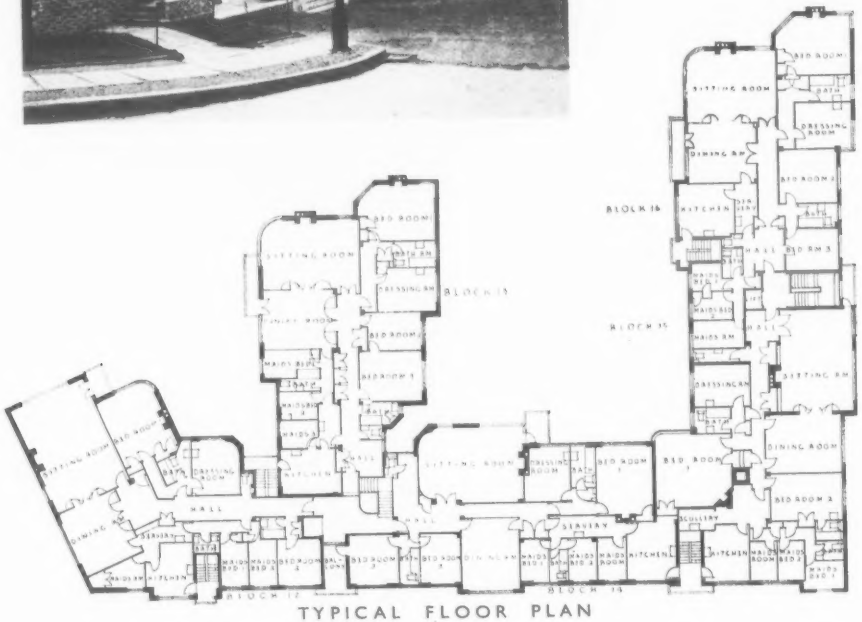
Above is the main entrance on the principal front of the new block facing the new road: and, on the right, is a general view of the principal elevation.

AVENUE CLOSE: BLOCK OF FLATS IN HAMPSTEAD



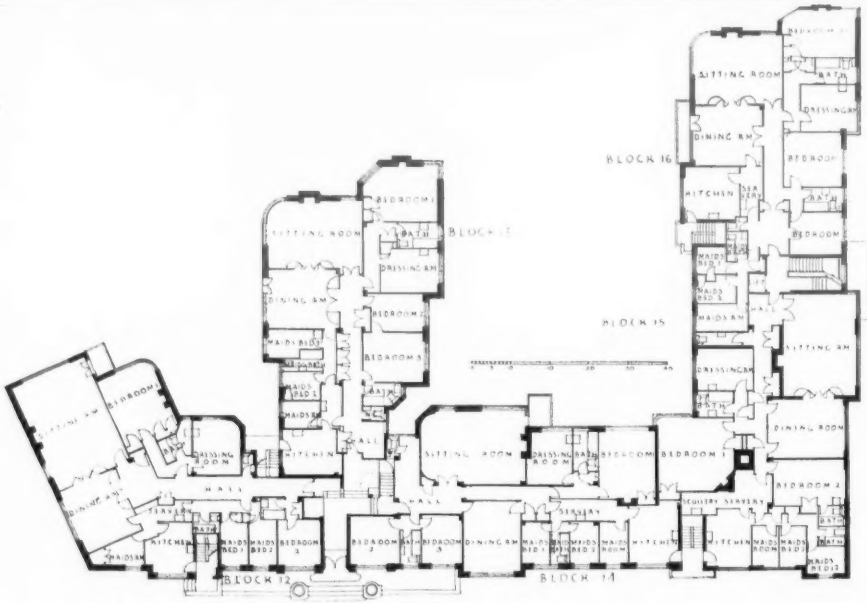
SITE PLAN

The photographs show : left, the main front to the new road ; right, one of the service entrances.

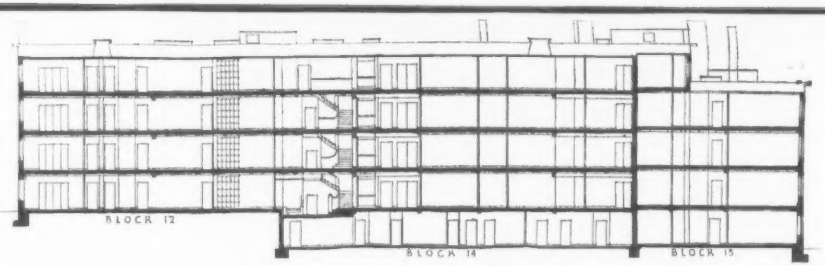


TYPICAL FLOOR PLAN

TYPICAL FLOOR PLAN



BLOCKS, 12, 13, 14: GROUND FLOOR PLAN.
BLOCKS, 15 AND 16: FIRST FLOOR PLAN.



[S E C T I O N

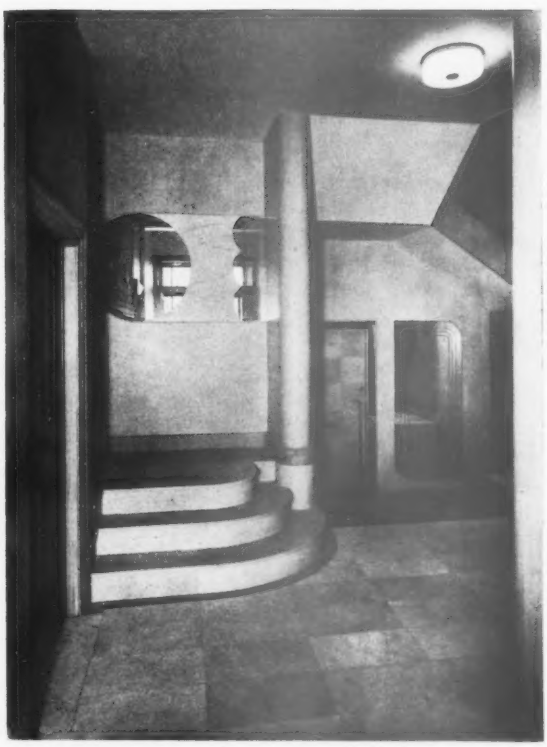
GENERAL PROBLEM—*Flats with a reasonable amount of surrounding garden and individual privacy, with accommodation for families of five or six persons. Town planning requirements necessitated the provision of a through road as direct as possible from Avenue Road to St. Edmund's Terrace; and, under the Town and Country Planning Act, it was necessary to restrict the height of the buildings to three storeys on the Avenue Road front and four storeys to the east. An open court has been provided near the south boundary as a result of the adjoining owner's appeal to the L.C.C. It was stipulated that as many flats as possible should be planned in the form of a peninsula, with sun on three sides. In order to avoid the expense of thick party walls a way through from one end of the building to the other was provided. Advantage was taken of the levels of the site to raise the windows of some of the ground floor bedrooms five to six feet above ground level, thus removing a prejudice against ground floor flats.*

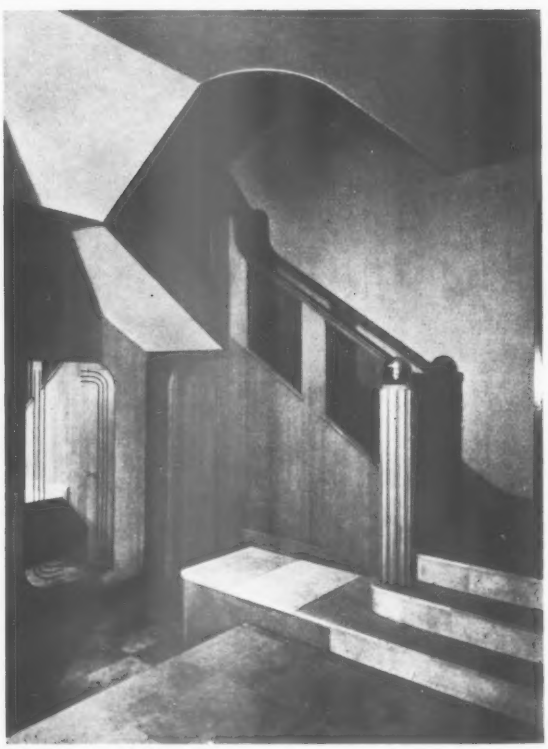
CONSTRUCTION—*Brick walls with steel spine and hollow tile concrete floors.*

The photographs show: below, a general view of the existing buildings; right, the garden front of the new block.

DESIGNED BY STANLEY HALL AND EASTON AND ROBERTSON

AVENUE CLOSE: BLOCK OF FLATS IN HAMPSTEAD:





BY STANLEY HALL AND EASTON AND ROBERTSON

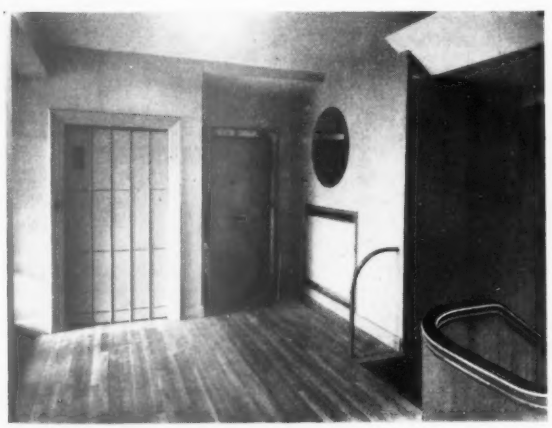
FINISHES—*Except for a small cornice in the principal rooms, and walnut doors in the dining and sitting rooms, no decorative treatment was attempted in the flats. There are painted deal door frames, architraves and skirtings throughout. The entrance hall is in Roman stone tiles, with a grey Hopton-wood border. The stairs are of oak, with ⅜-in. plate glass balustrades. The entrance doors to the flats are in oak squares with stainless steel architraves fixed by oak beads. The lifts are in pinky beige cellulosed ply, with triple stainless steel rails and the Avenue Close insignia, representing a tree. The floors are of 2½-in. strip American oak in the halls, dining and sitting rooms, with ⅜-in. oak thresholds to the principal doors. There are deal floors elsewhere, except in the bath rooms and cloak rooms, which are of concrete and rubber.*

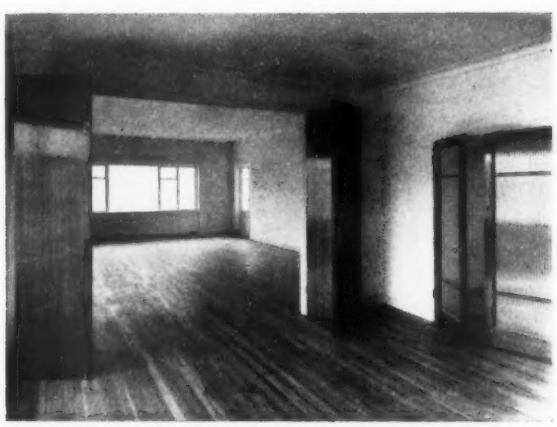
HEATING AND VENTILATION—*Heating is by low pressure hot water system and radiators. Ventilation is provided to all lobbies and to the bath and cloak rooms on the upper floors by use of gas flues, and by vents through lintols to the other bathrooms, etc. There are coal fires in all sitting rooms and principal bedrooms.*

COST—*£82,885, including roads and gardens; 1s. 10½d., excluding roads and gardens.*

The photographs show: above, a typical kitchen; below, left, staircase landing, showing the lift doors; and a typical sitting room. Facing page: above, main staircase and landing; below, two views in the main entrance hall.

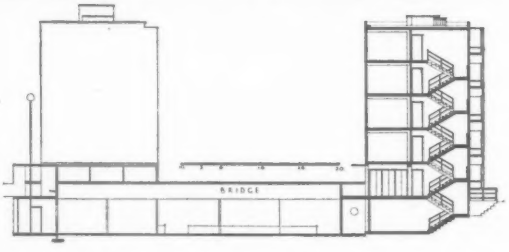
For list of general and sub-contractors see page 491.





KENSAL HOUSE: FLATS AND NURSERY

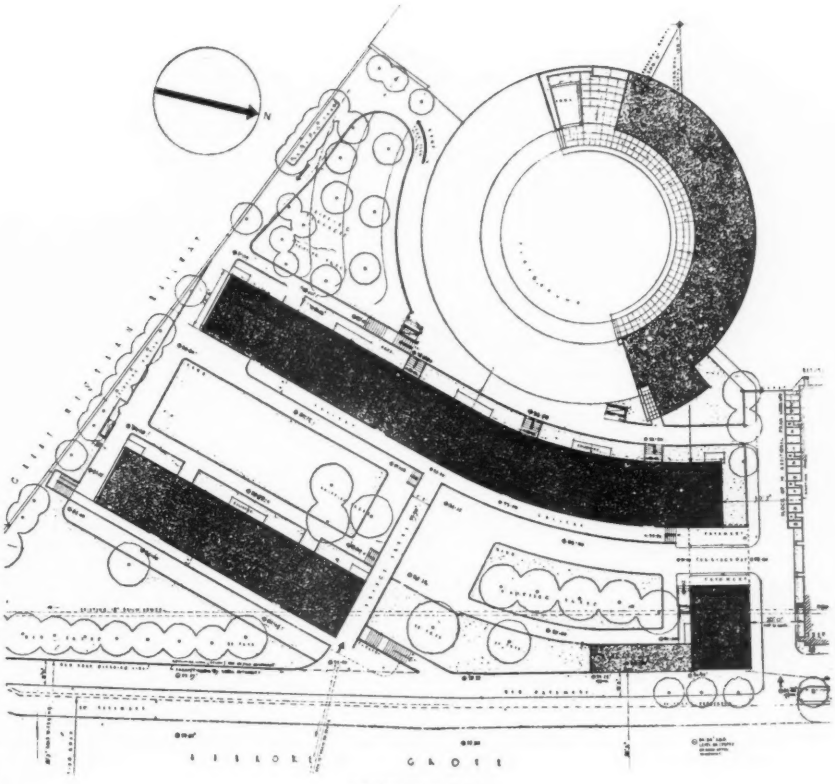
DESIGNED BY E. MAXWELL FRY (EXECUTIVE ARCHITECT), ROBERT ATKINSON, C. H. JAMES, MICHAEL TAPPER, G. GREY WORNUM, AND ELIZABETH DENBY (HOUSING CONSULTANT)



GENERAL—*Kensal House has been erected by the Capitol Housing Association (a company formed by the Gas Light and Coke Company) to prove that a complete modern automatic fuel service in low-rented flats not only offers obvious advantages to the tenants, but, properly planned and installed, presents no economic difficulties either to the tenants or to the authorities who build their dwellings. The fuel programme which the company desired to demonstrate in action is as follows:—1: a constant supply of hot water at sink, copper and bath. For this purpose a small instantaneous water heater has been installed in each flat, serving both kitchen and bath. 2: a modern automatic cooker in the kitchen. 3: a coke fire, lit by gas, in the living room. 4: provision for occasional heating in bedrooms. The scheme was carried out in strict conformity with the terms of the Housing Acts, as to permitted areas, financial arrangements, and choice of tenants, who were nominated by the Kensington Borough Council from its slum clearance area. Thus it qualifies for subsidy. The flats are for families of five or more persons.*

Above is a general view. In the foreground is the site of the former gas-holder, now levelled and equipped as a playground for the older children. On the left is a view of the north entrance taken from the courtyard.

