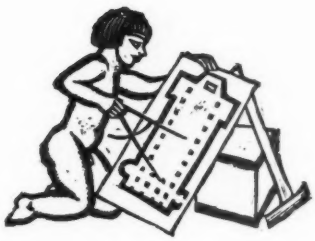
HOUSING PROGRESS

ROCK DWELLINGS IN WORCESTERSHIRE

THE rock dwellings at Blakeshall Common, Kinver, Worcestershire, which have been recently evacuated after condemnation by the local authority. The rooms are cut out of soft red sandstone, some being probably two thousand years old and others excavated during last century, and were occupied by local shepherds' families.

H. G. WELLS LOOKS FORWARD

A scene in Everytown in A.D. 2054, showing almost the whole city roofed in, with traffic circulations at various levels. The photograph is from the coming film by Mr. Wells, called "Things to Come."



EDWARD VIII

THE great events which have taken place during the last two weeks have deeply moved many millions of men and women. That emotion, the unanimity of feeling which was able to be made known each day, showed the grief of a great confederation of peoples at the death of a King respected by all the world, and the welcome and confidence felt towards King Edward VIII on his inheritance of grave responsibility. But they showed more than this.

They showed the range and speed of modern communications, the power of swift realization and immediate response which those communications grant a nation and an empire, and the closeness of today's relationship between the British Throne and British democracy. In the showing of these, the difference between the world today and the world of the past was plainly to be seen.

At the beginning of a new reign it is natural that the average man should be shaken into a rare recognition of how closely he and his life is bound up with others living thousands of miles away. The twenty-five years of the last King's reign saw that world develop in startling and terrible ways : what will happen in the next ?

Prophecy for a generation ahead has never been more difficult than now, when the enmities of nations can be so quick and so disastrous. But with these international causes withdrawn, there would seem amongst the complication of Britain's domestic living some broad tendencies and broad determinations which must in the end lead to changes that can be foretold.

The ease of communication which allows the whole population to live and work on each other's doorsteps is the first force that must surely lead to change. Its advantages are in its results of forcing upon each person some knowledge of how the rest live; its ills in its cancelling of all "natural" limitations, in its allowing whole cities to grow or to decrease, almost entirely at the whim of individuals.

The next generation will surely see some modification in the size or nature of towns in order that all their inhabitants may have a chance of fresh air and easy access to spaces ample for their outdoor recreation ; will see that new industry with all its accompanying population is guided in its choice of a site by the interests of the country, not solely by adventitious private inclinations.

From this national guidance in the placing of each industry and of the dwellings of the men and women who are dependent upon it, national responsibility for the kind of lives those dependents lead must also increase. Much of this responsibility has already been assumed, Britain's expenditure on social services is now a thing for politicians to repeat in self-righteous gratification ; but how much of this sum is being misapplied, how much is an indirect subsidy of industrial maladjustments, how much is being spent on providing for eventualities that should never be allowed to arise, has yet to be ascertained. But of a few big things we can be certain.

The whole of Britain is now too closely interwoven by transport both visible and invisible to allow of purely local remedy, of purely local planning by restriction to continue much longer. Public determination that the slums and semi-slums shall be got rid of will continue, but the money and energy expended will be greatly wasted if no one looks ahead with a national, and not a parochial, vision in deciding where the new housing is to be placed. For if living is to be a pleasure the matter is not only one of housing but of industry, of health services, of recreation and education, of a well-related whole achieved by the long-sighted balancing of the parts.

We prophesy that the development of this national vision, the striving after a society which will be an organism vigorously healthy, will be as prominent an achievement of the next generation as the awakening of a social conscience has been of the last.

This we respectfully suggest may well be one of the great works for which his experience, training and peculiar qualities have fitted Edward VIII.

His knowledge of the lives of his subjects he has already made is greater than that of any of his predecessors. He has travelled widely ; he has played a great part in the development of social responsibility for the surroundings of the workers ; he was shown that he is not afraid to speak straightly where faced with grave dereliction of that public responsibility ; and he has displayed an intolerance for convention where it is retrogressive.

He who will be the leader in the tasks of the future realizes them fully. We may hope that under his leadership in a generation of great difficulties, Britain's example of the art of living will be a great one.

The Architects' Journal
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NOTES & TOPICS

THIS EDUCATION

ON Monday night at the R.I.B.A., Mr. Thomas said in his address to students that it was a common feeling of students that they are being taught all wrong. This is very true; and the students (bearing in mind the dictum about the Army always preparing for the war before last), might reply: "... and they usually are." It is certain that unless the students of any profession think this about their education, their profession is in an unhealthy state.

*

Architectural education, however, cannot today be dismissed as a problem with such a comforting gesture. Not only are the manner and means of architectural practice changing very rapidly, but social surroundings are doing the same, leaving the staff of architectural schools with a double and horrifying problem.

*

They must equip students to be ready for the social and architectural changes which are obviously coming, and, no less, they must give them the training necessary to enable them to earn a living till those changes come. The difficulty of securing a proper balance between these two divisions of their work can hardly be exaggerated. I hope the students in the ardour of voicing their no doubt justified complaints, will not overlook the fact that there is nothing to stop them drawing up a programme for themselves which might help any discussions of reform.

COMPETITIONS AGAIN

All competitions are apt, at one time or another during the worry and scramble of their preparation, to give rise to feelings of hatred and uncharitableness in the heart of each competitor. So often an apparently unnecessary condition seems to spoil a perfect scheme, or a rival "gets away" with what seems to the unlucky to be a breaking of the rules.

*

Fortunately, such feelings usually pass quickly. Common sense and common fairness soon convince the irate that an assessor cannot be held guilty for promoters' stipulations, and that the man who takes a long chance is entitled to his luck when that chance comes off. But there are exceptions. . . .

HARPENDEN

Most architects, for instance, feel strongly that "loose" conditions should be kept "loose" by the Answers to Questions—*unless* there is ample time after the Answers to Questions for the preparation of a complete new scheme. And the current Harpenden Competition seems to run counter to this general feeling.

*

The last day for entering for this competition was December 15, and the conditions, when received, were wide and general and admirably brief.

*

But on January 27 the Answers to Questions were received . . . and what a change was there.

*

Additional information, and additional prohibitions and suggestions, had very really altered the conditions, and must have rendered questionable more than one hard-thought scheme.

*

The additional rulings are no doubt necessary, but in this case an extension of time beyond March 1 seems also, and trebly, necessary.

HUDDERSFIELD

A north country architect complained recently of the sourness of English towns—the dreadful sameness of Leeds, Bradford, Huddersfield, and Halifax. Apart, he said, from Bath Road, Cheltenham, and one or two more, they all suffer the same marks of the Industrial Revolution which rolled them out flat.

*

True, they all have the same villas, tram standards, chain stores and statues of the Great Queen, but there is an art, sometimes a rewarding one, in looking behind the stigmata of Progress for the shyer claims of individuality. It is an art, I feel, which might be studied with profit by borough surveyors when turning down the work of architects on the æsthetic grounds (oh yes, borough surveyors know all about æsthetic grounds) that they offend the amenities of the neighbourhood.

*

Take up your Baddeley on *Yorkshire*, and turn to "Huddersfield (a great centre of worsted goods) presents a most modern and cleanly appearance, due in a great measure to the buildings being constructed in the grit sandstone of the district."

*

Then turn to Halifax, whose plan "is as irregular and old-fashioned as Huddersfield is the reverse," and ask yourself, if you happen to live in Huddersfield or Halifax, what the real difference is. It certainly doesn't lie in the modernness of Huddersfield as against the old-fashionedness of Halifax, for Halifax must have gone on developing, long after Huddersfield.

*

I don't know the answer, but I do know that my north country friends' complaint of sameness is nonsense. Except for a view and the doubtful distinction of preventing John Wesley from speaking in 1748 by throwing coppers

A reproduction of a poster, approximately 26 ins. × 16 ins., now on exhibition at 400 railway stations in England.

amongst the crowd (which *didn't* prevent the building of many a cheery Bethel-Methodist chapel), the patriots of Halifax have little to congratulate themselves upon. The men of Huddersfield, on the other hand, have much.

*

They have the Station and the George Hotel, and the lay-out thereof—black classic in the Euston tradition. They have macabre industrial drama, canals, football, and incredible urban scenery from immense height. They have superb viaducts and grim nineteenth-century cottage architecture. Barring Lloyds Bank and Burton the Tailor of Taste, they have little to complain of in the way of the *moderne*. They have, in fact, a town which I have christened "The Wurzburg of the North." Have the men of Halifax and Bradford anything to be proud of? Certainly not.

MANSFIELD FORBES

The death of Mansfield Forbes which occurred this week at Finella, Cambridge, is not an event which will be mourned widely, for he was known to far too few. Yet to his friends the news came almost as a royal shock of incredibility.

*

A Don of Clare, Cambridge, lecturer in English, the distinguished historian of his college, he was about as unlike the conventional conception of a don as any man could be. I remember my first meeting with him years ago in his rooms, before Raymond McGrath designed Finella. There was nowhere to sit down, since the chairs as well as the floor were piled with books—new, not old—which in itself was typical. In came the famous wizened yet youthful figure hidden behind a pair of spectacles tied up with wire. He turned the waste-paper basket upside down for me to sit on, took off one shoe, picked up a piece of bread, sawed it through with a pencil, and began to toast it at the fire.