SCHOOL IN LADBROKE GROVE, W. 10



SITE PLAN

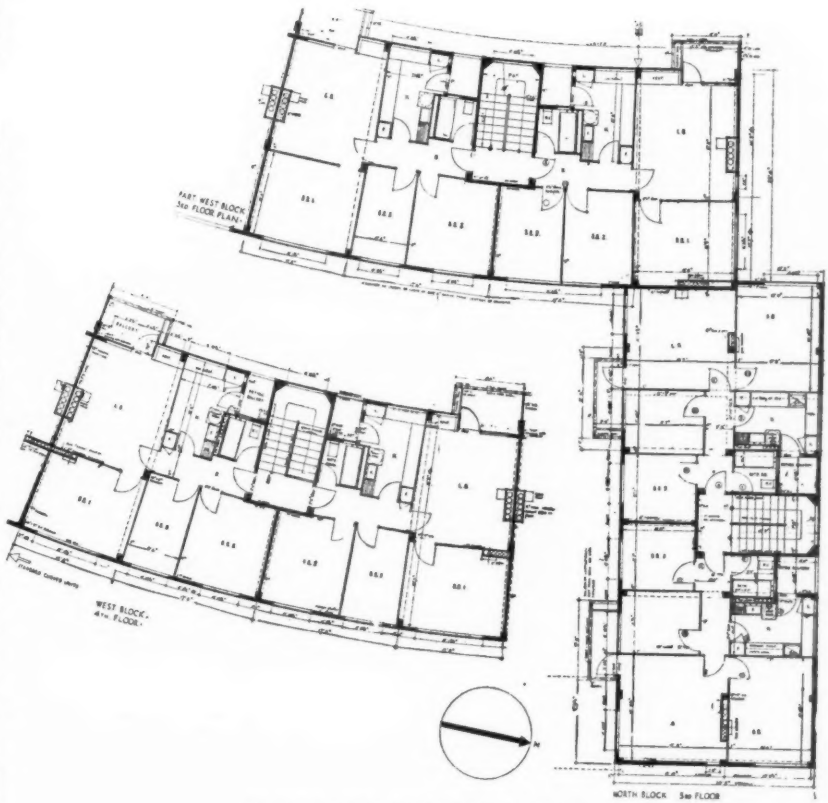
SITE—*At the junction of Ladbroke Grove with the Great Western Railway. It is a roughly triangular site of 1½ acres, and was formerly part of the Kensal Green Gas Works. The ground rises sharply from south to north, the area being bounded on the south by the Great Western Railway. The two blocks are connected by a footbridge at street level.*

CONSTRUCTION—*Walls are of reinforced concrete, 4-ins. thick, with a smooth hard board used as shuttering, and lined with cork 1-in. thick on the inside surface. Floors are hollow tile, roofs asphalt, and windows are metal. Floor surfaces are finished with linoleum; ceilings with wall board and ¼-in. plaster. The nursery school is of light-steel frame and timber construction, with brick walls where necessary.*

PLAN—*There are 68 flats built on a wide curve in two blocks running north and south, to permit morning sun to reach bedrooms facing east and afternoon sun to reach living rooms facing west. Accommodation: 54 flats with three bedrooms, kitchen and bathroom; and 14 flats with two bedrooms, kitchen and bathroom. Each flat has a large family balcony and a small specially ventilated balcony for drying clothes. A nursery school with accommodation for 60 children has been incorporated in the scheme; also, social clubrooms intended primarily for the use of adult tenants.*

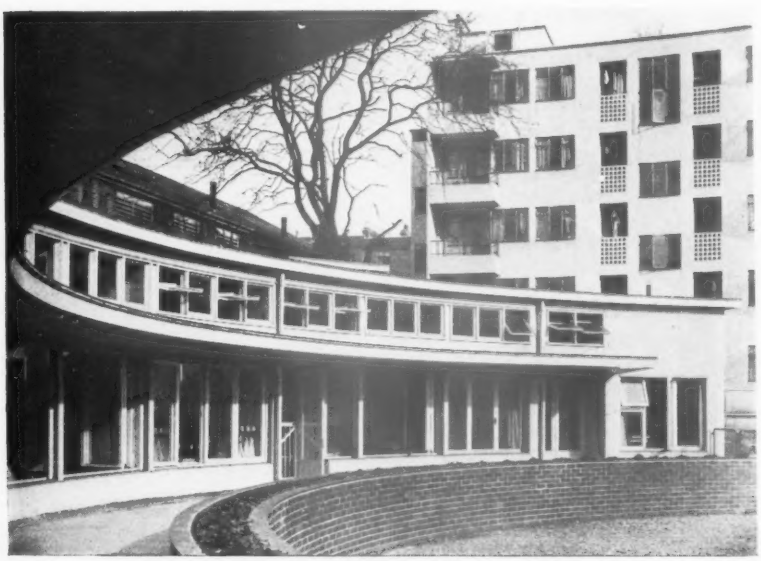
RENTS—*5s. 6d. and 11s. 6d. per week, including rates.*

INTERNAL FINISH—*Halls and living rooms are painted to a height of 3 ft. 6 ins., so that children's finger prints can be wiped off, and are distempered above. Kitchens and bathrooms are painted throughout, and bedrooms are distempered. The common staircases are finished in cement paint in pastel colours. All window cills are faced with small quarry-tiles. Window boxes, holding 2 ft. of earth and well drained, are built in the concrete of the balconies.*



PLANS OF TYPICAL FLATS

KENSAL HOUSE, LADBROKE GROVE, W.10



The photographs show: left, top, a detail of the balconies; left, the nursery school; above, from top to bottom, a living room, a kitchen, and the nursery school.

INFORMATION SHEET
SUPPLEMENT

The Architects' Journal Library of Planned Information

RECENT developments have brought up for reconsideration the question of the looseness of Information Sheets.

When the series was first started, it was felt that readers of the Journal would have some grounds for complaint if in a feature that was clearly meant for it, no facilities for filing were provided: and the Sheets were therefore inserted loose in the paper.

This method has obvious advantages for filing, but it has also obvious disadvantages, which our readers have not been slow to point out.

As a permanent feature, loose inserts are a nuisance in a paper, since they have a way of dropping out in the street or the train, if not before they get into the reader's hands (we have periodical complaints that Information Sheets for such a week have not been delivered with the paper).

Or, what is nearly as bad, they have a way of sticking out slightly, and getting bent or torn.

Furthermore, those architects who collect the sheets, and there are a great many, are often human enough to delay the act of filing for several days after receiving their copies, in which time the sheets again have a good chance to commit literary hara-kiri.

For all these reasons, it has been decided to make an obvious improvement.

By binding in the Information Sheets in the Journal so that they cannot fall out, their powers of self-destruction will be curtailed. And to insure that they can be as readily filed as before, the pages are now being perforated.

INFORMATION SHEETS

484 Plumbing

485 Partition Blocks

486 Elementary Schools—I

D

Sheets issued since Index :

401 : Plumbing to Baths
402 : Waterproofing
403 : Asbestos-aluminium Foil—I
404 : Roofing
405 : Joinery
406 : Asbestos-aluminium Foil—II
407 : Roofing
408 : Joinery
409 : Rubber-faced Building Slabs
410 : Places of Public Entertainment—II
411 : Electric Switchgear
412 : Lead Soakers to Valleys
413 : Plumbing in Welded Copper Pipe
414 : Electric Switchgear
415 : Electric Switchgear
416 : Insulating Board
417 : Work on Glass
418 : Plumbing in Welded Copper Pipe
419 : Places of Public Entertainment—III
420 : Tentest Metal Cover Strip
421 : Wood Preservatives
422 : Welding Sheet Copper Work
423 : Garages and Drives—II
424 : Roof Glazing
425 : Places of Public Entertainment—IV
426 : Asbestos-cement Roofing Tiles
427 : Asbestos-cement Roofing Tiles
428 : Welding Sheet Copper Work
429 : Flat Roofing
430 : Asbestos-cement Roofing Tiles
431 : Automatic Boilers
432 : Plumbing
433 : Places of Public Entertainment—V
434 : Plumbing
435 : Lifts—I
436 : Lead Soakers to Hips
437 : Coloured Cement Renderings
438 : Wallboards
439 : Wall Finishes
440 : Roofing
441 : Sash Operating Gear
442 : Roofing
443 : Wallboards
444 : Rainwater Goods and Fittings—I
445 : Roofing
446 : Rainwater Goods and Fittings—II
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448 : Roof Glazing
449 : Places of Public Entertainment—VI
450 : Telephone Cabinets
451 : Hardboard
452 : Escalators
453 : Automatic Boilers
454 : Places of Public Entertainment—VII
455 : Places of Public Entertainment—VIII
456 : Ellipses
457 : Roofing
458 : Sanitary Equipment
459 : Hoods and Canopies
460 : Expansion Joints
461 : Roof Pitches, etc.
462 : Gas Refrigerators—I
463 : Asbestos Cement Rubber Floor Tiles
464 : Approximate Estimating—I
465 : Gas Refrigerators—II
466 : Approximate Estimating—II
467 : Gas Refrigerators—III
468 : Approximate Estimating—III
469 : Gas Refrigerators—IV
470 : Stopstara Glazing Compound
471 : Gas Cookers
472 : Lead Insulation against X-Rays
473 : Electrical Equipment—I
474 : Asbestos-Cement Ventilating Ducts
475 : Asbestos-Cement Glazed Panels
476 : Approximate Estimating—IV
477 : Monel Metal Sink Units
478 : Approximate Estimating—V
479 : Roofing
480 : Approximate Estimating—VI
481 : Lead Flashings
482 : Approximate Estimating—VII
483 : Flue Linings

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THE ARCHITECTS' JOURNAL LIBRARY OF PLANNED INFORMATION

EXPERIMENTAL PLUMBING INSTALLATIONS TESTED BY THE DEPT of COMMERCE (U.S.A)

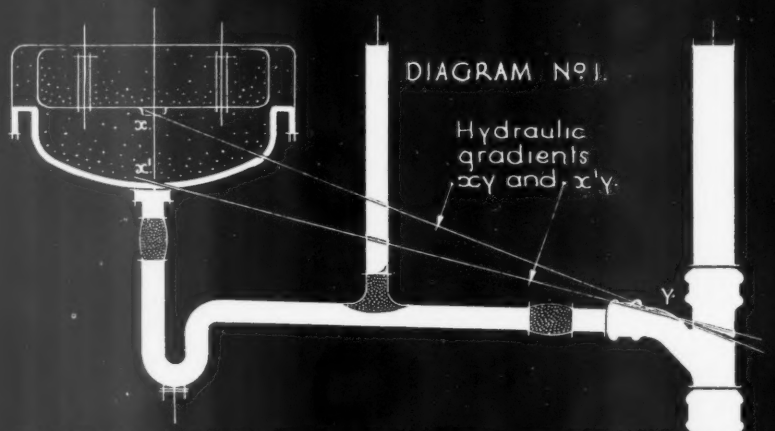
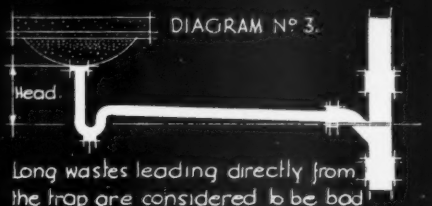
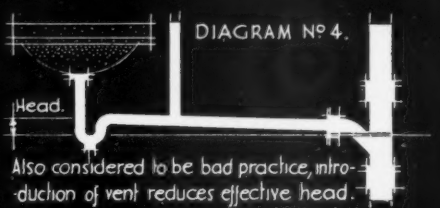


DIAGRAM OF TYPE OF INSTALLATION CONDEMNED OWING TO THE LIABILITY OF THE VENT TO CLOG. Clogging is caused by deposits left in the foot of the vent after back-flows from the waste.



Long wastes leading directly from the trap are considered to be bad practice.

EFFECTIVE HEAD OF WATER ON A HORIZONTAL WASTE WITH NO VENT.



Also considered to be bad practice, introduction of vent reduces effective head.

EFFECTIVE HEAD OF WATER ON A HORIZONTAL WASTE WITH A VENT.

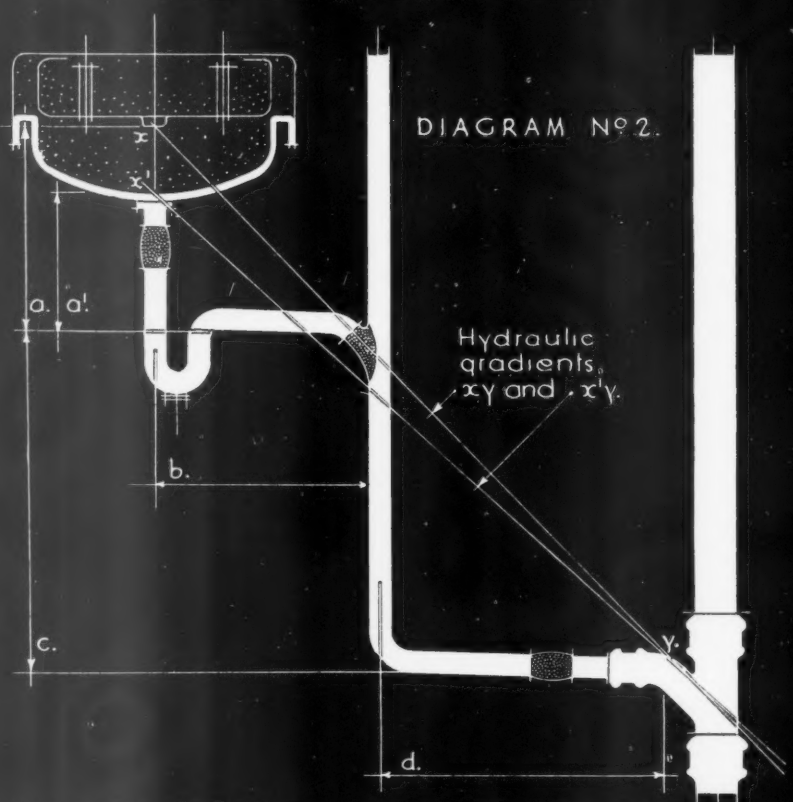
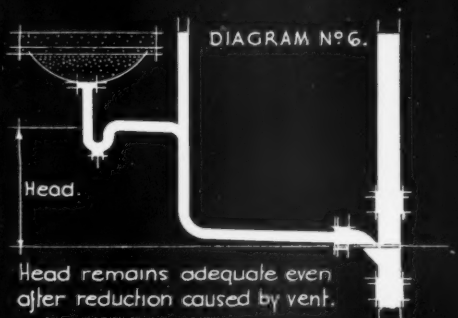


DIAGRAM OF TYPE OF INSTALLATION WHICH IS RECOMMENDED (WITH VERTICAL RUN OF WASTE & A VENT.)

The introduction of a vertical length of pipe increases the effective head.

EFFECTIVE HEAD OF WATER ON A WASTE WITH A VERTICAL SECTION & NO VENT.



Head remains adequate even after reduction caused by vent.

EFFECTIVE HEAD ON WASTE WITH VERTICAL SECTION AND VENT.

Clogging of the vent by back-flow is minimised by taking the vent off the vertical section of the waste in such a position that the junction is above the line representing the hydraulic gradient. For a fuller explanation of the diagrams see the back of this sheet.

The head of water in any waste is a major factor influencing the velocity & scouring power of the waste flow and the tendency to syphonage.

A summary of part of a report made by a sub-committee on Plumbing, U.S.A. Dept. of Commerce.

INFORMATION SHEET: EXPERIMENTS ON THE EFFICIENCY OF VARIOUS PLUMBING UNITS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON W.C.1. Oliver A. Bayne.

THE ARCHITECTS' JOURNAL
LIBRARY OF PLANNED INFORMATION

INFORMATION SHEET

• 484 •

PLUMBING SYSTEMS

Subject : Plumbing Systems

Extracts from the recommended Minimum Requirements for Plumbing of the sub-Committee on Plumbing of the United States of America Department of Commerce.

The information on this Sheet is based on the results of a series of tests carried out in America on plumbing systems specially erected for experimental purposes, and the following notes form a summary of the conclusions of the Committee.

The effect of a vent on the head of water in a branch waste :

The effective head of water in any section of the waste system is a factor influencing the velocity, scour, and liability to self-syphonage, and the general effect of a vent in a branch waste is to decrease the effective head. See diagrams 3, 4, 5 and 6 on this Sheet.

Long wastes on the horizontal or with a small gradient leading directly from the trap, as in diagrams 3 and 4, are bad practice, and should be reduced to the minimum length consistent with other requirements.

If a vertical section is introduced into the waste pipe, as in diagrams 5 and 6, the effective head of water will be proportionately increased.

The efficient venting of branch wastes :

In connection with the employment of vents as a protection against syphonage and pressure effects, or as a means of ensuring air circulation, it is of importance that the position and manner of making the vent connection should receive special attention.

Experiments indicate that there is a strong liability for a vent pipe to become completely closed near its junction with the waste pipe where conditions for fouling are favourable.

Diagrams 1 and 2 on this Sheet illustrate identical installations, except that in diagram 1 the vent pipe is taken off the top of a horizontal waste pipe, and in diagram 2 the vent pipe is the continuation of a vertical section which is introduced into the horizontal waste pipe. In both systems the trap and waste were of a nominally uniform cross-section throughout, as the results obtaining here would be modified is this were not so.

The system in diagram 1 is condemned because the vent is liable to become fouled, and the system in diagram 2 is recommended as most generally satisfactory.

In both diagrams the line *x-y* represents the approximate hydraulic gradient when the waste pipe is flowing full under the head of water in the fixture. For small fixtures (such as wash-basins or kitchen sinks) the point *x* might be measured from the top of the fixture outlet with perfect safety (x^1 on the diagrams). The hydraulic gradient may then be represented by the line x^1y.

It can be seen that in diagram 1 there will be back flow into the vent pipe, with a strong liability to stoppage owing to the accumulation of deposits from the waste water, while in diagram 2 the vent pipe is protected against back flow and stoppage because it is situated above the hydraulic gradients *xy* and x^1y.

In order to ensure the vent connection being above the hydraulic gradient, it is necessary that the lengths of the vertical and horizontal sections of the waste pipe should be correctly proportionate to each other, and a formula for this has been evolved.

Referring to diagram 2, the letters *a*, a^1, *b*, *c* and *d* have been used to represent the length of the corresponding vertical and horizontal sections of the waste pipe. In order to ensure protection against back flow into the vent pipe it is necessary that $\frac{c}{d}$ should be equal to or greater than $\frac{a}{b}$ (or $\frac{a^1}{b}$ where the fitting is one of limited capacity).

For example, if in diagram 2 the length of the section of waste pipe represented by $a^1 = 5$ inches, measured from the basin outlet, and $b = 10$ inches, and $c = 17$ inches, then to hold the relationship $\frac{c}{d}$ is equal to or greater than $\frac{a}{b}$, it is necessary that *d* shall not exceed 34 inches in length.

(The London County Council bye-laws state that the vent pipe must be connected with the waste pipe at a point not less than 3 inches and not more than 12 inches from the highest point of the trap. This would obviously limit the length of section *b* of the waste-pipe in diagram 2, if it is considered in relation to practice permitted by the L.C.C.)

The point emphasized in the report is the necessity of limiting the length of horizontal waste pipe if the vent pipe is to be continuously efficient and if the best scouring effect in the waste pipe is to be secured.

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PHYSICAL PROPERTIES OF FOSALSIL INSULATING PARTITION BLOCKS :

MEAN THERMAL CONDUCTIVITY : From 0° to 400° F., 1·0 B.T.U's. per sq. ft. per hour per 1" thickness for 1° F. temp. diff.

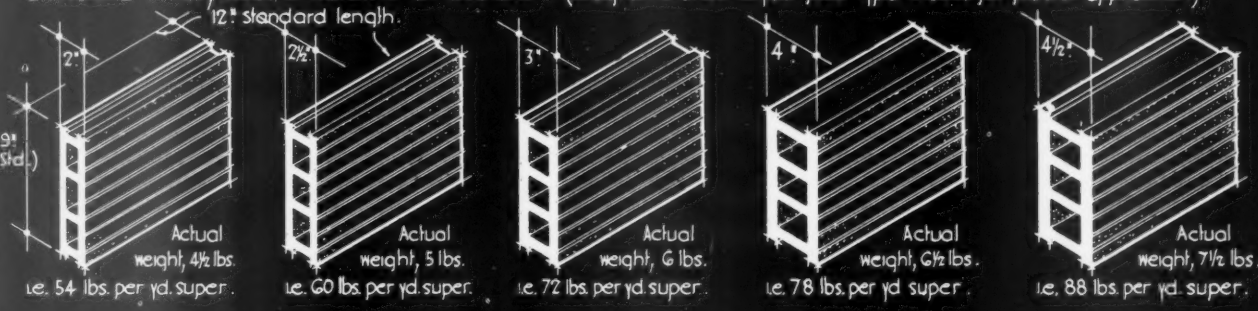
LINEAR EXPANSION : N.P.L. tests show a coefficient of expansion between 0° & 250°C of ·0000025 for fosalsil blocks.

SOUND INSULATION : Between sound frequencies of 300 & 2000 cycles per second, a double 2" Fosalsil partition has a loudness reduction factor of 48·5 decibels minimum. (4½" solid brickwork = 38·5 decibels).

WEIGHT & CRUSHING STRENGTH : The weight of Fosalsil Insulating Partition Blocks is 36 lbs per cub. ft. of material, & crushing strength 987 lbs. per sq. in.

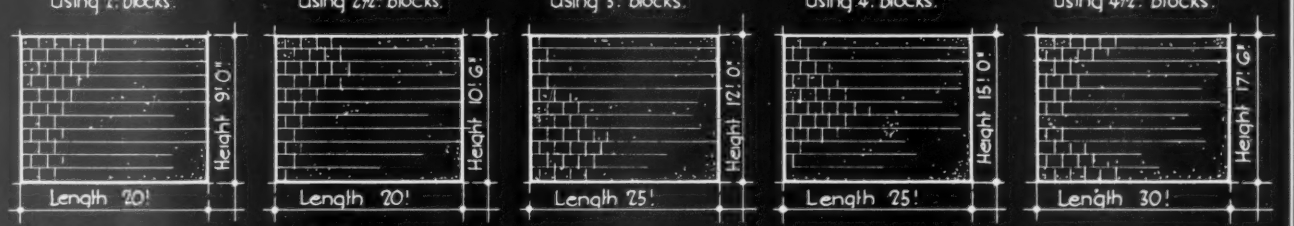
CUTTING, SHAPING AND CHASING : The blocks may be cut to any shape with an ordinary hand saw, & will not crumble or split when being chased

STANDARD TYPES, SIZES & WEIGHTS OF BLOCKS : (diagrams shew keyed face type blocks for plaster application).



SMOOTH-FACED TYPE PARTITION BLOCKS for paint or paper finish are made in the same sizes and weights as above. Both types are obtainable in half blocks, in all thicknesses for window and door frame, and cross wall abutment, etc.

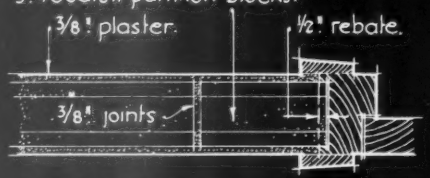
DIAGRAMS SHOWING RECOMMENDED LENGTHS & HEIGHTS OF UNREINFORCED PARTITIONS OF VARIOUS THICKNESSES.



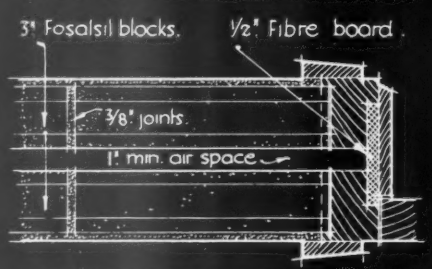
REINFORCED PARTITIONS : With the addition of suitable reinforcement to the partition, the recommended lengths and heights given above for unreinforced partitions may be considerably increased.

TYPICAL CONSTRUCTION DETAILS : (Blocks should be well wetted or preferably soaked over night before being laid.)

3" Fosalsil partition blocks.



1. PLAN FOR PARTITIONS UP TO 12'.0" HIGH.



3. DOUBLE SOUNDPROOF PARTITION.

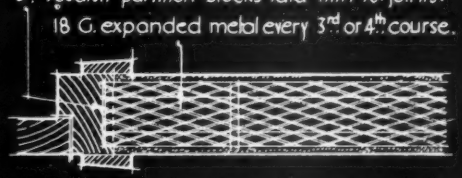
NOTES ON LAYING : Blocks should be bedded in 9" courses with ⅜" compo. joints, staggered. Blocks to be recessed ½" into backs of frames, or fixed with 15" x 1" x ⅛" strip iron cramps every fourth course.

2. Frames & bedding as above, strips of ⅜" mesh expanded metal laid full length every 3rd or 4th course.

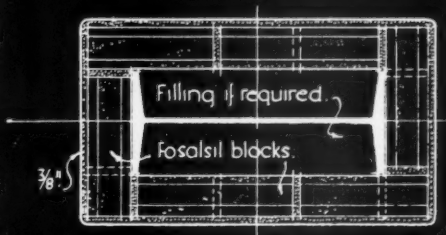
3. Blocks laid as in No. 1 above, but in two thicknesses 1" to 2" apart, kept perfectly clear of mortar.

4. Blocks laid close to stanchion in 9" courses lapping at corners for bonding, using ⅜" compo. joints as for No. 1. Centre filled with concrete if required by authorities.

3" Fosalsil partition blocks laid with ⅜" joints. 18 G. expanded metal every 3rd or 4th course.



2. PLAN FOR PARTITION OVER 12' HIGH.



4. TYPICAL STANCHION CASING.

Information from Moler Products Ltd.

INFORMATION SHEET : FOSALSIL INSULATING PARTITION BLOCKS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Owen A. Bayne

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PARTITION BLOCKS

General :

Fosalsil insulating partition blocks are for the construction of internal partitions, cross walls, etc. The blocks are a kiln-fired product made from an absolutely inert raw material, so that shrinkage, corrosion, or movement in the wall after erection are eliminated. Each unit is accurately made to shape and size, and possesses ample mechanical strength to meet the requirements demanded by the various building authorities for internal partition work. The various physical properties are given overleaf.

Thermal Conductivity :

Due to the high temperature firing during the manufacturing process, the blocks are completely fireproof and will resist the passage of heat to a high degree. In the case of a Fosalsil encased stanchion the steelwork is prevented from reaching a temperature at which bending or buckling would take place. Official tests have shown that after an encased stanchion was subjected to 1000° C. external heat for a period of 2 hours, the body and outer flanges of the stanchion itself had reached a temperature of approximately 100° C.

This heat resistance of the material ensures equable temperatures within rooms lined with Fosalsil, with consequent lower fuel consumption in the winter and the maintenance of cool conditions during the summer. The linings remain free from condensation even when the internal temperatures of the rooms are rapidly changed.

Cutting and Chasing :

The blocks may be readily cut to the required size and shape on the job by means of an ordinary hand saw. A proportion of half blocks can be included with any delivery if desired, for use against door and window frames, etc.

Chases may be rapidly formed by light blows, and the material will neither crumble nor split during this process.

Laying :

Fosalsil insulating partition blocks are handled in the same manner as ordinary partition blocks. Their extreme lightness, however, as well as reducing the dead weight of the building, permits more rapid transport, handling and setting up. All blocks should be well wetted, or preferably soaked overnight before being laid up, whilst prior to plastering it is advisable to soak them thoroughly. The $\frac{3}{8}$ in. vertical joints between blocks should be staggered, and all joints may either be made with compo of one part Portland cement to six parts of clean, sharp sand and one part hydrated lime, or with one part of Portland cement to four or five parts of Fosalsil No. 6 powder.

Fixings :

After erection, it will be found that the blocks provide a firm hold for fixing nails, screws, etc., whilst the fact that all metals embedded in Fosalsil are actually preserved means that their depreciation is reduced to a minimum, and dangers such as the fusing of wires averted.

Where it is necessary to attach heavy fixtures such as wash basins, direct to walls, Fosalsil solid fixing blocks are available in 6 in. by 9 in. sizes of all standard partition block thicknesses, and in standard brick sizes.

Standard Sizes:

As illustrated overleaf, the partition blocks are manufactured in the following standard sizes : 12″ × 9″ × 2″, 12″ × 9″ × $2\frac{1}{2}$″, 12″ × 9″ × 3″, 12″ × 9″ × 4″, and 12″ × 9″ × $4\frac{1}{2}$″. Half blocks 6″ × 9″ can be supplied in all the above thicknesses.

Decorating and Plastering :

The grooved sides of the blocks provide an excellent key for the plaster. All blocks should be thoroughly wet immediately before the base coat for the plastering is applied.

For work on which it is not intended to use plaster, the blocks can be supplied in all thicknesses with a smooth face either on one or both sides.

Manufacturers : Moler Products, Ltd.

Address : 103 Kingsway, London, W.C.2

Telephone : Holborn 2961 2

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THE DAYLIGHT LIGHTING OF CLASSROOMS: THE PLACING OF DESKS IN RELATION TO THE WINDOWS.

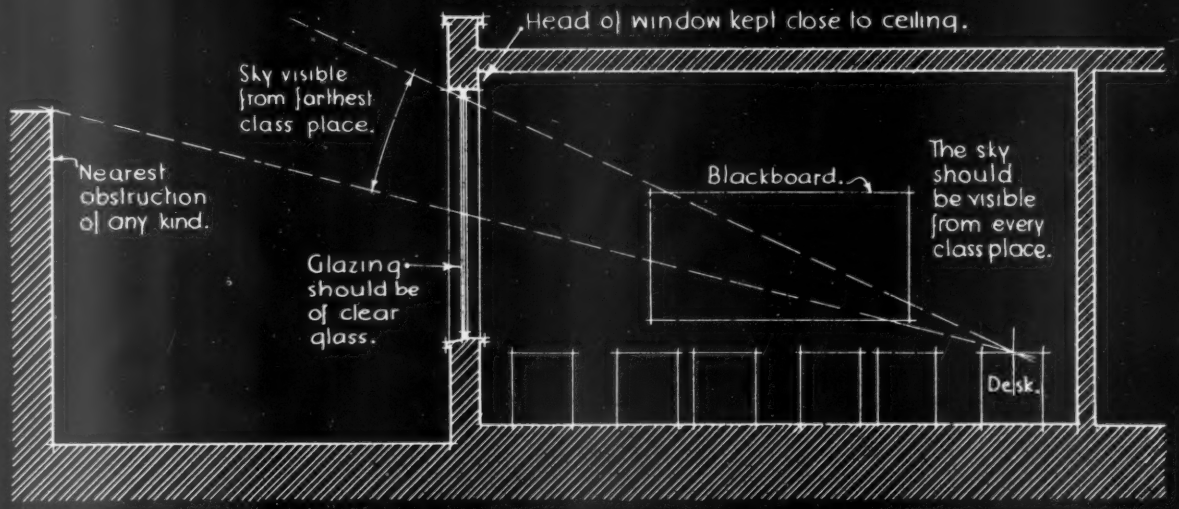
No position in a classroom is fit for use as a class place unless the sky can be seen from it at desk level. The visible area of sky should give an illumination on a horizontal plane at desk level equivalent to a daylight factor of 0·5% of the light from an unobstructed sky hemisphere of uniform brightness.

This figure should be regarded as a minimum and in new schools a daylight factor of 1% is recommended.

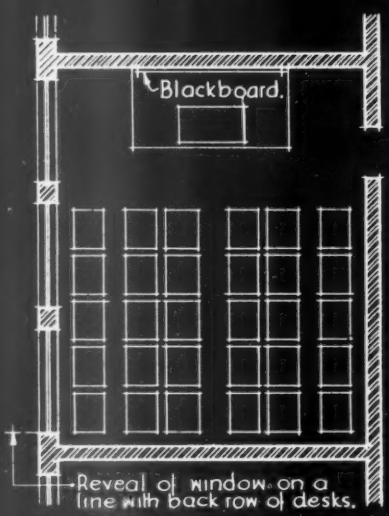
As a rough guide the proportions of 1 square foot of clear glass to 5 square feet of floor area will give a light factor of 0·5%.

In classrooms 20'0" wide or wider and not more than 12'0" high the windows should be as large as possible if the required light factor is to be secured at the back of the room.

It is recommended that classrooms 20'0" and more in width should not be less than 11'0" high unless they have large windows on opposite sides.



DIAGRAMMATIC SECTION THROUGH A TYPICAL CLASSROOM.



PLAN OF TYPICAL CLASSROOM.

Classrooms should preferably face towards the South, or slightly towards the South-East.

Windows may be on one or more sides of the class room, but the main lighting should be on the left of the pupils, and windows directly facing the pupils or the teacher are to be avoided.

In rooms with windows on one side only, the best lighting and best angle of vision for seeing the blackboard result where the windows occupy one of the long sides of the room, and the blackboard is on one of the short sides adjacent to it.

It is important that the blackboard should be well lighted and placed so that it does not reflect glare into the eyes of the pupils. Blackboards which can be set at varying vertical angles are useful for avoiding glare.

The last vertical glass-line of the window furthest from the blackboard should be on a line with the back of the last row of desks.

Extracts from "Elementary School Buildings" issued by the Board of Education, 1936.