Then he launched into an attack on the people who had pinched and plagiarized Trystan Edwards's ideas

*

He was a master of a kind of plastic invective which was always at the service of his friends in their battles against pedantry and stupidity. In fact, everything he had was at the service of his friends. His generosity and his enthusiasm were like blows that one quailed before. Any cause so long as it was both lost and picturesque could command his loyalty and labour. But labour with him was not that dull and grudging thing we have learnt to give lip service to. It was a sort of rake's progress leading up unexplored avenues hung with fantastic situations.

*

It was sometimes said that he made an affectation of eccentricity, but if he did it was to escape from the ennui of drabness. So many eccentrics are escapists from life. Mansfield Forbes was the exact opposite. His object was to escape into life from the death in life imposed by dreary conventions and dull people.

*

For that reason he was made a bizarre figure in a University town, but for that reason too, he made dull things seem vivid to dull people. Architecture, his life's love, burgeoned under his hands into something that was really worth living for. Should the architectural history of our time ever be written let the historian not forget those Cambridge house-parties, those green lawns dotted with recumbent young moderns, and that weird bespectacled figure clothed in white flannels that seemed to be made of some hard kind of paper.

EVEREST

The news of the departure of the advance party of the fifth Everest expedition, together with the publication of what is stated to be the final list of selected men, bring with them some architectural regrets. For last August, Mr. Peter Bicknell, a Cambridge architect, was one of the group of men climbing in Switzerland in horrible weather with F. S. Smythe—climbing, it was suspected despite a universal reticence, with a view to the selection of the Himalayan team.

*

Mr. Bicknell is not in the latest list—whether because he was not invited or because of other reasons for not undergoing so long and strenuous an absence, I do not know. But I am sorry that architecture is not represented in the effort to do one of the last few things that enterprising humanity has not yet already done.

CITY AMENITIES

"What is wanted is an ædile, or architect town planner, whose duty it would be to ensure that new buildings are in conformity with the scheme to which the centre has been built, and that certain standards and styles are adhered to in all new developments. Such work can, of course, be greatly facilitated when done in harmonious co-operation with the City Engineer's department, but manifestly it is primarily an architect's job."

*

And where does this come from? Is it an extract from a circular issued by some pro-architectural body? A resolution passed by some newly formed Architects' Advertising Council? Not a bit of it; merely the *Western Mail* appealing to the Cardiff City Council. Would that all daily papers had as much architectural sense. ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

LONDON AIRPORTS

The Westminster City Council is to discuss with the L.C.C. the question of providing aerodromes for both the immediate and the future need of London, and to ask that attention be given to this subject when town-planning schemes are prepared.

DARLINGTON CIVIC CENTRE

The Darlington Town Council at its next meeting will consider a scheme for a new civic centre, estimated to cost £308,000. It proposes to centralize offices now scattered. The plans include municipal offices, a police court, omnibus station, and 35 houses.

CHELSEA EMBANKMENT

At a meeting last week of the Chelsea Council it was decided to support the scheme to extend Chelsea Embankment to Wandsworth Bridge. The Fulham and Wandsworth Councils have already decided to support the proposal, which is being sent to the London County Council.

BRITISH INDUSTRIES FAIR

It was officially announced at the Department of Overseas Trade last week, in response to inquiries, that the British Industries Fair, organized by the Department at Olympia and the White City and by the Birmingham Chamber of Commerce at Castle Bromwich, will be held in accordance with previous arrangements. The Fair will open on Monday, February 17, and will continue until the evening of Friday, February 28.

MENAI BRIDGE'S FUTURE

A joint committee of the Caernarvonshire and Anglesey County Councils is to ask the Minister of Transport to appoint an architect and an engineer to report on proposals for improved communication over the Menai Straits.

Telford's suspension bridge was damaged in a recent gale, and there is a local agitation for either its strengthening or for the building of a new bridge. Feeling is strong, however, against the demolition of the present bridge.

THE ARCHITECTS' DIARY

Thursday, January 30

INTERNATIONAL EXHIBITION OF CHINESE ART. *At the Royal Academy, Burlington House, Piccadilly, W.1.*

AERODROME OWNERS ASSOCIATION. *At British Industries House, Marble Arch, W.1. Conference and Exhibition. Also January 31. "Building up of an Aerodrome." By Major R. H. S. Mealing; and "Acquisition and Planning of a Municipal Airport," by Major Herbert Hamer.*

SOCIETY OF ANTIQUARIES. *Burlington House, Piccadilly, W.1. "Mediæval and Renaissance Sculpture recently found at Thetford Priory, Norfolk." By Rt. Hon. W. G. Ormsby-Gore.* 8.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS. *Yorkshire Branch. At the Hotel Metropole, Leeds. "Underpinning and Foundation Work in Loose and Waterlogged Ground by Chemical Consolidation, Ground Water Lowering and other Means." By H. J. B. Harding.* 7 p.m.

ARCHITECTURAL ASSOCIATION, 36 *Bedford Square, W.C.1. Annual Exhibition of Photographs by Members. Until February 15.*

CHISWICK AND HAMMERSMITH IMPROVEMENT SOCIETY. *At the Hampshire House Club, Hampshire Hog Lane, Hammersmith. Exhibition of photographs and maps of the suggested new road to relieve Hammersmith Broadway and other streets, also suggested alternative schemes. 11 a.m. to 10 p.m. Until February 7.*

Monday, February 3

HOUSING CENTRE, 13 *Suffolk Street, S.W.1. "Housing Estates and their Social Problems." By E. Sandford Carter.* 6 p.m.

Wednesday, February 5

LIGHTING SERVICE BUREAU, 2 *Savoy Hill, W.C.2. Discussion on "Recent Experiences in Lighting Practice." The speakers will include: J. R. Leathart, Oliver P. Bernard, P. J. Blundell Harland and E. B. O'Rorke.* 7.30 p.m.

ROYAL SOCIETY OF ARTS. *John Street, Adelphi, W.C.2. "Modern Architecture—Fashions and Tendencies." By Oswald P. Milne.* 8 p.m.

CITY CHURCH PROTEST

A promise never to attempt to touch another City church was made by the Bishop of London in a letter last week to the Lord Mayor, defending the proposal to demolish All Hallows' in Lombard Street. The Bishop explained that he thought it wiser to rebuild the church in the suburbs when he was told by the architect that it would take £15,000 to build up again.

Nine bodies, including the R.I.B.A., protested against the proposed demolition, and the Common Council of the City has decided to appeal to the Privy Council in support of the protest.

FLOODLIGHTING

Mr. H. Lingard, A.M.I.E.E., lectured on "Floodlighting," to the Welsh School of Architecture, at the Technical College, Cardiff, on January 22. The lecture was attended by the students and staff of the School, members of the City Council and of the South Wales Institute of Architects (Central Branch).

Mr. Lingard said that floodlighting was one of the youngest branches of the science of lighting, and that it had an important future. It was effective, economical, and rapidly increasing in popularity. New uses for floodlighting were being discovered almost continuously. This system of illumination, he said, deserved the architects' closest attention, and the engineer desired the architects' guidance towards a more artistic development of the subject. The engineer could produce almost any lighting effect, and it remained for the architect to give his opinion as to the most desirable effect for the particular building under construction.

Mr. W. S. Purchon, F.R.I.B.A., presided.

EDINBURGH ARCHITECTURAL ASSOCIATION

Mr. John Wilson, F.R.I.B.A., in a lecture entitled "Some Faults in Modern Construction" at a recent meeting of the Edinburgh Architectural Association, said that the present trend of work pointed to the conclusion that traditional construction would require to be drastically altered if new and, in particular, synthetic materials were to be used in conjunction with traditional materials.

If the modern system of building had not shown a decline in place of an advance in construction, as evidenced by the failure, in many cases, to give adequate living conditions in dwellings, the Ministry of Health Committee's interim report on flats would not have emphasized that "one overriding consideration is the general habitability of the dwelling."

They had, he said, given too much heed to engineering science, which had concentrated on the minimum cost of safe structure. One was forcibly reminded of the medical analogy of "patent medicines" in the way that we rushed to adopt every new material that was persuasively and attractively specified for use by the architectural public. Why should we rush primarily for data to the laboratories and craft workshops of the Continent, when we had our Building Research Station?

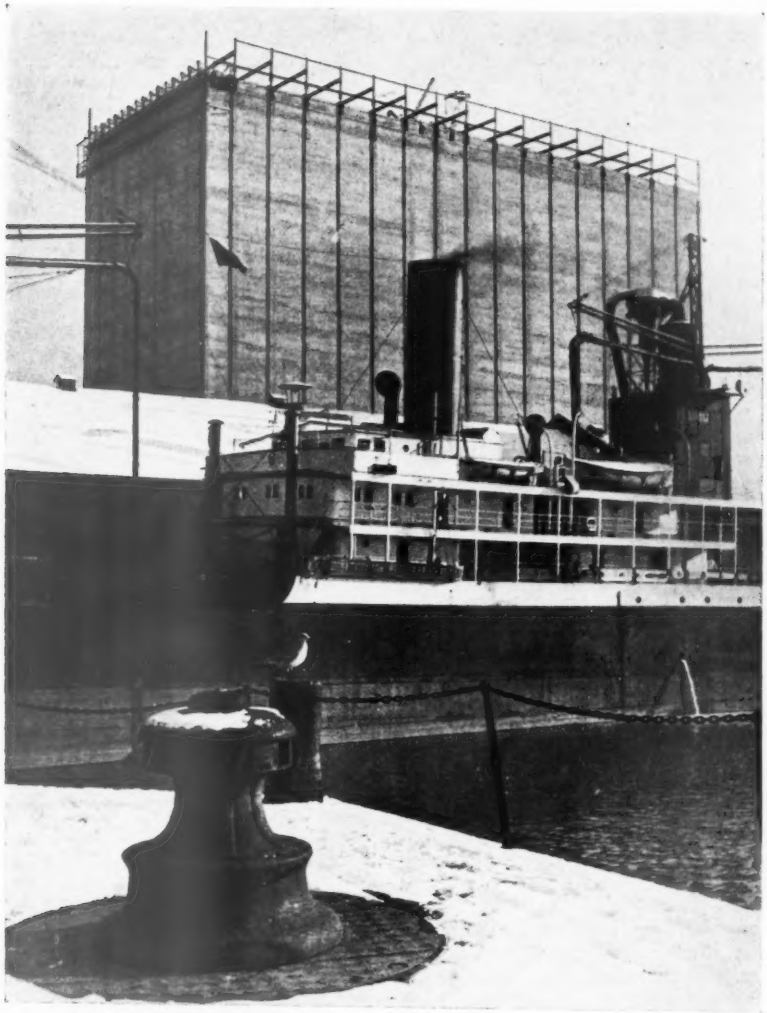
It was only fair, however, to state that the rush methods imposed on architects at present were very largely responsible for failures of all sorts.

EXHIBITION

On Friday, January 24, an exhibition of maps and photographs of the suggested new road to relieve Hammersmith Broadway and other streets leading to the Gt. West Road, also suggested alternative schemes, was opened at the Hampshire House Club, Hampshire Hog Lane, near Riverscourt Road, Hammersmith. The exhibition, which has been arranged by the Chiswick and Hammersmith Improvement Society, will remain open until February 7, between the hours of 11 a.m. and 10 p.m.

D.I.A.

The annual dinner of the Design and Industries Association, which was postponed owing to the death of King George V,



The grain silo now in course of construction at Brunswick Dock, Liverpool. The building is expected to be completed at the end of the year.

will be held on Thursday, March 19, at the Café Royal, London. Tickets issued to members for the function fixed for January 29 will be applicable to March 19.

The Council of the Design and Industries Association has appointed Mr. H. McG. Dunnett as secretary of the Association to fill the vacancy created by the recent resignation of Miss Pheysey.

TOWN PLANNING INSTITUTE

"The Work of a Planning Officer" is the title of a paper to be read by Mr. H. Robinson at a meeting of the Town Planning Institute to be held at Caxton Hall, Westminster, S.W.1, on Friday, February 14.

OBITUARY

P. F. WARREN

We regret to record the death of Mr. Percy F. Warren, F.R.I.B.A., a partner in the firm of Messrs. Petter and Warren, of Yeovil. He was 51 years of age.

Mr. Warren was a native of Norwich, where he was educated at King's School, and was subsequently articled to Mr. George F. Skipper, F.R.I.B.A., of Norwich and London. In 1909 he entered into partnership with Mr. John Petter. Since that time the firm has been engaged in connection with a large number of buildings in the West Country, which include the Municipal Buildings and Free Library at Yeovil, the Yeovil branch of the Westminster Bank, the Portland Urban District Council offices, the Central School, Yeovil, numerous extensions and alterations to country houses and commercial buildings, including the "Cow and Gate" factory at Wincanton.

COMPETITION NEWS

GLAMORGAN HOSPITAL

Conditions of the competition (open to architects of British nationality) for a new public health hospital at Church, near Pontypridd, are now obtainable from Mr. Henry Rowland, Clerk of the Glamorgan County Council, Glamorgan County Hall, Cardiff (deposit £1 1s.). The assessors are Messrs. E. Stanley Hall, F.R.I.B.A., and W. James Nash, F.R.I.B.A., and the following premiums are offered: design placed first, £500; design placed second, £300; design placed third, £150. The last day for submission of designs is May 29 next; and the last day for questions is February 28.

GRANITE COMPETITION

Conditions of a competition, organized by the Architectural Association (London) for the Cornish Quarry Masters' Association have just been issued. The object of the competition (open to architects, architectural assistants and students) is to promote the study of granite as a building material under modern conditions. The subject is: "An Entrance to a Tunnel."

The following assessors have been appointed: The Hon. Humphrey Pakington, F.R.I.B.A., Mr. C. Lovett Gill, F.R.I.B.A., Mr. H. S. Goodhart-Rendel, F.R.I.B.A., and Mr. M. L. Wetherall (representing the Cornish Quarry Masters' Association). Three premiums are offered: £25, £15, and £10 for the designs placed first, second, and third respectively. The latest date for submission of designs is Monday, April 6. Copies of the conditions may be obtained on application to the General Secretary, The Architectural Association, 34-36 Bedford Square, London, W.C.1.

The result of the competition will be announced, and a criticism will be given, at 6 p.m. on Wednesday, April 22, at the Architectural Association; and the competition drawings will be on exhibition at the Association from Tuesday, April 21, until Friday, April 24.

COMPETITION RESULT: BURY TOWN HALL

Mr. J. Hubert Worthington, M.A., F.R.I.B.A., the assessor of the competition for a proposed town hall, Bury, has made his award as follows:

Design placed first (£500): Mr. R. Edmonds, A.R.I.B.A., of 24 Bennett's Hill, Birmingham 2.

Design placed second (£300): Messrs. Bradshaw Gass and Hope, FF.R.I.B.A., of 19 Silverwell Street, Bolton.

Design placed third (£150): Messrs. Harvey and Wicks, FF.R.I.B.A., and H. Jackson, A.R.I.B.A., of 5 Bennett's Hill, Birmingham.

Special Mention: Messrs. H. V. Ashley and Winton Newman, FF.R.I.B.A., of 14 Gray's Inn Square, London, W.C.1.

The premiated designs will be illustrated in our next issue.

Competitions Open

January 31.—Sending-in Day. Proposed Parliament House, Salisbury, Southern Rhodesia, for the Government of Southern Rhodesia. (Open to architects of British citizenship.) Assessor: James R. Adamson, F.R.I.B.A. Premiums: £500, £300, £200 and £100. The designs must be sent to the Assessor at 19 Silverwell Street, Bolton, not later than January 31.

January 31.—Sending-in Day. The North British Architectural Students' Association invites members (i.e., members of Schools and/or Allied Societies at Man-

chester, Glasgow, Edinburgh, Leeds, Sheffield, Hull and Newcastle) to submit, in competition, designs for: (1) A Church of England Chapel. Assessor: Mr. H. L. Hicks, F.R.I.B.A. Premium: 10 guineas. (2) A Control Tower and Waiting Room for an Aerodrome. Assessor: Mr. R. Bradbury, A.R.I.B.A. Premium: 10 guineas. Designs must be submitted to the Hon. General Secretary, N.B.A.S.A., School of Architecture, Armstrong College, Newcastle-upon-Tyne, 2, by January 31.

February 24.—Sending-in Day. Competition (promoted by the Timber Development Association) for an essay, not more than 5,000 words in length, entitled the "Romance of Wood." Assessors: : Lord Iliffe, C.B.E., N. A. Cox, M.A., Frank Jane, B.SC., and E. H. B. Boulton, M.A. Premiums: First prize, £100; second prize, £25; five prizes of £5 each, and ten prizes of £2 each. The latest date for submission of manuscripts is Monday, February 24. Applications for particulars and conditions of the competition should be made to the Technical Director, Timber Development Association, 69-73 Cannon Street, London, E.C.4. The envelope should be marked "Romance of Wood" Competition.

March 1.—Sending-in Day. Proposed public hall, Harpenden, for the Harpenden U.D.C. (open to architects of British nationality domiciled in the United Kingdom). Assessor: Robert Lowry, F.R.I.B.A. Premiums: £100, £75 and £50. Last day for submission of designs: March 1. Architects were invited to submit names to the Clerk to the Council before December 15 last.

March 31.—Sending-in Day. Proposed police headquarters, fire station and courts for the Southport Corporation. Assessor: E. Vincent Harris, F.R.I.B.A. Premiums: £300, £200, £100. Conditions, etc., are obtainable from R. Edgar Perrins, Town Clerk, Town Hall, Southport. (Deposit £1 1s.) Closing date: March 31. The last day for questions was January 1. (The sending-in day for this competition has been extended from February 29 to March 31.)

Competitions Pending

Duncan of Jordanstone College of Art, for the Dundee Institute of Art and Technology.

Town Hall Buildings for the Edmonton U.D.C. Assessor: E. Berry Webber, A.R.I.B.A.

Secondary School for Boys, Luton, for the Bedfordshire C.C. Assessor: Professor W. G. Newton, F.R.I.B.A.

Block of shops and offices, for the Borough of Newcastle-under-Lyme. Assessor: H. S. Fairhurst, F.R.I.B.A.