INFORMATION SHEET: ELEMENTARY SCHOOL BUILDINGS: No 1

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

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ELEMENTARY SCHOOLS—I

Subject : Daylight Lighting of Classrooms

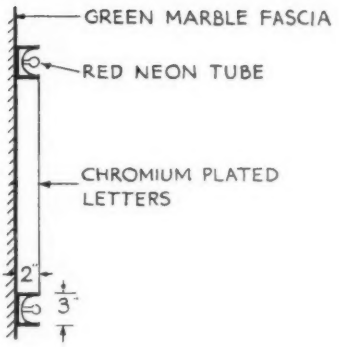
The information on this Sheet is based on recommendations of the Board of Education in their Education Pamphlet No. 107, "Suggestions for the Planning of Buildings for Public Elementary Schools," issued in 1936 by His Majesty's Stationery Office, and summarizing the Board's definition of the proper daylight lighting and the conditions necessary to secure it.

The Architects' Journal Library of Planning

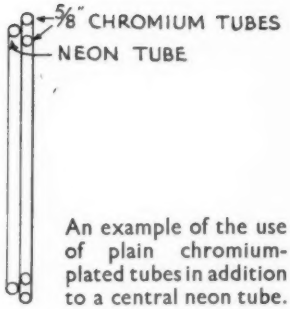
SHOPS

Electric Lighting—2

[By Bryan Westwood and Norman Westwood]



An application of neon tubing to solid letters. It looks effective whether illuminated or not, and in either case is legible even from an oblique viewpoint.



An example of the use of plain chromium-plated tubes in addition to a central neon tube.

Show Windows

A YEAR or two ago careful tests were made to ascertain the effect of increased intensity of light in shop windows. It was found that an increase from 15 ft. candles to 100 ft. candles resulted in 70 per cent. more people stopping to look at the windows. Effective brilliance of windows, however, is only comparative, depending on neighbouring ones. The shops in streets in central areas of large towns are all participants in a "Lighting" race; for this reason comparisons with American intensities are not of much value, competition there has merely proceeded further.

Allowing for difference in locality, the following wattages are recommended :—

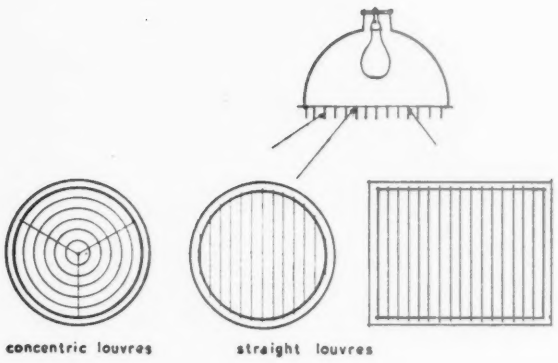
(*a*) Central areas—150–300 watts per ft. run.

(*b*) Ordinary shopping streets—100 watts per ft. run.

(*c*) Side streets—50 watts per ft. run.

These figures are given deliberately on the high side as compared with current practice. Wattages over 200 per ft. in this country are rare and usually only occur in deep windows with a honeycomb of lighting on the ceiling. Type of light, direct or indirect, as well as intensity, must be studied in relation to the articles displayed. The more indirect the light, the less shadows there are, and consequently differences in texture tend to disappear and goods lose brilliance. This property is very valuable in designing lighting for displays of velvet gowns, or other fabrics which show creases or surface marks easily. In such cases entirely indirect light should be used, but at the other extreme good Turkish carpets should be shown under direct light so as to bring out beauties of pattern and texture. In between these extremes lie most other types of goods for which semi-indirect light is best.

Spotlights are valuable for emphasis and can be fitted with simple baffles to prevent glare (see diagram *b*). The usual method of lighting by rows of reflectors on the ceiling of the window, giving a honeycomb effect, has the advantage of good stereoscopic properties. This is further enhanced when the ceiling is divided into cells



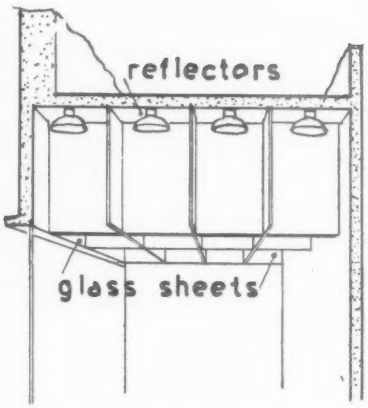


Diagram (*b*), above, shows the use of louvres to shield the lamp from direct vision without impeding the beam. Right : Diagram (*c*).

SHOW WINDOW LIGHTING

by means of embossed glass (see diagram *c*). Reflectors are made in various shapes to suit the depth of the window, and can be fitted with baffles in the same way as spotlights if not otherwise adequately shielded from direct view.

Overhead lighting has been further improved by the perfecting of prismatic plates which are placed about 4″ below the centre of the lamp, which is fitted with a reflector. Whereas ordinary opalescent glass reduces the candle power while diffusing the light, these panels refract the light from the lamp and reflector in relation to the prismatic panel. Direction, and intensity of the beam, can be controlled (see diagram *d*). These units are supplied in one plate 12″ square, or four plates making a unit 24″ square, in which case a single lamp is kept double the distance away from the glass. The panels are smooth on one side and have to be fixed with the concentric prisms downwards.

In Peter Jones new shop, by Crabtree, Slater and Moberly, a system has been installed whereby a curved background is lighted by lamps at the top, and a further set in a trough at the bottom, thus giving an evenly illuminated background for display.

Since the ability of the window dresser is often judged by his success in producing original effects by use of different forms of lighting, spotlights, coloured lights, etc., ample plug points must be provided in the wiring

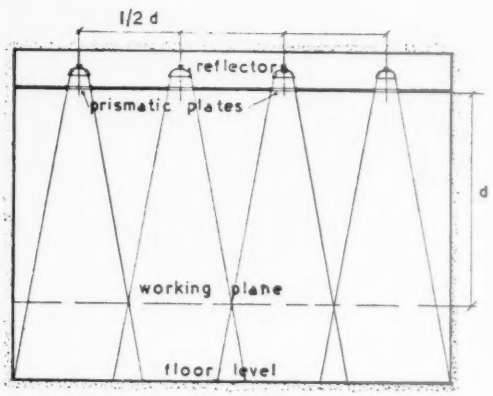
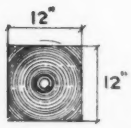
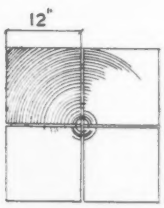


Diagram showing spacing of prismatic plates to give evenly distributed light at the working plane. ie counter level

Diagram showing concentrated light thrown on wall by placing reflector to one side of prismatic plate



concentric prism for 75-150 watt lamp lamp 4" above lense



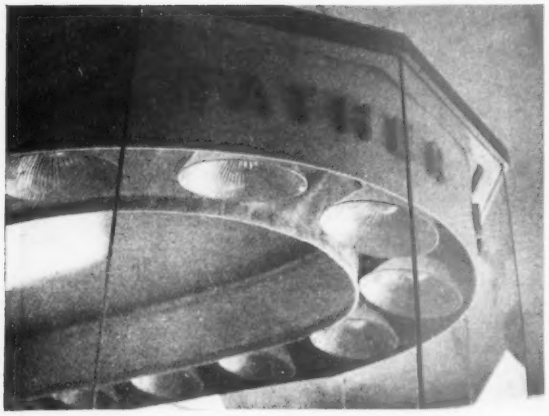
4 1/4 concentric prisms for 150-300 watt lamp lamp 8" above lense

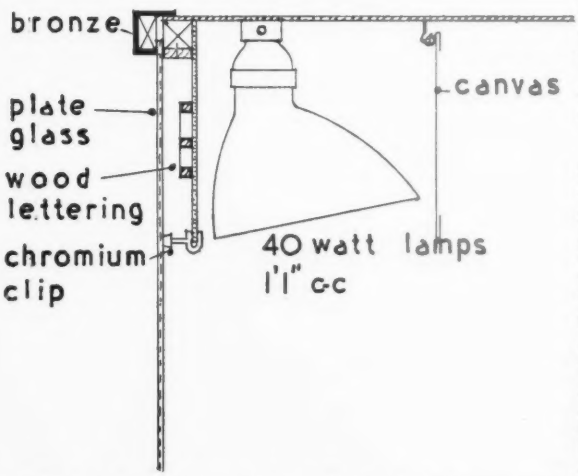
PRISMATIC PLATES Diagram (*d*).

Beauty Parlour. By Ernö Goldfinger and Szivessy. The ceiling is divided into cells to conceal the lamps. An expensive and effective method of lighting.

layout. If this is not done, sooner or later temporary wiring is introduced with the likelihood of upsetting the balance of the system. After-hours lighting is useful for about 1,000 hours per annum, so it is obviously well worth controlling the window lighting by time switches, so that the windows can be inspected during the leisure hours of a large part of the population. It is important that there should be a switch to short circuit the time switch for use when fog or other causes make it desirable to switch the lights on or off other than at the predetermined time. This avoids the need for resetting the time switch on these occasions, and also the risk of lights being turned on again at unexpected hours when the staff forget to put the clock back to normal.

Finally, may we repeat the necessity of using a light background if a reasonable efficiency is to be obtained from the lighting in show windows. In this respect, reference to tables of reflection factors certainly bears out the conclusions one soon arrives at in practice. For instance, referring to British Standard colours, and





Cleghorn's, Edinburgh. By Rowand Anderson and Paul and Partners. Textiles used as a valance to conceal show window lighting.

assuming a matt surface and gasfilled lamps as the illuminant, golden yellow reflects 80 per cent., and light buff 60 per cent., while peacock blue reflects 11 per cent., and crimson only 6 per cent. Similarly, while the figure for plaster is 75 per cent., red oak is only 33 per cent. Surface also plays a part in reflection; thus we find silvered glass 86 per cent., aluminium paint 72 per cent., and chromium plate 60 per cent., and black velvet ½ per cent.

The Interior

In the interior, much can be done by lighting special displays up to four times the intensity of the general lighting, so that they shall catch the casual customer's eye. Appreciation of the particular properties of different kinds of light, and intelligent use of them, is the way to make an effectively lighted interior. Daylight lamps add vividness to greens and blues, diffused light eliminates the appearance of creases, and conversely, direct light emphasises texture. If these properties are to be utilized to the full, the general lighting of the shop must not be increased to such an extent that it becomes virtually impossible to provide adequate extra intensity for the special effects. At the same time, it is continually being urged that interiors should be more strongly lighted; it is difficult to make the right compromise, and published figures are not consistent. The Electric Lamp Manufacturers' Association give tables of this kind, but the figures are even higher than those appearing in the latest official American publication. At the same time, an official of the G.E.C., writing in the *Architectural Record*, gives a minimum of 15–20 ft. candles, which is considerably higher than the average level quoted in the E.L.M.A. booklet, and the whole general lighting of a new American store has been designed to give an intensity of 65 ft. candles with 100 ft. candles over counters.

Taking an average figure from this conflicting evidence, a figure which is borne out by experience, good present-day lighting in the small shop is about 8–10 ft. candles, and 5–7 for shops where large objects with little detail form the bulk of the merchandise. The figures for medium-sized shops and departmental stores are 10–15 and 15 and over respectively.

In our opinion the best system of lighting for general use is largely indirect, but with a certain amount of direct light to relieve dullness. This means that the ceiling must be light in colour, and if it is to look satisfactory it must be free from surface defects. The lamps and reflectors can be placed on the top of showcases, or behind a cornice. Alternatively, special reflectors are obtainable to throw the light on the ceiling. These can be in the form of standard lamps or wall brackets. A system of this kind, owing to losses in reflection, is bound to be more expensive to run than pendant lights only, but it gives a refined and pleasing effect, and practically eliminates shadows.

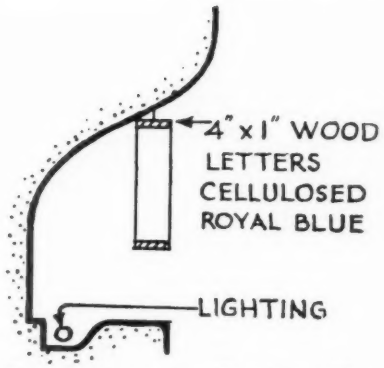
Where such a system is impracticable or undesirable, the pendant fitting is still useful. The opal glass spheres which are familiar in buildings of all kinds, have sufficient surface area to diffuse the light from the lamp so that the visible source of light is not unduly brilliant, but the total light emitted is sufficient for its purpose.

Special light fittings are generally very expensive, and difficult to replace when breakages occur. Good fittings capable of giving a large total amount of light can be joined by grouping a number of spherical or other units on a common base.

Counters and showcases are best lighted by means of strip-lights in suitable reflectors placed in the angle immediately below the counter top, or less effectively in the vertical angles. If there is space enough to use reflectors accommodating ordinary lamps, it is advisable to do so, as these have a longer life and are cheaper to replace.

Neon Lighting for Interiors

Neon tubes have already been used for general interior lighting, and there are several examples in London, and a complete store in Paris lighted in this way. The system, however, is still in rather an experimental stage. The chief advantages are low running cost, even illumination and adaptability of the source of light. The disadvantages are (1) high first cost, (2) the necessity of using three or more tubes to get the



The letters are in silhouette. The background is illuminated by lamps at the base.

desired colour, presents difficulties, especially where the light is reflected by curved surfaces. The light from the different tubes is likely to strike such a surface at slightly different levels, so that there is a strip of several colours before they are all superimposed to form white light. This is not necessarily a disadvantage, but it is liable to give a rather "cheap" effect to a dignified interior.

(3) The light from the tubes is intermittent, going completely out once in each cycle of the alternating current. This is not apparent when looking straight at the tube, but is rather trying when moving objects are illuminated. Particularly noticeable is the way that assistants' hands appear to move in jerks. This effect can be overcome by connecting each colour to a separate phase of the supply, but this complicates the wiring system and adds to the cost.

Signal Lights

Small lamps are particularly useful as a silent warning for various purposes. They are often used to show that fitting rooms are occupied or

H.M.V. Gramophone Shop, Oxford Street. By Joseph Emberton. An example where neon lighting is a fundamental part of the design and not merely applied as an afterthought.

that electrical apparatus is left on, and by using three colours singly or in different combination, members of the staff can be told that they are wanted.

Switch Rooms

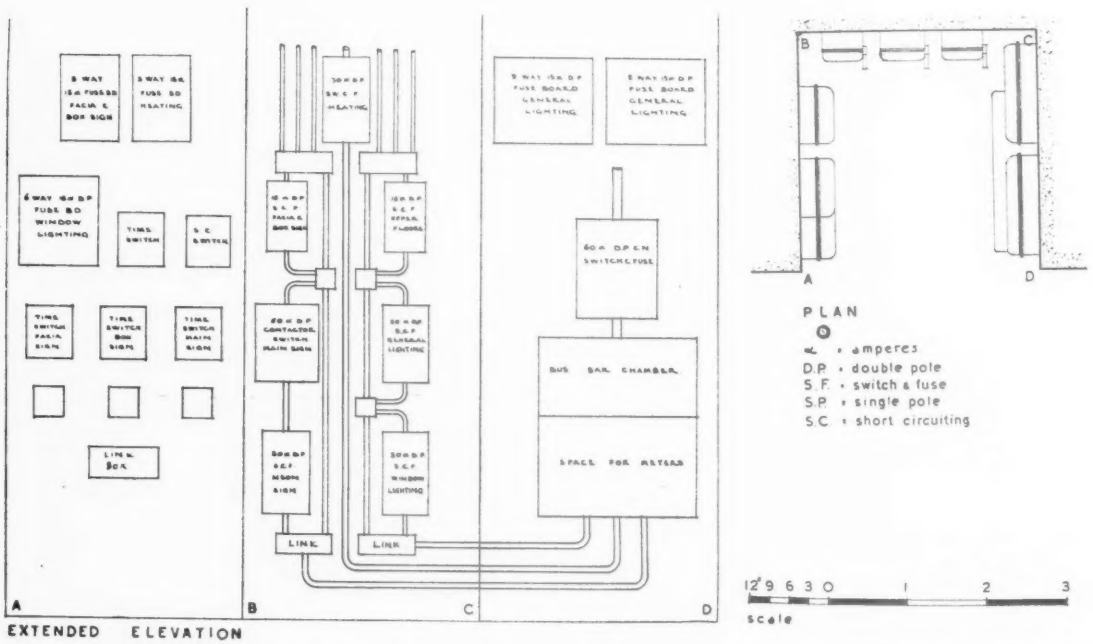
For obvious reasons it is desirable to have the switch board as near as possible to the place of entry of the main cable. If there is a basement, it is usually the most convenient place but it must be dry.