Design for standard joint railway receiving offices in London, for the four main railway companies (L.N.E.R., L.M.S., G.W.R. and Southern). Assessors: Mr. L. H. Bucknell, F.R.I.B.A., Mr. C. Grasemann, Mr. W. H. Hamlyn, F.R.I.B.A. and Mr. Charles Holden, F.R.I.B.A.

Assembly Hall, Salisbury Street, South Shields, for the South Shields T.C.

TOWN PLANNING

THE POSITION IN THE COUNTRY

[*BY T. S. BARNES*]

In this article, the second of two, a brief survey is made of the town planning position outside London. In the first article, published on December 26, the procedure and stages necessary for the preparation of schemes were outlined, and a short review given of the position in Greater London.

IT is not possible to review the town planning position in this country in one, or even a dozen articles, except in a very broad way, and all that is attempted here is, as it were, a glance around to see what has been going on.

In a previous article I mentioned that the first power to "town plan" was conferred under the Housing and Town Planning Act, 1909, and, as the title of that Act suggests, the town planning visualized by Parliament under its powers was concerned principally with housing. It would be true, I think, to say that modern town planning in this country has grown from housing by way of garden cities, and that these, with the preservation of rural amenities, have been the principle objectives of town planning until the passing of the 1932 Act.

It must be borne in mind that the town planning done under the Acts of 1909 to 1925 has dealt, broadly speaking, only with land undeveloped with buildings, and not until the 1932 Act became operative was it possible to include built-up areas in schemes.

At the present time the vast majority of schemes are under the earlier Acts and therefore do not include built-up land.

On April 1, 1933, the date upon which the 1932 Act came into operation for new schemes, there were a little over 1,200 schemes (counting as separate schemes those of local authorities where joint action was taken by a joint committee or a county council) at one stage or another of their procedure. Of these 1,200 schemes some 6 per cent. had become operative and about a third of this 6 per cent. are confined to six or seven towns.

Although 1,200 sounds a fairly large number it must be remembered that the areas of many of these schemes are small, a fact which can be appreciated when it is realized that all the open land in London was not covered by 15 schemes and that, generally speaking, only open land was included in Portsmouth's 9 schemes, Croydon's 8, Ealing's 8 and Birmingham's 9, and so on.

As very few towns and villages are completely static the 1932 Act gives planning authorities the opportunity to prepare schemes for the whole of their areas, and some are doing so; London, of course, being the most notable instance.

During the two years following April 1, 1933, almost 500 schemes have been added to the list, though some of these are not new, but are due to the revision of boundaries under various County Review Orders, and since that date, according to the monthly Statements issued by the Ministry, an average of about a dozen resolutions a month are submitted by the planning authorities. Although there is a steady flow of resolutions to prepare schemes, schemes are not becoming operative at anything like the same rate as the resolutions are being submitted; and, in fact, during the two years mentioned above no scheme became operative, nor have I seen one mentioned in the monthly Statements up to October 31, 1935, which is the latest I have before me at the moment.

The percentage of operative schemes must now have fallen to little more than 4 per cent. of schemes in preparation.

The Statements referred to are not published for sale by the Ministry of Health, but are issued by it to various interested bodies, such as the Town Planning Institute, the Town Planning and Garden Cities Association and the Chartered Surveyors' Institution and others, who publish them

in their journals and so make it possible to follow the progress of any scheme in the country.

The briefest examination of these Statements shows that there is an encouraging amount of co-operation between planning authorities and that this appears to be steadily growing.

There is now hardly a county in which some of the planning authorities have not co-operated or in which planning powers have not been relinquished to the county council.

The counties of Berks., Chester, Derby, Devon, Durham, Lancaster, Oxford, Hereford, W. Sussex and Wilts, are perhaps the most advanced in this respect, but many of the others are such a short distance behind that it is hardly fair to single out those mentioned. The three last mentioned counties are of especial interest, as in West Sussex practically all the planning authorities have relinquished their powers to the county council, and in each of the others all but one authority are constituent members of a single Joint Committee, which has taken action in place of the authorities themselves.

A noticeable exception to this more or less general co-operation exists in many places between the large towns and the surrounding country districts, where either only land within the towns has been included, as in, amongst others, Birmingham, Nottingham, Liverpool and, of course, London, where the need for co-operation in planning between the administrative county and the surrounding districts is perhaps greater than in any other place, or else powers have been exercised by the large towns to include land of adjoining authorities in their own schemes.

An example of this is the scheme of the Leicester Town Council, which includes parts of six urban and rural districts in addition to parts of the town itself. Southampton, Portsmouth, Bristol, Derby and Hull are amongst the towns doing the same thing.

Very noteworthy instances of co-operation between large towns and adjoining districts are to be found in the county of Lancaster. Between 90 and 100 of the planning authorities, including Manchester, Salford, Bury, Rochdale, Preston, Blackburn and Burnley, and, in fact, all but about half a dozen of the large towns, are constituent members of fourteen joint committees.

Although co-operation between planning authorities is in the main confined within the boundaries of the separate counties it is not so in all places. There are, for example, the North-east Lancashire "No. 2" Joint Committee, of which several authorities in the West Riding of Yorkshire are constituent members, the Downland Preservation Joint Committee, with members in both East and West Sussex, and the South Staffordshire and North Worcestershire Joint Committee. There is also the regional scheme of the Oxford Town Council, which includes parts of both Oxford and Berkshire.

No general opinion on the actual schemes which are being prepared can be expressed, and frequently schemes which are published in the technical press are rather disappointing, but it does appear that the administrative side of town planning is moving slowly in the right direction, and that it is being realized more and more that in town planning not isolated action but *concerted action* is what is needed; and it is hoped that the existing co-operation will spread further so that not only individual planning authorities but joint authorities as well will be linked together where necessary. Only by such co-operation can town planning begin to do what is hoped of it towards the better using of the surface of Great Britain.

R. I. B. A.

KING GEORGE V

The following telegram was sent by the President of the R.I.B.A., to His Majesty King Edward VIII on January 21 last:

"His Majesty King Edward VIII, Buckingham Palace. The Council and Members of the Royal Institute of British Architects tender to your Majesty their heartfelt sympathy in the loss sustained by the death of our Royal Patron.

Percy Thomas, President."

The following telegram was received by the President on January 22:

"The President, Royal Institute of British Architects, 66 Portland Place, W.1. The King is touched by your kind message of sympathy and will be glad if you will express his sincere thanks to all who joined in it. Private Secretary."

ANNUAL DINNER

We are informed by the R.I.B.A. that in view of the death of His Majesty King George V it has been necessary to postpone the annual dinner which was to have taken place on February 3. A new date for the function has not yet been fixed.

EXHIBITION

An exhibition entitled "Everyday Things," is to be held in the R.I.B.A. building, Portland Place, W.1, towards the end of February. The object of the exhibition is so that inexpensive household objects and equipment can be well designed and of quality. The following information has been issued by the R.I.B.A.: "The exhibits, which have been chosen by an independent committee of architects, are all mass-produced or manufactured for general sale. In this the exhibition differs radically from the usual exhibition of 'applied art'; specially designed and expensive single objects have been rigidly excluded. All the things shown can be bought in shops and in all cases retail prices are to be given in the catalogue. In excluding luxury goods, the committee set as an approximate upper limit the requirements of the man who owns a house costing £1,500.

"It has been found quite unnecessary to go beyond the products of British manufacturers; indeed many things worthy to be shown have had to be excluded because of lack of space. The exhibition has therefore become a cross-section of industrial manufacture and is not wholly representative of it.

"Architects cannot design all the things they instal in a building. Moreover, their clients often consult them about the selection of furniture and loose portable objects. Consequently this exhibition will reveal the ideas of the architect in his capacity as selector in the field of industrial manufacture. It will also, in some cases, show him as the actual designer. Many firms now employ on their designing staffs men and women who have been trained as architects. In some cases also practising architects have designed objects at the request of manufacturers.

"Though its emphasis is on household equipment, the Exhibition will also include examples of inexpensive objects for use in other buildings. It will be organized in the following sections: furniture, silverware and cutlery, glassware, kitchen equipment, plastics, church fittings, ceramics, textiles, building equipment, and building finishes.

"The exhibition is to go on tour in the principal provincial centres after it has been shown in London."

SOCIAL EVENING

The R.I.B.A. Social Evening, originally announced for February 10 has been postponed until Monday, March 2. The evening will take the form of a *soirée*, which will be opened at 8.30 p.m. by a short talk by Mr. R. A. Duncan, A.R.I.B.A., on the exhibition of "Everyday Things," followed by light refreshments and a view of the Exhibition.

PRESIDENT'S ADDRESS TO STUDENTS

The annual presentation of prizes and studentships in the award of the R.I.B.A. was made at the Institute on Monday night. The presentation was preceded by an address to architectural students by Mr. Percy Thomas (President), extracts from which are printed below:

Some of you know, I fancy, that—like most men of my generation—I obtained my training in the old-fashioned way. For practical purposes, the present system of architectural education hardly existed 35 years ago. You, or, at any rate, the great majority of you, have had the benefit of systematic training in the

recognized schools at the hands of expert professional teachers.

There can be no doubt in the mind of every unprejudiced observer that the new system is an infinite improvement on the old one. In fact, the old one was not in any exact sense a system at all. It was a haphazard business, in which the acquisition of the desired standard of knowledge and ability depended almost entirely upon the student himself, and the element of luck played too large a part in it altogether.