The necessary equipment to control the electrical installation of a shop has become large enough to constitute a planning problem, owing to the increase of ordinary lighting, and the addition of neon signs and time switch control.

It is very difficult to lay down any rule as to size, because every installation has components to meet its special needs. As a rough guide a shop of about 20 ft. frontage well equipped electrically would require about 75 sq. ft. of wall space to accommodate switches, meters, and fuse-boards. If only a small space is available, special non-standard components have to be used to save space and naturally the price goes up.

In the diagram of a typical switch board, we show a number of junction boxes. Some of these could be dispensed with, but they are included in order that the whole of the switch gear can be assembled before being brought on to the site. The junction boxes enable the few connections which must be left to be made easily later. Since rents in shopping areas are so high, work is nearly always done under pressure, and it is worth spending a little money in order to get everything possible assembled before work begins on the site.

Rimmel's, Regent Street, W.1. Embossed glass provides a simple background to the red neon lettering.



This diagram is only intended as a guide to the general space required for electrical gear and approximate sizes of components. Circuits vary in every installation, and being beyond the scope of these notes have not been included. This particular switchboard served a 3-floor shop of about 15 ft. frontage carrying normal electrical equipment, comprising heating, lighting and neon signs. The layout is an example of careful planning necessitated by the confined space, which is usual in shops of this size.

The short circuiting switch on wall AB is provided for the purpose of cancelling time-switch control when required. This avoids the necessity of re-setting the time switches after emergency switching.

READERS' QUERIES

Some recent queries submitted by readers are printed below, together with the opinions upon them which have been obtained by the JOURNAL. *Whilst the* JOURNAL *is always ready to help readers in this way it cannot guarantee the infallibility of the opinions given, nor can it answer enquiries which require prolonged research. The* JOURNAL *also reminds readers that questions dealing purely with the properties and failures of materials and structures might be more properly sent to the Building Research Station, Garston, Watford, Herts., which makes no charge for its services.*

ROOF INSULATION

Question 1

I should appreciate comments upon the following :—

(1) In a flat timber roof of a private residence, I have introduced 1⅜-in. "Heraklith" (wood fibre and magnesite cement) covered with ½-in. screeding of cement and sand — waterproofed — proprietary asphalt finished, and now just completed. The insulation slightly depressing in places between the 2-in. firrings at 13-in. centres, ¾-in. boarding was at once introduced and nailed on the screeding (the 4-in. nails frequently piercing the insulation).

The first point is that the roof finish people reasonably require timbers to be ventilated, and two 9-in. by 3-in. air bricks each side of the approximately 30-ft. square roof — firrings across joists — have been provided, and it seems that the ventilation must very greatly reduce the advantages of the insulation.

Incidental to this, as first floor joists are rarely, if ever, ventilated, why is ventilation more essential to a flat roof? And if the reduction to insulatory advantages is very great, could it be dispensed with?

(2) It so happens the form of the ceiling under is not yet decided, and remark may be forthcoming about the best material, which should be of not much, if any, more than normal cost.

(3) Is there any risk of premature deterioration of the ¾-in. boarding (covered with alternate bitumen and felt) as placed?

With many thanks for your anticipated favour, which would very much oblige if it can be soon.

Answer 1

In reply to these questions, we should like to make the following comments :—

The insulation required is presumably thermal and not sound insulation, so the piercing of the Heraklith by the nails would have no appreciable effect.

It is definitely advisable to retain the air bricks. Asphalt effectively seals the roof space, thereby creating conditions suitable for the growth of dry rot. In ordinary floors there is always some air movement.

The air bricks will certainly increase heat losses in the winter, but should not affect greatly the insulation from the sun in the summer. A better method of construction would have been to concentrate on insulating the ceiling from heat losses, and to provide a white surface with crushed oyster shell or similar material on the roof for solar reflection.

The most convenient way of insulating the ceiling against heat losses is to use a good quality fibre board finished with plaster. Heraklith or a similar material would of course be equally effective.

It appears that the boarding is definitely in conditions conducive to dry rot. It could either be taken up and creosoted under pressure, or treated by any other well-known means, or better still it could be replaced by western red cedar boarding.

PARTY WALLS

Question 2

Can you assist me in the following matter? I am anxious to know whether there is any decided case dealing with the legal liability of the parties under the following circumstances :—

My client was the owner of four terrace houses erected many years ago. No. 1 was the corner house and he sold these premises. The purchaser pulled down No. 1 and exposed the party wall between No. 1 and No. 2, and this party wall was found to be structurally defective; there was an absence of appropriate foundations and no damp course. Whereupon the new owner of No. 1 served a party wall notice and it was obvious that my client would be landed with a good deal of expenditure which he never contemplated. The argument was put forward that inasmuch as the new owner of No. 1 had pulled down these premises for his own convenience, and thereby unfortunately exposed this defective party wall, the liability devolved upon him to make good the whole of the party wall at his expense.

Any details in connection with a similar case I shall be pleased to know.

Answer 2

The inquiry does not state whether the premises with which it is concerned are situated in London, or some other part of the country.

In the Administrative County of London, Party Wall matters are governed by the provisions of the London Building Act, 1930, but in the rest of the country (except for a few places in which building operations are regulated by Local Acts of Parliament), they are governed by the common law.

If the premises are outside London, the inquirer would be well advised to consult his solicitor about the matter.

If, however, the premises are within the Administrative County of London, the appropriate sections of the Building Act state quite clearly the rights of both building and adjoining owners in relation to party walls, and also how the expenses connected therewith are to be borne.

It may be that there have been cases on the matter under consideration, but, if so, we have not been able to trace any. On the other hand, the Building Act deals so specifically with it, that there seems little room for dispute and litigation. The inquirer should be referred to Part IX of the Act, and particularly to Sections 114 (2) and 120 (1) (*b*).

These two sections make it abundantly clear that if the party wall is so defective that it is necessary or desirable to pull it down and rebuild it, the building owner has the right to do so, and that the expenses are to be jointly borne.

There is no substance in the point that the building owner should bear the cost of rebuilding the wall merely because he exposed its defects, but the inquirer should carefully consider in the apportionment of the expenses, the latter part of Section 120 (1) (*b*), in which it is stated that regard is to be had to the use that each owner may make of the structure.

We have assumed from the letter that the inquirer admits that the wall is so defective that it is necessary or desirable to pull it down and rebuild it.

•

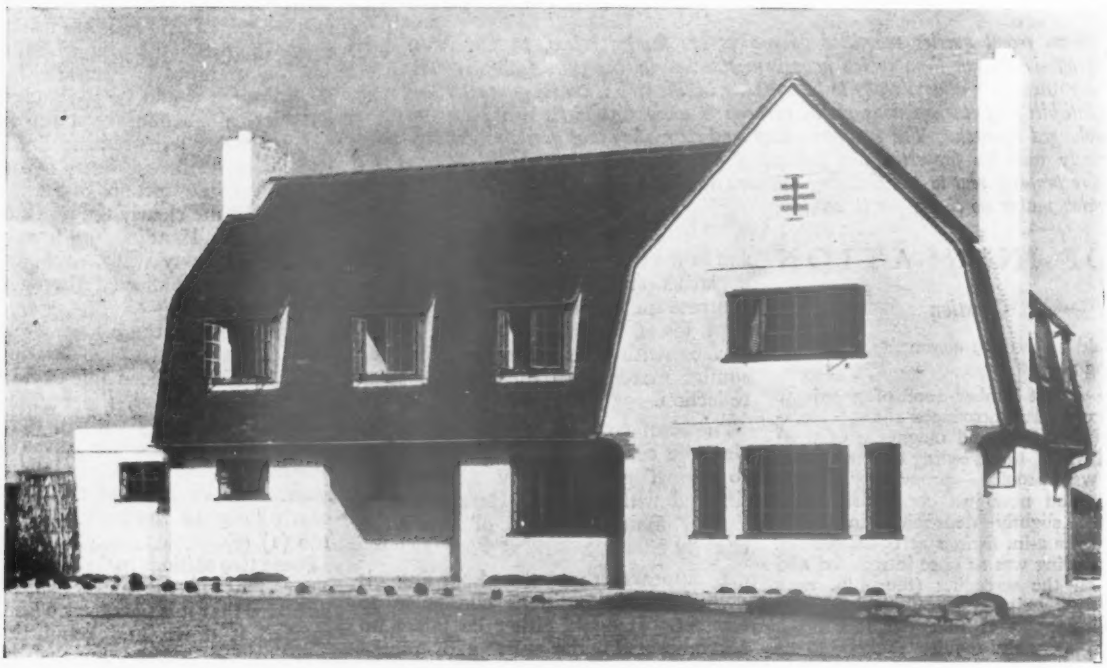
The Speculative Builder

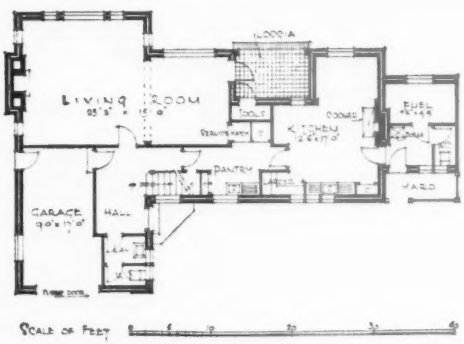
Mr. Stanley C. Ramsey, speaking at a recent meeting of the Norfolk and Norwich Association of Architects, said that it must not be forgotten that of the vast number of houses that had been erected in this country since the war, practically two-thirds of them had been provided by the speculative builder and about one-third by the local authorities, and except that in so far as architects had worked for these two agencies, the direct contribution by architects had of recent years been almost negligible—that was in point of quantity, of course, not in point of quality.

Lambeth Town Hall

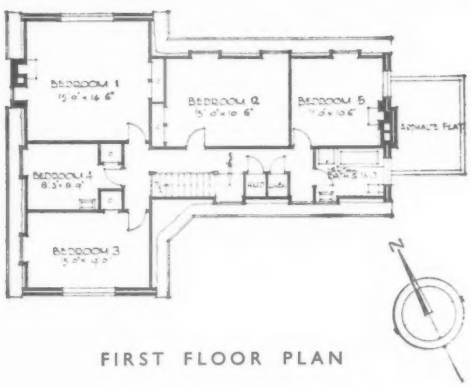
Lambeth Town Hall is to be extended at a cost of £90,000. The work will begin during the summer and will take fifteen months to complete. The extensions will provide additional office accommodation and will give Lambeth a public hall capable of seating 500 people.

HOUSE AT WEST WITTERING





GROUND FLOOR PLAN



FIRST FLOOR PLAN

DESIGNED BY

FISHER AND TRUBSHAWE

SITE—*House faces the sea on the south side.*

PLAN—*Special accommodation requirements: living-room with dining recess; garage incorporated in building and entered from house; recess off kitchen for maids; small study (or bedroom) on first floor facing south and west.*

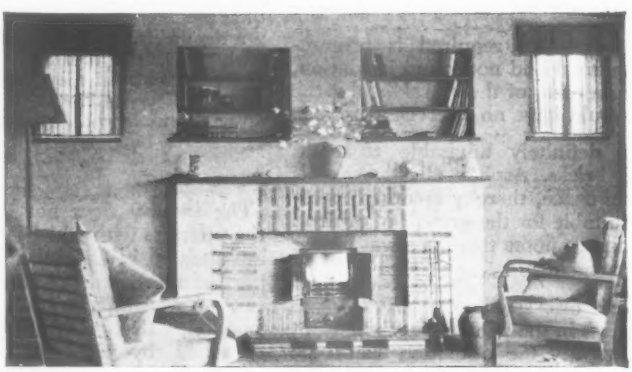
CONSTRUCTION—*Walls are of 11 in. hollow brickwork, cream-washed; and the roof is covered with red-brown hand-made sandfaced tiles. Standard metal windows are fitted.*

FINISHES—*Interior walls: rough plaster, grit finish, left natural cream colour. Ground floor, pine blocks. Built-in stove in living-room; tile surround with hot air vents. Bathroom tiled to 5 ft.*

SERVICES — *Hot water from kitchen range. Central heating from separate boiler.*

COST—*£1,345. 1s. 2d. per cu. ft.*

The photographs show the south-west elevation and the fireplace end of living-room.



Cottage-flats, Rotterdam. Architect, J. T. P. Oud. From "European Housing."

LITERATURE

EUROPEAN HOUSING

[*BY W. P. KEEN*]

Housing: A European Survey by the Building Centre Committee. Volume I: England, France, Holland, Sweden, Denmark and Spain. London: Rolls House Publishing Co. Price 30s.

DURING the past two years no fewer than fifty books dealing with housing have been published in this country. This is a surprisingly large number, considering that the total does not include the numerous Government publications explaining the new Housing Acts passed in the course of that period. It is, however, all the more surprising to find that, of this number, only two—*Modern Housing*, by Catherine Bauer, and *Housing and Town Planning throughout the World*, by Bruno Schwan—cover international housing. The others are devoted mainly to the housing laws of this country.

It is not hard to find the reason for the scarcity of books on international housing. The compilation of such volumes is obviously a difficult and arduous task, entailing months of hard work. It is comparatively easy for a housing expert to write a book on any or all the aspects of housing laws in England; but if he were asked to compile a record of European housing I doubt very much whether he would do so for less than the fabulous sum paid to a boxer for a championship fight. And then he would take many years before his work could be placed before the public.

A case in point is the Building Centre's first of two volumes on working-class housing in six countries—England, France, Holland, Sweden, Denmark and Spain. Here is a work that has taken ten people over two years to compile. That they had by no means an easy task is borne out by their statement that "this volume, and the volume to follow, is the result of a survey which has taken over two years to complete," and that "all the schemes illustrated have been visited by the Committee, with the exception of those at Barcelona." Considering that nineteen of the thirty-two schemes are abroad the thoroughness with which the Committee has carried out its work can easily be appreciated. It is, therefore, to the following members of the Editorial Committee of The Building Centre that we are indebted for this valuable volume: Holroyd F. Chambers, Louis de Soissons, A. T. K. Grant, G. Grey Wornum, F. R. Yerbury (general editor), with the assistance of Justin Blanco White, Mary Crowley, E. W. N. Mallows, Rose Gascoigne and H. A. F. Best.

In their preface (which is preceded by an introduction by Sir Kingsley Wood, Minister of Health), the authors point out that the function of the work "is neither to support nor oppose any political theory on housing, nor yet to offer proposals for the solution of the housing problem"; rather, it has been their object "to supply to those interested an unbiased report upon what has already been done, so that they may benefit from the experience of others and have before them an analytical record of facts upon which they may form their own judgment." In other words, here is a record of thirty-two European schemes illustrated fully and described minutely, with essential facts about the housing laws of the countries concerned. Each has been chosen by the housing directors or others responsible for the housing works of the cities concerned as being representative of their work; they do not represent the ideals which could be desired by those responsible; but they do give a true picture of the best that could be done.

The main feature of the book is that the general text has been reduced to a minimum. The preface occupies two pages, followed by ten pages devoted to definitions. Then we have the schemes, grouped under their countries in the following order: England, thirteen (London, seven; Birmingham, one; Liverpool, three; Leeds, two); France, six (Paris, five and Villeurbanne); Holland, five (Amsterdam, three; Rotterdam, two); Sweden, four (all in Stockholm); Denmark, three (all in Copenhagen); and Spain, one (Barcelona). The subject matter is divided into three sections. The first deals with the countries' finance; the second is devoted to the town from which the schemes are drawn, divided up as follows: population,

A block of flats in Stockholm. From "European Housing."

climate, situation, industries, wages, open spaces, transport and local building materials, followed by a section on that town's housing policy under the following heads : introduction, management, social services, site planning and details regarding building standards and data on the construction and finishes of each of the schemes illustrated. Finally, there are the plans—with scales and measurements in English and metric values—and the illustrations.