You, from the very beginning of your careers, are working to a programme laid down and perfected by men of great experience and ability. Your training is progressive and thorough, and all-sided. It is not a case of finding yourself in the office of a man whose entire practice was devoted to the designing of Victorian-Gothic churches, and leaving him at the end of four or five years with a considerable power of imitating him, but with an almost complete ignorance of any other branch of your profession. You have the opportunity of acquiring an all-round mastery of your art, which should enable you to tackle any work which may come your way with, at any rate, an elementary knowledge of the principles of it.

Only in one respect—not quite an insignificant one—you may for a time be at a disadvantage as compared with the product of the old system. By the time you have reached the age of 23 or 24, you will be full of theoretical knowledge, but you will have had very little—if any—experience of the actual daily work of a practising architect. You may be less *immediately* useful to an employer, and you may find that a disappointing period elapses before you are able to adapt your theoretical equipment to the actual work that you will be called upon to do. But if you have the right stuff in you, and the right enthusiasm for your profession, that period need not be very long. It will be all the shorter if you realize from the start that when you leave the school you are *not* a fully-equipped architect. You are a fully-trained student, and ready for the second stage of your career—your initiation into the realities of practice. The young architect will make a great mistake if he thinks he has nothing more to learn on the day on which he takes his diploma. He has, in fact, a whole lifetime in front of him in which, if he is wise, he will be learning all the time. If a professional man ever reaches an age at which he thinks he knows all that there is to be known about his job, it is merely a proof that his mind has ossified. It is not only that the departments of knowledge that an architect may be called upon to master are so many and so complicated, but that they are continually growing and changing. The requirements of the job are changing, materials are changing, methods of construction are changing, regulations and bye-laws are changing.

I want to say to you as emphatically as I can that there is only one sure road to success, and that is hard work. That is just as true of the brilliant student as it is of the average man.

When your opportunity comes—whether it is big or small—put into it every ounce of thorough and earnest work that you are capable of—and then some more. Never be discouraged if the results of a long spell of hard work are scrapped. Just begin again and go on doing your best. Don't be distracted from your effort by the temptations—never more numerous and attractive than today—to have a good time. Don't mix up holidays and working time. When you have a holiday, make the most of it. Let it be real recreation in the fullest sense of the word. But when you are working, put your work first, and put every bit of yourself into it. When you are spending large sums of other people's money, you have got to be a good business man, or you will have no chance of spending any more when once you have been found out. The idea of an architect as someone above such sordid details is a thing of the past. He can still be an artist, but he need not be a fool.

And don't fall into the easy way of thinking that everything that is irksome in the job, everything that you don't feel quite sure about, can be done for you by the specialist. You will have to use specialists to a greater or less extent according to the nature of the job, but *you* must use *them*, not the other way about.

Remember always that, in no undignified sense, you are the servant of the client. It is your business to give him the best possible return for the money he spends. I have often regretted that our schools do not include a course on "How to deal with a committee" or "What answers to give a client." You may some day win an important competition and carry out a fine building, but your reputation and future prospects may depend upon how you handle your committee.

Ours is the most democratic of all professions. No other offers such opportunities to the young and unknown. I do not think we appreciate enough the great advantage which the competition system gives to the young architect. Guard it carefully as your greatest possession, for its advantages are not only the opportunity for fame and a career, but as a training ground to prepare yourself for the future. As a factor in the formation of character it is invaluable.

I think one of the most essential factors to success is to have a thorough knowledge of the habits and customs of the people who are going to occupy the building which you are called upon to design. Always remember that your principal object is to produce buildings which are functionally and structurally efficient, economically sound, and æsthetically satisfying. You cannot learn to plan from books. Hardly any two buildings have the same requirements. The only satisfactory way to plan a building is to have a personal and intimate knowledge of the work which is to be carried on within, and the daily life of the people who are going to occupy it.

An architect should be something more than a draughtsman whom a client instructs to prepare a plan according to his requirements. He should, by his advice, be able to improve the economy and efficiency of his client's business, but he cannot do this unless he first makes himself acquainted with that particular business.

It is a common feeling of students that they are being taught all wrong. We, who now have better means than ever, through your Junior Members' Committee, of learning what the younger men and women in the profession are thinking, have had plenty of evidence lately that this keenly critical spirit was never so alive as it is now. We could want nothing more. Don't mistrust us if occasionally the older people don't rush in a headlong way—which I am sure you would mistrust—to swallow all your ideas uncritically.

We know that it is not merely, as the pompous phrase would have it, "the privilege of youth," to have young and fresher ideas than their elders. It is the *obligation and essence* of youth whenever things are really alive.

So with architecture today. We realize that changes are taking place, and even if I and my predecessors in this position do not accept them wholesale, we recognize that they are in a great part a genuine development. What we *can* do is to help you to detect the fraudulent elements—or indigestible morsels—just to save you from indigestion, and perhaps, too, to save the community from the unfortunate mess that sometimes results from acute indigestion.

Of course, you needn't believe that I and my fellows who are older than you really take quite such a modest view of our duties. We know that in most things we know ten or a hundred times more than you, because experience counts for a lot. All the same, we do know that in this matter of youth you have the upper hand.

This brings me to another of the purposes of my talk—to tell you something about the R.I.B.A.

Broadly, the affairs of the R.I.B.A. can be divided into our relations *among ourselves* and our relations with the *non-professional community*.

The more these coincide the better. There are many signs that the coincidence of interest was never better than it is now. There has hardly been a Presidential speech to the R.I.B.A. in recent years in which this has not been emphasized. I need only remind you of the remarkable speeches made by Sir Giles Gilbert Scott just over a year ago, and also the speech which we were privileged to hear the Prince of Wales make at the Guildhall, which put a picture of the obligations and opportunities of the profession before us with an engaging bluntness which did us all a world of good.

Almost every man and woman in the profession who is moved by the impulse common to all artists, has a deep-seated itch to attain the right to self-expression—I know that many, perhaps most of you, have a fear of going into offices as assistants, never in your life to see a building go up with your name to it. I know that, derived from this healthy desire for self-expression, comes to a good many a sense of mistrust of the whole system of private practice which has received much prominence recently. This same mistrust is also due to an equally healthy feeling that if a young architect is to be submerged in a salaried job, it may be better for him to serve in a Government or Local Authority's office.

On the one hand is safety, regular employment, often fine buildings to be carried out, and even a pension when you grow old. On the other hand, private practice is often a hard, uphill fight, a struggle to make ends meet, disappointment, and sometimes failure, but it also has the joys of success, and the satisfaction which alone comes from personal achievement. I can only remind you of the unique opportunities which the competition system provides, and leave you to make your choice.

SHOWROOMS IN OXFORD STREET, W.

DESIGNED BY

JOSEPH EMBERTON

ELEVATION.—*Plinth and piers are of polished Roman stone. Non-reflecting window below, with stainless steel rail and cellulosed metal cover to ventilation inlet. Lettering in cellulosed metal with fret cut centres and neon tubing behind. Coats of arms are in fired glass. Upper windows of ¼ in. clear plate, with opaque glass sheeting in surrounding panels. Framing of cellulosed mild steel. Door surrounds of stainless steel.*

ENTRANCES.—*Floored in terrazzo with lead division strips. Showcases floored in bakelite with cellulosed border, with sides of cellulosed plywood. Partitions are of plaster blocks, and ceilings of lobbies of metal-faced plywood, matt-finished. Ceilings of show-cases are of plaster board. Hardwood doors are sheathed in stainless steel with fireproof glazing.*