The above is a brief outline of the format of the volume. It is now necessary to discuss the work of each country.

Quite naturally we start with England, for this country has twice as many schemes illustrated as any other. It may seem strange that the English quota should be so large but, on analysis, it will be found that the examples depict different types of landlord. The London schemes comprise two by the L.C.C.—the cottages and cottage-flats on the Downham Estate and the block of flats in China Walk, Lambeth ; the cottage-flats on the Magdalen Park Estate, Wandsworth, by the Wandsworth Borough Council, and examples of block dwellings carried out by the Duchy of Cornwall (Newquay House, Kennington), the St. Marylebone Housing Association (Wilcove Place), the Chapman Development Trust (Chapman House, Stepney), and the St. Pancras House Improvement Society (Kent House, Chalk Farm). In this

section on London we have a first-class survey of housing. Never before have so many London schemes, fully illustrated, been grouped together. We therefore have the opportunity really to study the efforts that are being made to provide the working classes with decent living accommodation. And from these seven London schemes it appears that Londoners are being given a fair deal from the type of flat provided. But, unfortunately, the rentals, from the working man's point of view, are rather high. A rapid calculation of the weekly rent of the seven schemes shows that the average is 15s. 10d. per flat. And, it must be remembered, this figure includes the rents on the Downham Estate where, although the average—15s. 3d.—for the estate is lower than the main average, fares must be taken into consideration. There are hundreds of people who are prepared to pay this sum and more for flats of this type, but there are thousands of people who would like to live in these flats or cottages but cannot afford to do so. It is obvious, therefore, that we must find means to reduce rents; and, too, we must find the way to cater for the ever-increasing demand for comparatively reasonable housing accommodation in inner London.

What of the other English schemes, outside London? There are illustrated six examples: Liverpool has three, Leeds two, and Birmingham one. Liverpool perhaps is the most important of these three towns, for its housing problem is far greater than that of the other two cities. That the Corporation is well aware of the necessity to rid the city of slums and to provide decent housing accommodation is manifest by its recent decision to draw up a plan for the redevelopment of some 50 acres in the centre of the city, the first scheme of its kind to be submitted to the Minister of Health under section 13 of the Housing Act, 1935. The three Liverpool schemes shown are typical of the Housing Department's work and are: The Dovecot Estate, Speke Road Gardens and St. Andrew's Gardens. The average rent per week for the Dovecot Estate is 11s. 8d., and for the other two 9s.

Leeds has two examples: like Liverpool, the schemes show two types of housing: cottages on the Gipton Estate and flats at Quarry Hill (which are now in course of construction on the Mopin system and for which rents are not yet fixed).

Lastly, we have, in the English group, Birmingham, whose contribution is the Wesley Castle Estate, consisting of cottages let at an average rent of 12s. per week.

In the French section it is interesting to note that none of the Paris schemes is within a radius of less than five miles of the city. The two most important are at Champ des Oiseaux and Cité de la Muette, which are also built on the Mopin system; the three other examples are at Maisons Alfont, Boulogne-sur-Seine, and Chatenay-Malabry. The other scheme in this section is the much-publicized New Town Centre at Villeurbanne, near Lyons.

Holland's examples are drawn from Amsterdam and Rotterdam. The schemes in Amsterdam comprise two cottage estates, that at Buiksloterham and the more recently built one at the Blauwe Zand; and the Rotterdam examples are the cottage-flats at the Hook and the Bergpolder flats.

All the schemes in the Swedish section are in Stockholm, and very good they are, too. There are block dwellings by the municipality and by private enterprise, cottage settlements established by the municipality and terrace homes and block dwellings built by the Co-operative Society. The Swedish section is by far the best of the foreign groups.

The three Danish examples, all in Copenhagen, are two block dwellings by the municipality and one block by private enterprise. Some illustrations of the municipality's Sokkelundsvej scheme might well be in the London section dealing with the work of the London County Council, so remarkably similar are they externally to some of the L.C.C.'s schemes.

Spain has been so much in the news recently that no one can criticize the fact that only one scheme, at Barcelona, is illustrated. The scheme, built by the "Working Class Dwellings Committee," comprises seven-storey maisonettes and two-storey terrace-houses.

It is difficult to assess the value of this book. Personally I would state that it is undoubtedly the finest contribution to housing literature yet made. There is, however, one subject with which the authors have not dealt. They have omitted to give a comparison of building costs in the various schemes, for the following reason, given in their preface: "It has been found impossible to deal adequately with the question of costs of building in connection with housing. Building costs are affected in many different ways by local conditions. The comparison of building costs in different countries is likely to be misleading even if it were possible to obtain full and accurate information which is not usually the case. Although it might be possible to solve the difficulty of varying rates of exchange, there are other factors which involve greater complications, such as changing prices, varying costs of labour, and differences in available local materials, climatic conditions, subsoils (compare Amsterdam with Stockholm) and local building bylaws and regulations. A housing scheme which was the cheapest to build in one country might possibly be the most expensive to build in another. It would seem that the only method to arrive at converted costs would be to obtain full working drawings of a scheme from one country, adapt them to meet the local conditions and regulations, and obtain estimates for actual building in the country for which the comparison is required."

It would, however, have been useful to have the comparison of cost within each country, particularly England. For instance, it would be interesting to compare the cost of the brick-built flats of the L.C.C. and those erected in concrete by the St. Pancras House Improvement Society or the other housing associations. This is, perhaps, a minor criticism, considering the high standard of the information and illustrations given.

We now await with much interest the second volume.

JAGGARD AND DRURY

Architectural Building Construction. Volumes II and III. By Walter R. Jaggard and Francis E. Drury. London: Cambridge University Press. Price 12s. 6d. each.

THE new edition of the last two volumes of Jaggard and Drury are likely to make any architect in 1937 wonder where he will be, and what methods of construction he will be using, in another twenty years.

Few people connected with building like change for its own sake and few, for very sound reasons, care to use a material or method which has not been thoroughly tried out. Yet all the weight of this conservatism has not stopped building construction developing and changing during 20 years in a way that seems to have made Jaggard and Drury into a social document rather than a reference book.

To some degree this appearance of terrific progress is deceptive, caused by changes in fashion and the method by which the authors put their story across.

Jaggard and Drury is a work of great personality. The strength of personality is in the tremendous conviction it gives; its weakness is that it is apt to date. In addition the authors selected two buildings, a house and a warehouse, by the detailed analysis of which they taught the young and the old how to build soundly. And it is unfortunate that these two buildings, known intimately to many more architects than any recently hanging in the Royal Academy, should today be so unfashionable in appearance and should use so many constructional details

which are so far as we can tell, forever discarded.

But a sigh at the angles for calculating footing offsets and 1 ft. 10½ in. brick walls must not be allowed to develop into the conviction that Jaggard and Drury is a back number. Anyone who knows it thoroughly will know a very great deal about sound building; and its drawings are still unbeaten for learning how a building is put together.

The new edition has been enlarged by notes and drawings on plywood or blockboard, partition blocks, tubular scaffolding and other recent developments.

And, like other established institutions, Jaggard and Drury having been thus informed that it is behind the times, will certainly prove extremely useful and be continuously consulted for a very long time.

LAW REPORTS

COMPENSATION AWARD FOR INTERFERENCE WITH LIGHT

Fishenden v. *Higgs & Hill, Ltd.—Official Referees Court. Before Mr. S. R. C. Bosanquet, K.C.*

THIS case came before Mr. Bosanquet, sitting as Official Referee, for the purpose of his assessing the amount of damages to which Mr. Reginald Charles Fishenden, of 8 Chesterfield Gardens, London, W., was entitled to recover from the defendants, Higgs & Hill, Ltd., builders and contractors, of Crown Works, South Lambeth Road, for the obstruction by them of plaintiff's ancient lights at No. 8 Chesterfield Gardens.

The plaintiff is the lessee of No. 8, and he had expended about £8,000 in converting the premises into residential flats. He brought his action against the defendants to restrain them from erecting or continuing to erect a large block of flats on the site of Chesterfield House, formerly the residence of the Princess Royal and the Earl of Harewood, so as to cause a nuisance or illegal obstruction to the plaintiff's ancient lights in No. 8 as they existed before the pulling down by the defendants of Chesterfield House. Plaintiff also claimed a mandatory order directing the defendants to pull down so much of the new building erected by them as caused a nuisance, obstruction or interference with his ancient lights. In the alternative plaintiff claimed damages.

The defendants pleaded that their proposed new building would not diminish the light which came through the windows of plaintiff's house and they alternatively pleaded that after completion of the erection of their building there would be left a quantity of light coming to plaintiff's windows, ample and sufficient for the requirements of reasonable persons occupying those premises.

Mr. Justice Crossman, who tried the case in the Chancery Division, held that the plaintiff had established his right to relief in respect of four rooms on the ground floor and basement and referred to as rooms 1, 2, 4 and 6, saying he could not find that the injury to the plaintiff was small and which could be adequately compensated for by a small money payment. He gave judgment for the plaintiff, granting him a mandatory order on the defendants to pull down and remove so much of their building as infringed the plaintiff's lights in question. This order he suspended pending an appeal.

On the appeal of the defendants, coming before the Court of Appeal, the Court held that the evidence given before Mr. Justice Crossman was sufficient to show that Mr. Fishenden's ground floor and basement had been deprived of so much light as to render the occupation of the rooms in question uncomfortable according to the ordinary notions of mankind, and though the locality had to be considered in arriving at any such conclusion, it was no defence to show that in a number of streets in Mayfair there was much less light than had been left to Mr. Fishenden. The Court thought there was evidence on which Mr. Justice Crossman was justified in holding that a nuisance had been caused by what the defendants had done, but that in the circumstances the Court ought to incline rather to damages than an injunction. The defendants had acted reasonably in having given Mr. Fishenden warning of what was going to be done and sending him the plans of their proposed building. The Court accordingly directed that the case should be remitted for the purpose of its being ascertained what damages Mr. Fishenden had suffered and directing that the mandatory order granted should be discharged.

Messrs. Higgs & Hill's appeal was accordingly allowed to the extent that there would be a variation of the order made by Mr. Justice Crossman.

Subsequently the matter came before Mr. Justice Eve on a summons by Higgs & Hill asking Mr. Fishenden to give particulars of the £8,000 damages he claimed. His lordship made no order on the summons.

It was stated that Mr. Fishenden was not the freeholder of his premises, and therefore it was a question whether he could recover anything for site value. Mr. Fishenden claimed that he was entitled to damages for the injury done to his premises as a whole and that it would be unfair to ask him to split his claim up into a number of different items.

Judgment

The Official Referee, in giving judgment, said in this case the lease had thirty years to run. The plaintiff acquired the premises in 1930 with the object of dividing it into flats and sub-letting them. Exactly opposite the premises were some stables some 40 ft. high which had been pulled down by the defendants and a block of buildings some 80 ft. high and 59 ft. away erected. It had been held that the defendants' building in some respects constituted an actionable nuisance. The rooms that were affected were the basement rooms and ground floor rooms. As regards the basement the Official Referee assessed the damages at £205 8s., and for the room occupied by the plaintiff, £410.

As regards the club premises he assessed the damages at £320, making a total for the basement of £1,135 8s.

On the first floor only one room was involved, and no doubt damage had been done and was more considerable than to the other rooms. He assessed the damages to this room at £630. There were two other matters to be considered, viz. the entrance hall and a second floor flat. As to the entrance hall, in his view some damage had been done and he assessed the damages at £107 14s. He did not think any damage had been done to the second floor flat. The total sum he awarded was £1,873 2s.

Mr. Fergus Morton, K.C., for the defendants, said before trial his clients had made an offer of £1,500 and taxed costs, and in December, 1936, they offered £2,500, with costs. That offer was refused and counsel now asked for the defendants' costs.

Lord Reading, K.C., for the plaintiff, asked for judgment, with costs, on the ground that the money was not paid into Court.

The Official Referee said the defendants had made an offer of a sum larger than plaintiff had received. There would be judgment for plaintiff for £1,873 2s., with costs up to and including December 21, 1936, and after that date no costs.

COMPENSATION: QUESTION OF APPLICATION OF ACQUISITION OF LAND ACT, 1919

Drapers' Co. v. *London Passenger Transport Board.—Chancery Division. Before Mr. Justice Luxmoore*

THIS was a test action, and the point at issue was as to the proper amount of compensation payable on the compulsory purchase of land, comprised in the site of Nos. 2 and 3 Cheapside, by the Transport Board, who required it for the purposes of the construction of a booking-hall.

Plaintiffs sought a declaration that the compensation payable ought to be ascertained according to the Land Clauses Acts, as modified by the London Electric and Railways Act, 1931, and not, as the defendants contended, under the provisions of the Acquisition of Land (Assessment of Compensation) Act, 1919.

Under the Acquisition of Land Act a special tribunal was created in the form of a panel of official arbitrators to determine the compensation payable for land authorized to be acquired compulsorily by any Government department or local or public authority, and section 2 provided that no allowance should be made for the acquisition being compulsory. Under the Land Clauses Act, 10 per cent. of the value was to be added to the price for compulsory purchase.

Mr. Fergus Morton, K.C., for the plaintiffs, argued that as the defendants had served the notice to treat under powers originally vested in the Central London Railway, they had no *locus standi*, as the railway company was not and never had been a public authority.

Mr. Tyldesley Jones, K.C., for the defendants, contended that the Acquisition of Land Act applied here as his clients had served the notice to treat for the land under powers conferred upon them by their Act of 1933. The defendants' Act of 1934 gave protection to the London County Council, and other public bodies, but there was no section for the protection of private owners, such as the plaintiffs.

His lordship, in giving judgment, said it appeared that the defendants required the premises for the purposes of the construction of a booking-hall for the station now known as St. Paul's, formerly known as the Post Office, and on October 2, 1935, served on the plaintiffs a notice to treat for the premises, Nos. 2 and 3 Cheapside. In accordance with a notice they had now

taken possession and the question that now arose was as to the method of ascertaining the compensation payable. Section 1 of the London Passenger Transport Act, 1933, established the defendants as a public authority, and defendants gave their notice to the plaintiffs under that Act.

One of the objects of the Act was to transfer to the defendants a number of transport undertakings, including the Central London Railway, which became vested in the defendants. That Act extended to all the rights, powers, and privileges of the transferred undertakings vested in them immediately by the appointed day—July 1, 1933. These powers included the rights enjoyed by the railway company and gave them the right to take the land in question.

It appeared to his lordship that the defendants had brought themselves within the provisions of the Acquisition of Land Act, 1919. The fallacy of the defendants' argument was shown by the fact that by the appointed day the railway company had never served any notice to treat on the plaintiffs, and therefore could not be under any liability or obligation in respect of those premises. He could not find in the plaintiffs' own Act of 1931 any section for the benefit or protection of the plaintiffs. The plaintiffs had raised other contentions, but in his lordship's view they all failed, and he dismissed the action and ordered the plaintiffs to pay the defendants' costs.

On their counterclaim the defendants were entitled to a declaration that the compensation payable must be awarded in accordance with the Acquisition of Land Act, 1919.

CONSTRUCTION OF RESTRICTIVE COVENANT

Nelson and another v. *Rayner.—Court of Appeal.—Before the Master of the Rolls and Lords Justices Romer and Greene.*

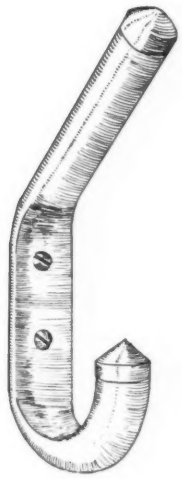
THIS was an appeal by Mrs. F. H. Rayner, of Woodleigh, Station Road, Sandown, Isle of Wight, the defendant in the action, from a judgment of Mr. Justice Bennett, sitting in the Chancery Division, in favour of the plaintiffs, Mr. W. G. F. Nelson and Mr. A. P. Good, as owners of Foreland House, Bembridge.

It appeared that defendant had a piece of land adjoining the defendants' property and she added to an existing old lifeboat house to make it a restaurant and residence. She also placed a hut on wheels on the land. It was under these circumstances that the plaintiffs asked for injunctions against the defendant erecting any building, and a mandatory order for removal, setting up that defendant was bound by a restrictive covenant not to build on the sea side of the house. Defendant pleaded that she had no personal knowledge of the covenant. Mr. Justice Bennett found that though defendant had no personal knowledge of the covenant, it was indicated in the documents and she must be taken to have purchased the land with constructive notice of it.