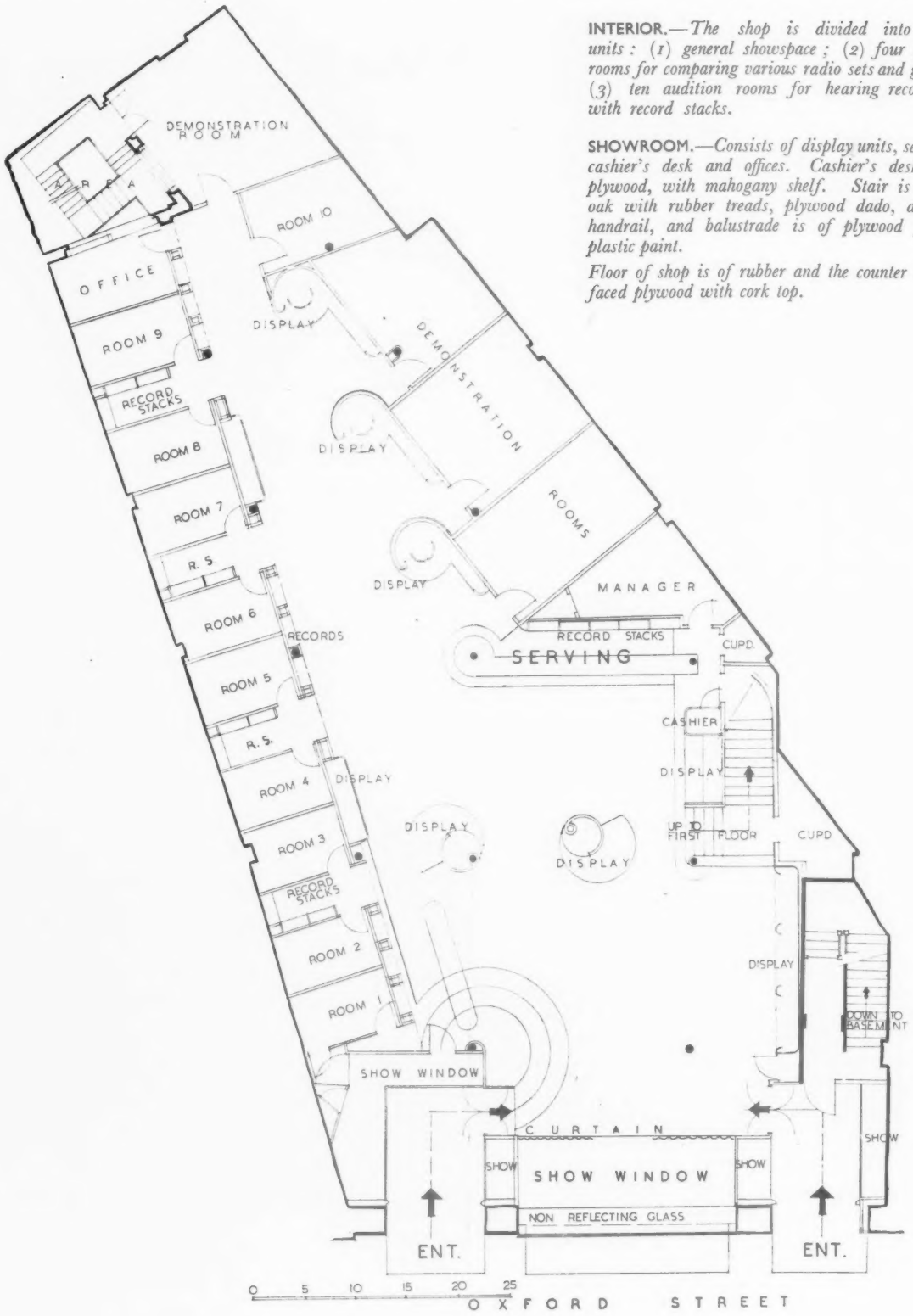
The photographs show a view of the shopfront taken at night; and the main counter, in walnut veneers with cork top.

GRAMOPHONE SHOWROOMS IN OXFORD

INTERIOR.—*The shop is divided into three main units: (1) general showspace; (2) four demonstration rooms for comparing various radio sets and gramophones; (3) ten audition rooms for hearing records, together with record stacks.*

SHOWROOM.—*Consists of display units, serving counter, cashier's desk and offices. Cashier's desk is of bent plywood, with mahogany shelf. Stair is of American oak with rubber treads, plywood dado, and chromium handrail, and balustrade is of plywood finished with plastic paint.*

Floor of shop is of rubber and the counter is of walnut-faced plywood with cork top.

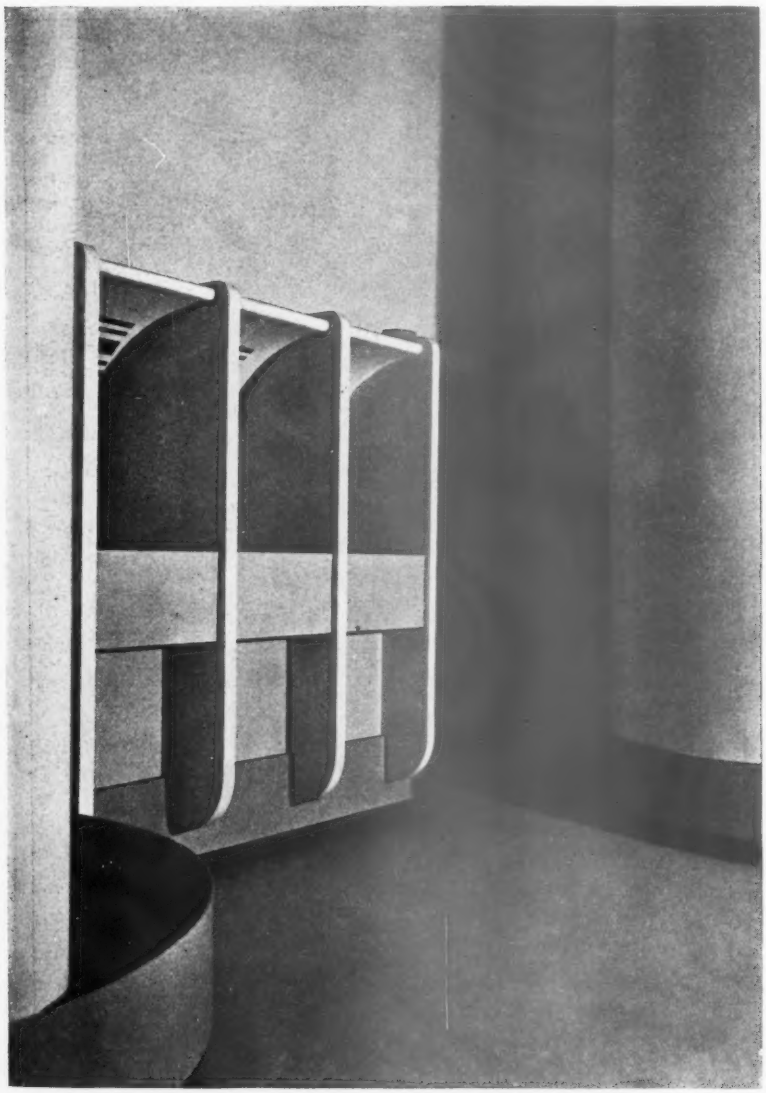


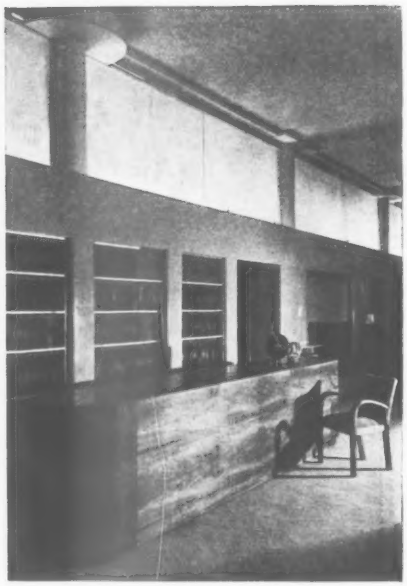
PLAN

STREET, W.: BY JOSEPH EMBERTON

The display fittings in front of the demonstration rooms.

SHOWROOMS IN OXFORD STREET, W.





DESIGNED BY

JOSEPH EMBERTON

AUDITION AND DEMONSTRATION.—*These rooms have floors of rubber, and partitions of 3 in. plaster slabbing, finished two coats special plaster. Ceilings are of insulation board under joists packed between, with laylights double glazed. Display spaces adjoining audition rooms are of plywood on boarding, cellulosed.*

DISPLAY UNITS.—*The plinths of display units are of plywood on deal boarding and framing, cellulosed. The semi-circular sides are of 9 mm. birch ply on firring, finished with plastic paint. The three-quarter-circle light screens forming the core of the display units are hung from the ceiling by metal straps and rods. The coves are framed in deal, covered with 9 mm. birch ply and finished white.*

LIGHTING.—*Lighting is indirect around ceiling, and direct from special fittings, and heating is from radiators flanking the audition rooms and beneath sales counter.*

The photographs show: above, an audition fitting for use when the audition rooms are engaged; right, the secondary counter, showing clerestory lighting over the audition rooms; and the main staircase.

For a list of the general and sub-contractors see page 212.

LETTERS FROM READERS

A GROUP OF STUDENTS
D. N. MARTIN-KAYE, F.R.I.B.A.
D. M. BEATTY
STUDENT
PETER BRABY
P. MORTON SHAND
G. GRAHAM HAYTHORNTHWAITE

Architectural Education

SIR,—In following the correspondence on architectural education, we note that neither the school directors nor the professional body have ventured an opinion.

It is impossible for either of these groups to exhibit such indifference without reason, and we would suggest that their attitude springs from a dislike of student "radicalism" which they evidently believe to be the complete substance of this correspondence.

If constructive suggestions were made by these same students, perhaps these other bodies would take a more tolerant view of the question.

We should, therefore, appreciate the opportunity to publish in THE ARCHITECTS' JOURNAL the results of our few years of research on architectural education, which includes a comprehensive plan for bringing it up to date.

We feel that, in drawing criticism to our work rather than to theirs, we will have at least justified our attitude and provided an intelligent basis for co-operation and understanding.

A GROUP OF STUDENTS

SIR,—I have noticed with much interest the varied correspondence on the subject of architectural education, and also Astragal's comments in your issue for January 16.

It is questionable whether Astragal is not demanding too much of the student in expecting him to express an opinion on this complex subject. The present system of training was not evolved in a day and is the result of many years' hard work and experiment. The students must be aware of this and are maybe somewhat diffident about expressing views. If I remember rightly one letter distinctly stated that they were awaiting a lead in the matter.

On the other hand I may appear to be belittling the courage and even capability of the students to present a case. All we have heard or read so far is a somewhat incoherent grumble. If they really want a review of present methods why do they not state quite clearly what their impressions are? I for one shall be very interested and no doubt many others will be as well. They can if they like accept this as a challenge to substantiate their grumble and to provide at least a coherent alternative to present conditions of training.