After legal argument the Court dismissed the appeal.

The Master of the Rolls, in giving judgment, said that in the opinion of the Court Mr. Justice Bennett was right in regard to the injunction against building and the mandatory order for removal.

Lords Justices Romer and Greene concurred.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Pressed Steel Lever Handles

A NEW range of lever handles has recently been introduced by a firm of metal stampers, and it seems to me that they have evolved a production method which is a complete breakaway from the present approach. The handle starts life as a straight length of tube, is bent through a right angle, and upset to give a shoulder for the escutcheon plate bearing and a further shoulder to act as a stop for the handle sleeve, the short leg of the elbow is squared, and a liner inserted for extra strength, and this unit, with a square or round escutcheon plate, is the standard "base" handle.

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Finish may be almost anything. The drawing at the foot of this page shows the various standard sleeve sections which can be slipped over the "base" handle and secured by the end stop button, and for this, again, several alternative shapes are available. So far, round sections of Erinoid and anodised aluminium in all colours, and chromium-plated or silver-oxidized sections in hexagon square, fluted and octagonal, can be supplied from stock. The escutcheons are spring-loaded, so that the usual droop of lever handles should be absent.

The firm has also taken the trouble to make fixing of the handles a good deal easier than usual. There are, of course, two common snags: the escutcheon plate does not always overlap the case of the lock itself, and very short screws with little or no holding power have to be used, or else, with a thin door, there is not enough wood left to hold a screw after the mortice is cut. These two difficulties are got over quite ingeniously by using a *metal-threaded* screw in conjunction with a small threaded back-plate, the complete assembly looking rather like a back collar-stud from which the head can be unscrewed. Admitted rather more trouble to fix, but the manufacturers have a special holder for the back plate, and anybody who has ever pulled a handle bodily off a door will probably think the extra trouble is well worth while.

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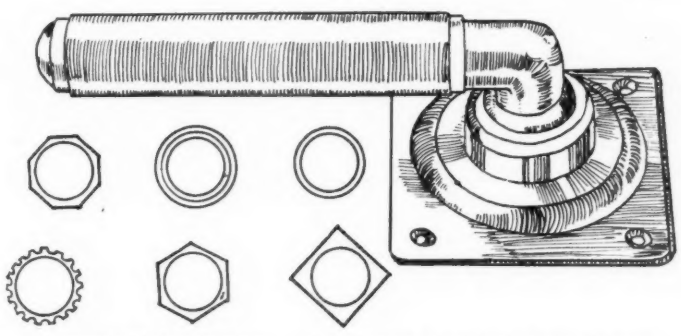
Prices are fairly low: 7s. 6d. to 8s. 2d. a set.

Coat Hooks

The same firm has also produced a hat and coat hook which is about as simple as it could well be and yet as pleasing as anything of its kind I have seen. The illustration at the head of these notes shows that it is pressed from a length of tube,



Pressed steel door furniture: the sections on the left show the different types of finish available. (*See note on this page.*)

Since the publication, in our issue for March 4, of Mr. H. A. J. Lamb's article on Sanitation, a correspondent has sent an even earlier example of a water-closet seat than the one from Tel-el-Amarna. The one shown above dates back to about 2,600 B.C., and the seat is covered with an asphalt mastic. It was discovered during the 1932-33 excavations by the Oriental Institute of the University of Chicago, at Tell Asmar, an ancient Mesopotamian city some thirty miles north-east of Baghdad.

the flattened portion being drilled for fixing screws.

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The end caps are in coloured Erinoid, and it seems to me that this fitting simply demands to be used in schools—particularly in nursery schools—for Erinoid is made in a number of colours, and the end caps could quite easily become the distinguishing marks for each child's particular peg, an infinitely cheaper proceeding than the rather elaborate signs and pictures which are so often used nowadays.

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And the price is positively Woolworth: 7s. a dozen in the matt black sherardized finish which is my personal preference, though chromium plate can be obtained for another 5s. a dozen.

Stainless Clad Steel

Stainless steel, in sheet, rod or bar, is becoming more and more widely used, but it suffers from the disadvantage of a pretty high price. For some time now the Ingersoll Steel and Disc Company, a branch of the Borg-Warner Corporation of America, have been producing a stainless *faced* steel sheet, marketed under the name of Ingaclad, and the process is now being developed in this country by S. Fox & Co., under licence from the American patentees.

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As the standard amount of stainless steel is only 20 per cent. of the whole sheet, the saving in cost should be considerable. The most obvious uses for the sheet are probably in chemical works and other places where high corrosion-resistance is necessary, but there are also a good many architectural uses to which this material could be put, for it can be welded and drawn, soldered or seamed quite easily.

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So far as I can discover, the process has not got very far beyond preliminary tests in this country, but the method of producing the stainless face is interesting. After rolling, the stainless plates are cleaned and ground and cut to size, and one face of each plate is coated with an insulating compound. The coated plates are then placed face to face, the four edges sealed by welding, and the double sheet placed in a mould. Mild steel is then poured into the mould, completely covering the stainless plates and forming a composite ingot which is then rolled into sheets or plates of the required gauge and then annealed. The four edges are then sheared back to the point where the stainless steel begins, thus producing two stainless clad sheets from each ingot.

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This cast-in-the-ingot method means that the stainless surface is not liable to roll marks, scaling or oxidization, as it is surrounded by an envelope of soft steel during the heating, rolling and annealing operations. Structurally, micro-photographs show that the stainless layer is perfectly bonded to the mild steel.

Prices Rise

The General Electric Company announce a 10 per cent. increase in price of all their conduit fittings and accessories. Whether or not this rise is bound up with the armaments boom I do not know, but remembering the admitted scarcity of steel and Sir Thomas Inskip's recent remarks on self-denial, it looks as though a good many other manufacturers may have to do the same thing.

Addresses

General Stampers (Welwyn), Ltd., Horseferry House, Horseferry Road, London, S.W.1.

S. Fox & Co., Ltd., Stocksbridge Works, Sheffield.

The General Electric Company, Ltd., Magnet House, Kingsway, London, W.C.2.

ACOUSTICS IN BUILDING

Dr. A. J. Davis, in a lecture on "Acoustics in Buildings," at the Building Centre on March 5, discussed the exclusion of noise from buildings. Dr. Davis said: "The prevention of the transmission of sound from room to room was complex because of the variety of paths by which unwanted sound could gain entrance, and one of the first essentials was to recognize clearly the nature of these paths.

"If, for example, sound originates in blows upon the structure of a building, or in heavy footsteps upon walls or floors, the vibration set up may cause considerable noise in the adjacent room, and may also travel in the structure and be heard in rooms far removed from the source. If the noise originates in the mechanical action of circulating pumps, or fans, attached to water pipes or ventilating ducts, the pipes themselves may convey noise to distant rooms or they may transmit vibration to walls which in turn transmit the noise to a distance via the structure of the building.

"In Great Britain the subject of building acoustics is being studied jointly by the National Physical Laboratory and the Building Research Station under the auspices of an Architectural Acoustics Committee of the Department of Scientific and Industrial Research. The problem resolved itself into a few main divisions.

"Primary importance attaches to finding partitions which are proof against air-borne sounds, and floors which insulate the room below from the noise of heavy footfalls or blows overhead. For unless transmission direct through the floor or partition can be prevented, no success can be achieved. It is also necessary to study the general transmission of sound via the structure of the building, and the problems of suppressing noise due to taps, cisterns, pumps and other equipment."

Discussing doors and windows for soundproofing of any importance, double doors and windows in separate frames were necessary, said Dr. Davis. "Double windows of ordinary glass are more effective than a 9-in. wall if the separation between the panes exceeds about 4 ins. A surprising condition arises if the air space between two faces of a double window is too small, for then certain low-pitched tones may be transmitted more readily through the double window than they would be through a single window.

"A considerable increase of insulation can be achieved with light double partitions by introducing absorbent materials such as felt, etc., into the interspace. If the partitions are of a material like clinker concrete, which is itself absorbent, the introduction of further absorbent is unlikely to be effective, but if they are of glass, as in the case of windows, additional absorbent is of utility. It can be applied advantageously around the boundary of the interspace."

THE WEEK'S BUILDING NEWS

LONDON & DISTRICT (15 MILES RADIUS)

CAMBERWELL. *Depot and Disinfecting Station.* The Camberwell B.C. is to reconstruct the Peckham Park Road depot at a cost of £9,352 and erect a disinfecting station at a cost of £11,763.

EAST HAM. *Dispensary, etc.* The East Ham Corporation is to erect a dispensary and medical officer's room at the Aldersbrook Homes, at a cost of £1,000.

ENFIELD. *Offices.* The Enfield U.D.C. is to erect offices at Enfield Highway Depot at a cost of £2,900.

ENFIELD. *Houses.* Plans passed by the Enfield U.D.C.: 12 houses, Myddleton Avenue, Mr. Geo. W. Newman; 64 houses, off Baker Street, Messrs. E. Dover & Co., Ltd.; 18 houses, Irkdale Avenue, off Carterhatch Lane, Messrs. W. Goodchild & Co.; 90 houses, Broadoak Estate, Broadoak Avenue, Kingsfield Drive, Messrs. Swannell and Sly; 68 houses, Princes Avenue, Bedford Crescent, off Painters Lane, Messrs. McManus & Co., Ltd.

SOUTHERN COUNTIES

HASTINGS. *Houses, etc.* Plans passed by the Hastings Corporation: Eight houses, Parker Road, Messrs. Eldridge and Cruttenden; 58 houses, off Harley Shute Road, St. Leonards, Lancing Estates, Ltd., per Mr. A. C. Draycott, architect; block of flats, Castle Hill Road and Castledown Avenue, Mr. G. T. Mullins.

KENT. *Extension.* The Kent Education Committee has obtained sanction to borrow £42,599 for extensions at Dartford secondary school.

PLYMOUTH. *Houses.* Plans passed by the Plymouth Corporation: Six houses, Merrivale Road, Mr. F. Westcott; 39 houses, Lopes Road and Penlee Way, Stoke, St. Aubyn Estates, Ltd.

PORTSMOUTH. *Houses.* Plans passed by the Portsmouth Corporation: Seven houses, Lower Farlington Road, Messrs. Cortis and Hankins, Ltd.; 16 houses, off Tipner Lane, Victory Housing Society; bungalow, East Cosham Road, Mr. W. A. McPherson; 31 houses, Baffins Estate, Messrs. Dye Bros.; 74 flats, Highland Road, Portsea Island Mutual Co-operative Society, Ltd.

EASTERN COUNTIES

YARMOUTH. *Houses, etc.* Plans passed by Yarmouth Corporation: Factory extension, Exmouth Road and Barrack Road, Yare Barrel Factory & Co., Ltd.; six bungalows, Stanley Avenue, Gorleston, Messrs. W. West and Son; bungalow, Elmgrove Road West, Gorleston, Mr. C. Baldwin; two bungalows, Burgh Road, Gorleston, Messrs. H. Bedwell and Son; two houses and shops, Church Lane, Gorleston, and two houses, Lawn Avenue, Mr. W. P. Wright; house, Cliff Avenue, Gorleston, Mrs. A. W. Fowler; two houses, Rampart Road, Mr. W. J. Bayne; two houses, Limmer Road, Gorleston, Mr. A. V. Caddywold; rebuilding 42 Market Row, Mr. L. Knowles.

YARMOUTH. *Houses.* The Yarmouth Corporation is to erect 24 houses in Bells Marsh Road.

YARMOUTH. *Gymnasium.* The Yarmouth Education Committee is to erect a gymnasium at Edward Worlledge central school, at a cost of £3,329.

MIDLAND COUNTIES

BEDWORTH. *Houses.* The Bedworth U.D.C. is to erect 100 houses on the Wootton estate.

BIRMINGHAM. *Gymnasium.* The Birmingham Education Committee is to provide a gymnasium and other accommodation at the Handsworth Technical School, at a cost of £9,100.

BIRMINGHAM. *Police Houses.* The Birmingham Corporation is to build six police houses in Cole Hall Lane, Yardley, at a cost of £2,600, and make alterations at Selly Oak Police Station, at a cost of £2,190.

NORTHANTS. *Pavilions.* The Northants C.C. is to erect pavilions at Rushden House sanatorium, at a cost of £23,150.

STOKE-ON-TRENT. *Houses.* The Stoke-on-Trent Corporation has approved an amended plan on behalf of Mr. G. H. Wignall, for 76 houses to be erected at Sandyford.

WARWICK. *Cinema.* The Warwickshire Licensing Committee has approved plans submitted by Mr. Harold Seymour Scott in respect of the new cinema proposed to be erected in Long Street, Atherstone.

WOLVERHAMPTON. *Houses, etc.* Plans passed by the Wolverhampton Corporation: Ten houses, Watson Road, B. and E. Estates, Ltd.; 24 houses, Inchlaggan Road, Fallings Park Estate, Mr. M. A. Boswell; 20 houses, Springhill Estate, Mr. C. M. Jones; 10 houses, off Bhylls Lane, Bushbury Estate and Building Co.; 10 houses, Woodhall Road, Mr. E. Minty; factory, Temple Street, Mr. E. A. Ward; six houses, Canterbury Road, Mr. C. Jenkins; 28 houses, Pendeford Road, Mr. P. Gallagher; 232 houses, Bushbury Lane and Warstones Road, Housing Committee.

NORTHERN COUNTIES

BLACKPOOL. *Houses, etc.* Plans passed by the Blackpool Corporation: Five houses, St. Martin's Road, Messrs. J. Birtwistle, Ltd.; six houses, Wilkinson Street, Messrs. Staunton & Co.; church and school, Westcliff Drive, Methodist Church Trustees; 10 houses, Kendal and Burnsall Avenues, Messrs. Midgley & May; nine houses, Park Drive, Messrs. Wilson and Thornton.

CARLISLE. *Community Centre.* The Carlisle Corporation has prepared plans for the provision of a community centre in Heysham Park at a cost of £4,000.

CARLISLE. *Extensions.* The Carlisle Corporation is to extend the isolation hospital at a cost of £8,900.

DURHAM. *Houses.* The Durham Corporation is to erect 46 houses on the Sherburn Road Housing Estate.

DURHAM. *Houses.* Plans passed at Murton, County Durham: Ten houses, Coronation Street, for Messrs. Dickenson Bros.; 18 houses, Winds Lane, for Messrs. Geo. Cairns and Sons.

DURHAM. *Public-houses.* The Tadcaster Brewery Co., Ltd., is to erect a public-house in Picktree Lane, Fatfield, County Durham.

LANCASHIRE. *Clinic.* The Lancashire C.C. is to erect a clinic at the Jericho institution, Bury, at a cost of £2,250.

LANCHESTER. *Houses.* The Lanchester R.D.C. is to erect 56 houses on the Hamsteels estate.

LINCOLN. *Market Premises.* The Lincoln Corporation is to erect new market premises, for which purpose sanction has been obtained to borrow £30,877.

LINCOLN. *School.* The Lincs. (Holland) Education Committee is to erect new premises for the Boston High School at a cost of £37,375.

LIVERPOOL. *School.* The Liverpool Education Committee is to erect a senior school at Dingle Vale at a cost of £48,613.

RIDINGS. *Agricultural College.* The County Councils of East, North and West Ridings have obtained sanction to borrow £52,220 for the erection of an agricultural college.

SCARBOROUGH. *Cemetery.* The Scarborough Corporation is to lay out 64 acres in Stepney Road as a cemetery.

SUTTON COLDFIELD. *Reconstruction.* The Governors of Sutton Coldfield Grammar School are to reconstruct the school at a cost of £48,500.

WARRINGTON. *Houses.* Plans passed by the Warrington Corporation: 72 houses, Withers Avenue, for Messrs. R. and S. Smith.

YORK. *Houses, etc.* The York Corporation has approved plans by the city engineer for the lay-out of land at Gale Lane, Acomb, which showed approximately 50 four-bedroom houses, 300 three-bedroom houses, 52 two-bedroom houses and 36 flats. The Committee authorised the city engineer to obtain tenders for the erection of the houses.

YORK. *Houses.* Plans passed by the York Corporation: 110 houses, Water Lane estate, York Corporation; eight houses, Penyghent Avenue, Heworth Homes Builders.