D. N. MARTIN-KAYE

Sir,—It is difficult to discover with what in particular Mr. Rother is dissatisfied. He accuses the architectural profession of "a narrow ostrich-like self interest," which is surely an unjust generalization, probably resulting from too much theorizing.

He says "we have appealed to the schools." This can hardly be the case. Schools of architecture undoubtedly aim at providing the most useful and progressive training, and are therefore ready to accept and consider criticism from students and from outside. They must provide training in draughtsmanship, practice procedure, in planning, design and construction in order that on completing the course students shall be equipped with a general technical knowledge and a knowledge of the principles of design. They should have some idea of their job, with its limitations and possibilities, and know the lines on which to make further progress. They should, in fact, be educated in the true sense of the word.

I agree with Mr. Lasdun that orientation is the most important feature in architectural education, and that this should be emphasized in school training. The position of the architect in the social system is the subject of consideration throughout the profession, and is, of course, discussed in schools. I cannot think that it is the fault of schools if the students do not "meet and discuss the particular problems in their schools," or co-operate with the staff, as Mr. Cox suggests.

Mr. Walters's complaint with regard to reinforced concrete construction is no new one. Perhaps it would be as well if, in the junior years, students were given opportunity to realize why they are not encouraged to run before they can walk. I doubt if he is correct in stating that "we are not allowed to think of it."

If the standard of entrance qualification were raised and a smaller number of students admitted to the schools, the desired co-operation and progress would be facilitated.

It would be interesting to hear what system of education Messrs. Ratcliff, Pye and Beal advocate in place of the present one.

D. M. BEATTY

Students and Building Materials

SIR,—May I, through your JOURNAL, make an appeal to manufacturers of building materials and articles associated with the completion of buildings, to acquaint students of the R.I.B.A. with their products.

My appeal is mainly for the advanced students of schools of architecture, who, while possessing excellent libraries to which they might refer, often find themselves inconvenienced by the absence of information of this type, with a consequent loss of valuable time in searching elsewhere.

It is very distressing to us students that this should happen, and I am sure that if we were given the privilege of the practising architect—namely that of receiving information from manufacturers without having to ask for it—we should not be swept off our feet by a host of unheard-of materials when we eventually emerge from our present state.

STUDENT

The Architect

SIR,—Plato wrote beautifully, yet he condemned all art as second rate: his only excuse for the artist was that he must be a sort of madman. Mr. Betjeman also writes well; and in his opinion the only architects "who matter at all" are fanatics—in his own words, "serious fanatical people." In the name of Vitruvius and all the tutelary gods let us hope that an architect may be serious without being fanatical.

A fanatic is generally understood to be a person who has lost all sense of proportion; in which case architecture is the last occupation he could be expected to pursue with success. He is one of those who get values completely mixed up, and continue to produce quite late in life adolescent ebullitions about "an honest ethic," "a contemporary ideology," or "a fundamental architecture"; in fact, the sort of man who would never be entrusted with a commission for fear that he should leave out the stairs, or whatever it is that the wrong sort of architect is supposed to do. Yet these are the people to whom Mr. Betjeman looks to raise the profession "from its present genteel state."

In his mania for classification Mr. Betjeman has mixed up two types in one. It would be interesting to know if he has ever seen a fanatic on an Urban District Council Admittedly the most useful sort of architect in the past has often been of the stamp of John Nash, a man who interests himself in local government economics, and civic planning; as he says. But this type is the reverse of fanatical.

Pugin was a fanatic, yet few will admit that he was a successful architect. Mr. Betjeman likens his modern fanatics to Wren, Hawksmoor, and Soane. What a strange trio to single out ! If Wren had had an atom of fanaticism in his temperament, there would probably not be a single building to his name ; he could never have succeeded in a society dominated by men like John Evelyn and Sidney Godolphin, in an England wearied by twenty years of crude fanaticism. Hawksmoor and Soane may have been eccentric up to a point, but they certainly did not have single-track minds. Fanatics are desirable in certain spheres but a profession is not the place for them. Fortunately they very rarely get there, or it would be all up with architecture.

PETER BRABY

Kensington Park Gardens

SIR,—I am surprised that Astragal, of all people, should be so hazy about his facts in regard to a neighbourhood he calls Kensington Park Gardens, and most people know as Ladbroke Grove. In it there are a considerable number of small and fair-sized houses which have not been (because they scarcely could be) converted into flats. These, moreover, represent some of the best examples of late Regency to early Victorian houses outside St. John's Wood ; and the petition he refers to was in respect of an isolated block of two semi-detached stuccoed houses of severe but most elegant proportions at the corner of Kensington Park Gardens and Ladbroke Grove. Astragal has also airily passed over the main point of that petition. It was to prevent the proposed block of flats on this site being built over the *private* gardens of the two houses in question—for no one seems to know whether under the Town and Country Planning Act the London County Council will be able to stop this happening. Perhaps Astragal thinks it " unreasonable " to make any objection to this expropriation ?

P. MORTON SHAND

Know Thyself

SIR,—Am I mistaken ? Does the architectural profession know itself ? Does it comprehend the truth and wilfully refuse to act, or is it on its death bed, complacently moribund ? The New Year issue of THE ARCHITECTS' JOURNAL gives me no solution but it gives me basis for criticism.

" The Bexhill concert hall is elegant . . . The Elephant House is a very good building . . . There are various kinds of architects, some aren't architects at all, but what I prefer are the good old architects . . . Why don't we use more architects ? Who are engineers anyway ? . . . Reilly . . . Betjeman . . . Astragal." Are these the mutterings of a dying profession or are they a wilfully formulated false impression ?

The New Year issue sparkles with a scattering of gold dust painfully sifted from a mass of inferior sand. Professor Reilly, Mr. Betjeman and Astragal muse contentedly on the architectural state of England but nobody tells the truth.

Professor Reilly does not confess that the buildings he praises are individually good but architecturally unimportant. Mr. Betjeman and Astragal do not admit that their articles are amusing but unconstructive and present an untrue reflection of the condition of the architecture of Great Britain.

Great Britain is architecturally dead. The profession does not control architecture.

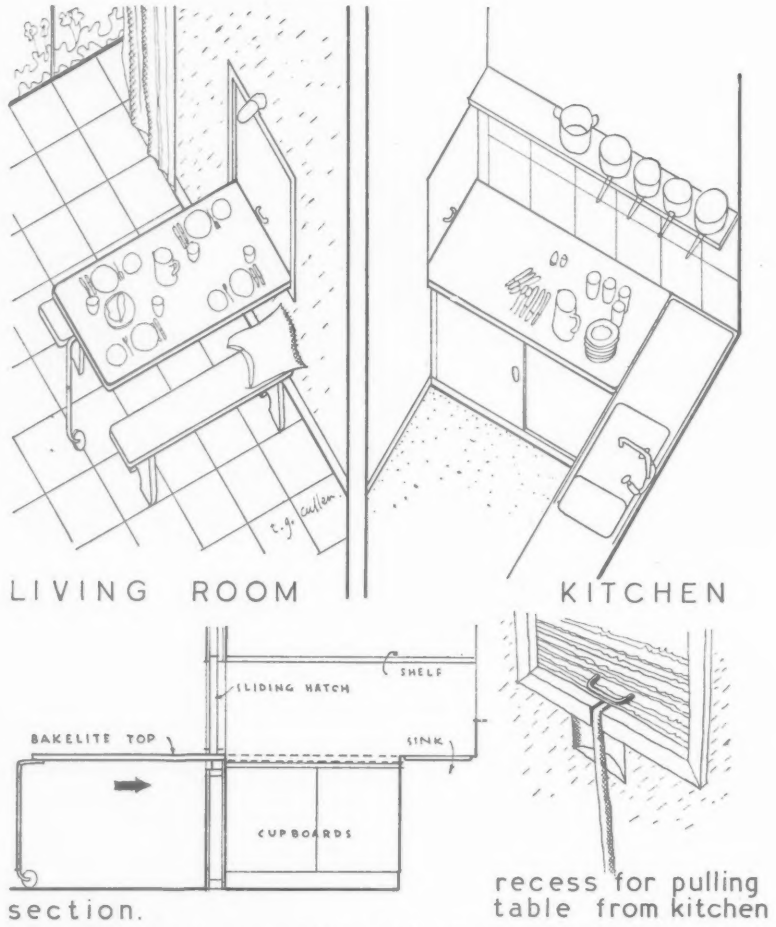
The towns, cities and countryside bear morbid evidence of the failure of the architectural profession. There is a roseola of jerry building spreading around our towns and penetrating the countryside. None of our towns are fitted for their purpose. None of our highways or thoroughfares fulfil their requirements. The town centres are atrophying, old men are busily laying cornice and entablature on the mausoleum of architecture.

Great Britain needs a Plan. The architect is the planner. The architectural profession complacently and wilfull yrefuses to act. They acknowledge the need of a plan but plead inability to act due to a hundred preventions, the economic system, private ownership of property, their own struggle for existence. Glib in their recital of the obvious they don't seem to see their own contribution to the prevention of comprehensive planning. The profession went to sleep 400 years ago ; it is still mediæval. They may build in modern materials but their conception is that of 400 years ago. They still think in terms of single structures, there is the same mysticism in their art and the same incantations on æsthetics and invocations of classical dieties.