SCOTLAND

GLASGOW. *Printing Works.* The Glasgow Corporation has authorised the Master of Works to undertake the erection of the printing works in accordance with plans to be prepared by him.

GLASGOW. *Housing Scheme.* The Glasgow Corporation has purchased 91 acres at Househillwood for a housing scheme.

GLASGOW. *Nurses' Home.* The Glasgow Corporation has provided land for the Royal Infirmary Governors in MacLeod Street to enable them to proceed with proposals for the erection of a nurses' home.

THE BUILDINGS ILLUSTRATED

AVENUE CLOSE, HAMPSTEAD (pages 461–465). The general contractors were Bovis Ltd., who were also responsible for the plumbing and plaster. Consulting Structural Engineer: W. L. Scott. Heating and Hot Water Engineer: J. Stinton Jones. The principal sub-contractors and suppliers included: Ragusa Asphalte Co., asphalte; Bath and Portland Stone Firms, stone; Cooper Wettern, Ltd., and Liverpool Artificial Stone Co., artificial stone; Rubery Owen, Ltd., structural steel; Caxton Floors, Ltd., fireproof construction; William Smith and Evans, roof tiles; G. R. Speaker & Co., Eonit partitions; James Clark and Sons, Ltd., glass and patent glazing; Honeywill and Stein, oak flooring; Macastingly, Ltd., waterproofing materials; G. N. Haden and Sons, Ltd., central heating; Davey Paxman, Ltd., boilers; Francis Polden & Co., Ltd., electric wiring and electric light fixtures; Leeds Fireclay Co., sanitary fittings; Parker, Winder and Achurch, door furniture and window furniture; Arthur Maxted, Ltd., iron staircases; C. Walker & Co., marble and tiling; Express Lift Co., Lifts.

NEW BURTON BANK, MILL HILL SCHOOL, N.W. (pages 466–468). The general contractors were Godson and Son, who were also responsible for the glass, gas-fitting, plaster, joinery and tiling. The principal sub-contractors and suppliers included: Ruberoid Co., dampcourses; Limmer and Trinidad Asphalt Co., Asphalt and special roofings; Northwick Brick Co., bricks and roof tiles; Portland Stone, stone; Cowley Concrete Co., artificial stone; Dawnays, Ltd., structural steel; Helical Bar and Engineering Co., fireproof construction; Hollis Brothers, woodblock flooring; G. N. Haden, central heating and boilers; H. A. Oakeshott, stoves, grates, gas fixtures and mantels; Benham and Sons, cooking apparatus; Duncan Watson & Co., electric wiring and bells; Troughton and Young, electric light fixtures; Scull & Co., plumbing; Doulton & Co., sanitary fittings; Yannedis, Ltd., door furniture, window furniture and cloakroom fittings; Crittall Manufacturing Co., casements (metal); Adrian Stokes & Co., metalwork; Frank Mortimer, Ltd., stonework; P. G. Bentham, stonework carver.

RATES OF WAGES

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

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

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

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

CURRENT PRICES

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

WAGES

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

MATERIALS

EXCAVATOR AND CONCRETOR

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

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	d.	6" s.	d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	"	3	6	5	3
Rest Bends	"	4	3	6	3
Single Junctions	"	3	6	5	3
Double	"	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	"	4	6	6	6
Channel tapers	"	2	9	4	0
Yard gullies	"	6	9	8	9
Interceptors	"	16	0	19	6
IRON DRAINS:					
Iron drain pipe	per F.R.	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
" 2nd "	"	4	2	6
Blue Bricks, Pressed	"	8	14	0
" Wirecuts	"	7	12	6
" Brindles	"	7	0	0
" Bullnose	"	9	0	0
Red Sand-faced Facings	"	6	18	6
Red Rubbers for Arches	"	12	0	0
Multicoloured Facings	"	7	10	0
Luton Facings	"	7	10	0
Phorpres White Facings	"	3	17	3
" Rustic Facings	"	3	12	3
Midhurst White Facings	"	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
" 1¼"	"	1	4	0
Rough boarding, ¾"	"		16	0
" 1"	"		18	0
" 1¼"	"	1	6	0

Plywood, per ft. sup.

Thickness	¼" A	¼" B	¼" BB	⅜" A	⅜" B	⅜" BB	½" A	½" B	½" BB	⅝" A	⅝" B	⅝" BB
Qualities	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	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings

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

	¾"	1"	1¼"	2"
Tubes 2'–14' long per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23" long each	10	1/1	1/11	2/8	4/9
" 3"–11½" long "	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long,,	11	1/3	2/2	2/10	5/3
" " 3" M—½" long,,	8	10	1/5	1/11	3/6
Bends	8	11	1/7½	2/7½	5/2
Springs not socketed	5	7	1/1½	1/11½	3/11
Socket unions	2/–	3/–	5/6	6/9	10/–
Elbows, square	10	1/1	1/6	2/2	4/3
Tees	1/–	1/3	1/10	2/6	5/1
Crosses	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples	3	4	6	8	1/3
Diminished sockets	4	6	9	1/–	2/–
Flanges	9	1/–	1/4	1/9	2/9
Caps	3½	5	8	1/–	2/–
Backnuts	2	3	5	6	1/1
Iron main cocks	1/6	2/3	4/2	5/4	11/6
" with brass plugs	—	4/–	7/6	10/–	21/–

Discounts	TUBES. Per cent.		Per cent.
Gas	68½	Galvanized gas	61½
Water	66½	" water	55
Steam	63½	" steam	50
	FITTINGS.		
Gas	61½	Galvanized gas	55½
Water	58½	" water	50
Steam	53½	" steam	46½

		s.	d.
Rolled steel joists cut to length	cwt.	14	6
Mild steel reinforcing rods, ⅜"	"	10	6
" " ½"	"	10	3
" " ¾"	"	10	0

SMITH AND FOUNDER—*continued*

		s.	d.
Mild steel reinforcing rods, ¾"	cwt.	9	6
" " 1"	"	9	6
" " 1¼"	"	9	6
" " 1½"	"	9	6
" " 1¾"	"	9	6

		4" s.	d.	6" s.	d.
Cast-iron rain-water pipes of ordinary thickness metal	F.R.		8		10
Shoes	each	2	0	3	0
Anti-splash shoes	"	4	6	8	0
Boots	"	3	0	4	0
Bends	"	2	7	3	9
" with access door	"		—	6	3
Heads	"	4	0	5	0
Swan-necks up to 9" offsets	"	3	9	6	0
Plinth bends, 4½" to 6"	"	3	9	5	3
Half-round rain-water gutters of ordinary thickness metal	F.R.		5		6
Stop ends	each		6		6
Angles	"	1	7	1	11
Obtuse angles	"	2	0	2	6
Outlets	"	1	9	2	3

PLUMBER

		£	s.	d.
Lead, milled sheets	cwt.	11	6	
" drawn pipes	"	42	6	
" soil pipes	"	45	6	
" scrap	"	32	0	
Solder, plumbers'	lb.		9	
" fine do.	"		1	0
Copper, sheet	"		1	2
" tubes	"		1	4½

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	5 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	"	5	0	0
Gothite plaster	"	3	6	0
Pioneer plaster	"	3	6	0
Thistle plaster	"	3	6	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb			3

GLAZIER

		s.	d.	s.	d.
Sheet glass, 24 oz., squares n/e 2 ft.	s. F.S.				2½
" " 26 oz.	" "				3½
Flemish, Arctic, Figures (white)*	"				7½
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	"				6
¼" wired cast; wired rolled	"				10½
¼" Georgian wired cast	"				11½
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.	3	9	9
Linseed oil	gall.		3	0
Boiled oil	"		3	3
Turpentine	"		3	9
Patent knotting	"		14	0
Distemper washable	cwt.	2	6	0
" ordinary	"	2	0	0
Whitening	"		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	"		14	0
Outside varnish	"		16	0
White enamel	"	1	15	0
Ready mixed paint	"		13	6
Brunswick black	"		7	6

CURRENT PRICES FOR MEASURED WORK

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

EXCAVATOR AND CONCRETOR

		s.	d.
Digging over surface n/e 12" deep and cart away	Y.S.	2	9
" to reduce levels n/e 5' 0" deep and cart away	Y.C.	8	6
" to form basement n/e 5' 0" and cart away	"	9	"
" " 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
" " (4–2–1)	"	1	12
" " underpinning	"	1	16
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	"
" rising on old walls	"	2	0	0
" underpinning	"	5	10	0
Fair Face and pointing internally	F.S.			1½
Extra over fletton brickwork for picked stock facings and pointing	"			8
" " " red brick facings and pointing	"			11
" " " blue brick facings and pointing	"		1	4
" " " glazed brick facings and pointing	"		3	6
Tuck pointing	"			7½
Weather pointing in cement	"			3
Slate dampcourse	"			10
Vertical dampcourse	"		1	1

ASPHALTER

		s.	d.
½" Horizontal dampcourse	Y.S.	4	9
½" Vertical dampcourse	"	7	9
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

SLATER AND TILER

		£	s.	d.
Slating, Bangor or equal to a 3" lap, and fixing with compo nails, 20" × 10"	Sqr.	3	10	0
Do., 18" × 9"	"	3	7	0
Do., 24" × 12"	"	3	17	"
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	"
" " " " " " " (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
¾" deal sawn boarding and fixing to joists	Sqr.	1	14	6
1" " " " " "	"	1	17	6
1¼" " " " " "	"	2	3	"
¾" × 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
1¼" " " "	"		1	6
2" deal wrought rounded roll	F.R.			8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼" do.	"	2	10	"
1½" do.	"	2	17	"
1" deal moulded skirting fixed on, and including grounds plugged to wall	F.S		1	6
1¼" 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, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ⅜" 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
1¼" deal tongued and moulded window board, on and including deal bearers	F.S.	1	9
1¼" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	"	2	6
1¼" deal moulded wall strings	"	2	1
1¼" " outer strings	"	2	4
Ends of treads and risers housed to string	Each	1	9
3" × 2" deal moulded handrail	F.R.	1	3
1" × 1" deal balusters and housing each end	Each	2	0
1¼" × 1¼" " " "	"	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, ½" 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	15	0
Do. in flashings	"	2	18	6
Do. in covering to turrets	"	3	4	0
Do. in soakers	"	2	9	9
Labour to welted edge	F.R.			3½
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.	1	2	1	4	1	8½	2	7	3	6	—	
Do. soil pipe and fixing with cast lead tacks	"	—		—		—		—		—		7	3
Extra, only to bends	Each	—		—		—		—		2	3	7	6
Do. to stop ends	"	6½		8		9		11		1	0	—	
Boiler screws and unions		3	3	3	9	5	"	8	0	—		—	
Lead traps		—		—		—		"	0	11	6	—	
Screw down bib valves	"	6	9	9	6	11	0	—		—		—	
Do. stop cocks	"	7	0	9	6	12	6	—		—		—	
4" cast-iron ½-rd. gutter and fixing	F.R.											1	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	"											"	6

PLASTERER AND TILING

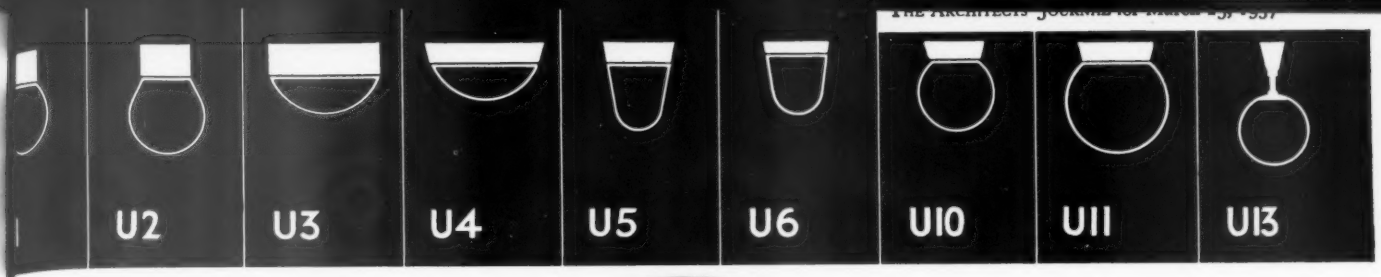
		s.	d.
Expanded metal lathing, small mesh	Y.S.	2	0
Do. in n/w to beams, stanchions, etc.	"	2	9
Lathing with sawn laths to ceilings	"	1	3
½" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1	5
Do. vertical	"	1	7
Rough render on walls	"	1	2½
Render, float and set in lime and hair	"	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.		8
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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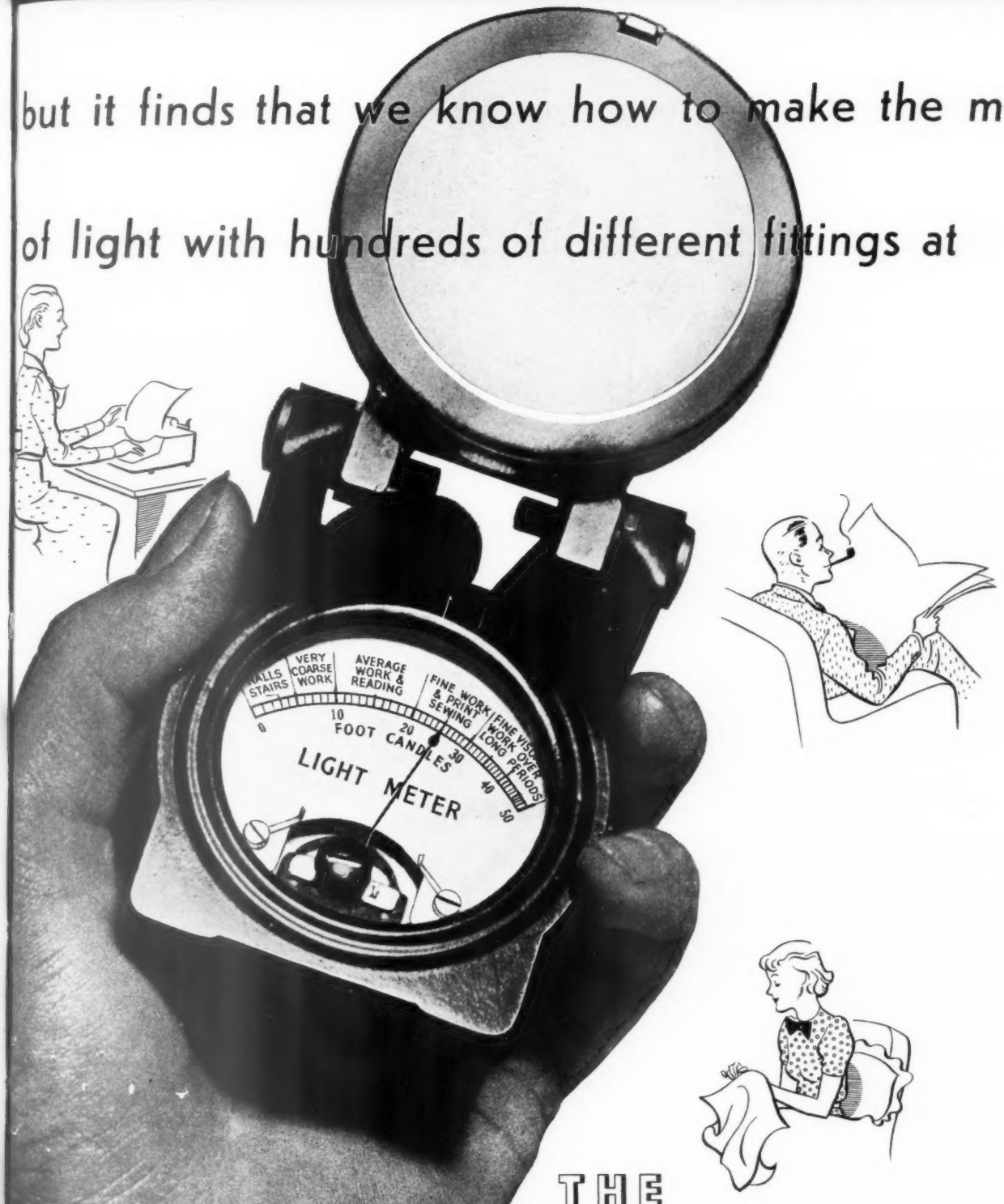

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