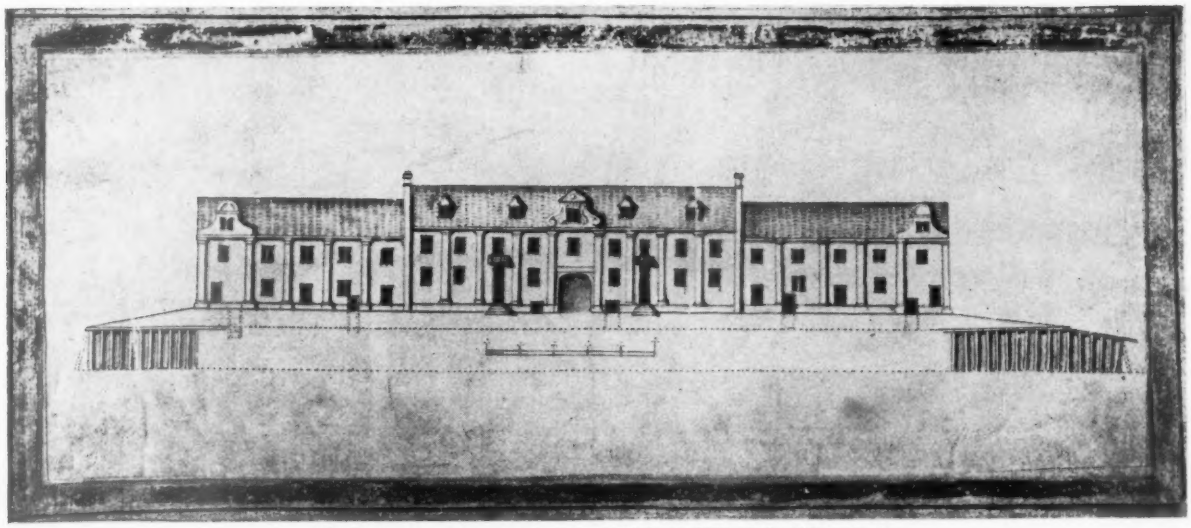
Society demands knowledge in place of mysticism and reason in place of belief. Industry has set a pace to science and society demands that we bring our particular science up to date. We are far behind every other known science and the results of our lethargy are so glaring that soon society will demand a reckoning.

This situation should be so apparent that every architectural society, every architectural paper should be demanding reasons and fighting tooth and nail to repair the profession's reputation. Instead we have happy witless musings and easy-going senility.

G. GRAHAM HAYTHORNTHWAITE



Combined living-room and kitchen table. Designer : Gordon Cullen.



House for Dr. Fothergill. From Volume XII of the Wren Society.

L I T E R A T U R E

BUILDING AS ART AND SCIENCE

[*BY HUBERT FITCHEW*]

The Wren Society. Vol. XII (1935). Editors, Arthur T. Bolton, H. Duncan Hendry. (Issued by subscription.)

Report of the Building Research Board for 1934. (London: H.M. Stationery Office. Price 3s. 6d. net.)

THE two books whose titles stand above present obvious contrasts. One is a library volume, choicely produced, redolent of eighteenth century grace; the other a handbook, no less redolent of twentieth century practicability. Yet—perhaps, therefore—they start a train of thought.

Many monuments to the genius of Wren and his contemporaries endure, hitherto little impaired. How many works of today have an expectation of life of two centuries? Two decades seem nearer the idea nowadays. Note, however, that factors of safety (the laws of gravitation even) were unknown when Wren began to practise. Once they were computed, when iron and then steel and concrete took the place of bricks and stone, we necessarily began the business of paring down scantlings; and we are hard at it today. The process has exerted a profound influence upon design.

In domestic architecture we are not looking much farther than the needs of the moment. How they went about this sort of building in the spacious days bygone is seen in the plates of drawings from the All Souls collection, in which the present Wren volume is rich. It contains, too, several unassigned designs from a folio in the Soane Museum, notably for the Duke of Newcastle's house.

In relation to these Mr. Bolton has an interesting theory. He thinks they may be from the pen of James Gibbs. "It hardly seems unreasonable, in view of the presence of these drawings amongst those of Wren, to interpret" (certain other evidence adduced) "by a supposition that young Gibbs may have been employed by Wren" (his senior by nearly fifty years) "on these Newcastle designs, and to see a possibility that the Campanile drawing (Plate XXXII) might have some connection with the first proposals of 1711 for St. Mary's-in-the-Strand." It is a theory the more plausible as Wren's influence would explain Gibbs's swing-over from the influence of Vanbrugh to those of Palladio and Inigo Jones.

One of the finest subjects reproduced is a west elevation of St. Martin-in-the-Fields, stated to have been drawn by Nicholas Hawksmoor for Gibbs, evidently *after* erection (the curious may compare Gibbs's own perspective, *before*, at the public library in Buckingham Palace Road). There are also Wren's plans for rebuilding the City of London after the Fire, of which much has been written, a survey by him of old London Bridge, a diagram of the comet of 1664—a reminder of his scientific aptitude—and several facsimile memoranda of Grinling Gibbons from Arbury. Only some drawings of St. Paul's now await publication, it seems.

Dr. R. E. Stradling's report, dated June, 1935, shows that a mass of experiments has been carried through on the strength of reinforced concrete beams. Stone, too, has come in for attention. An interesting method is described of measuring existing stresses in actual masonry structures, while many valuable conclusions on weathering have been reached. Asphalt and bitumen roofings are perenially present, not to mention plasters, concrete, and jointless floorings.

The section on the Efficiency of Buildings gives food for thought. From the use of a metallic wallpaper a saving of 8 per cent. of heating resulted; but experiments in the collection of dew proved disappointing. On the question of acoustics, "unfortunately no notable exceptions have yet been found to the principle that the sound-reduction factor of solid partitions is directly related to the weight." But partitions need not be solid: *verb. sap. sat.*

TWO CHURCHES

Church of the Holy Sepulchre, Jerusalem: Structural Survey, Final Report. By William Harvey. Oxford University Press. London: Humphrey Milford. Price 36s.

Church of the Nativity, Bethlehem: Structural Survey. By William Harvey. Oxford University Press. London: Humphrey Milford. Price 36s.

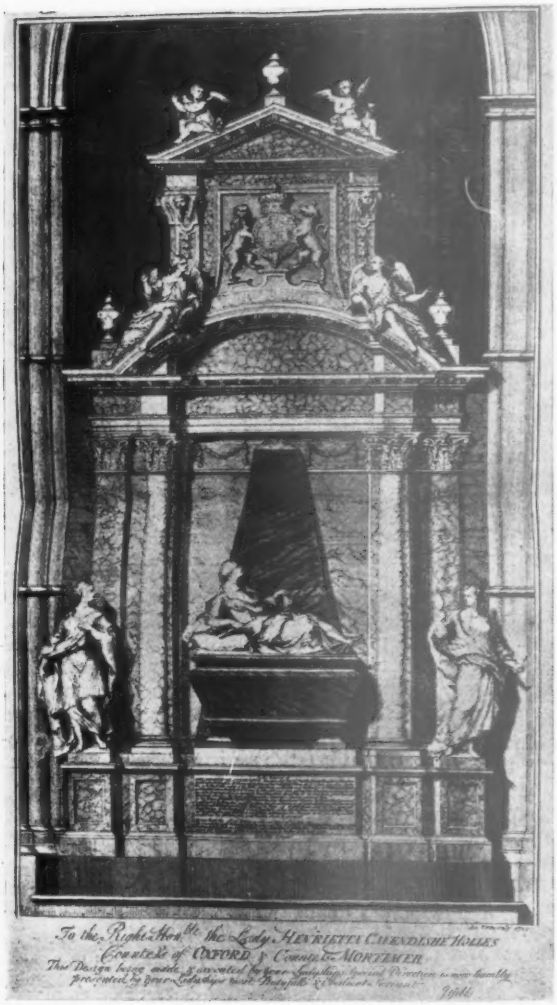
THE buildings which form the subjects of these two Reports are in themselves of such universal interest that both these books cannot fail to appeal to a widespread public.

Mr. William Harvey is to be congratulated on the excellence of the work, and both books are well illustrated with numerous photographs which, together with the drawings of John Harvey, provide a vivid picture of each church and of some of the problems that will have to be overcome in the proposed restoration.

The Reports are arranged in three parts, the first dealing with the structural state of the building and explaining the primary causes of movement in each building. These movements, aggravated as they have been as the result of subsequent earthquakes, have affected each church seriously and have caused great structural weakness in consequence

In the second part, the measures for permanent repair are dealt with, and the third part sets forth the various alterations recommended on archæological and utilitarian grounds, with the addition, in the case of the Report on the Church of the Nativity at Bethlehem of considerations arising from the archæological discoveries.

Although the reports would seem to be very concise and strictly relevant,



Above: the Duke of Newcastle's tomb as in Westminster Abbey; right: elevation, St. Martin-in-the-Fields. From Volume XII of the Wren Society.

it is obvious that they are the result of exhaustive research which has necessitated the taking of measurements, plumbings and levels with very great accuracy. Tell-tales have been fixed in the worst places, and it would seem that these are showing indications of considerable movement still going on.

Mr. John Harvey's drawings at the end of each book supply evidence which shows how arduous the task of compiling these reports must have been, and the simple, straightforward manner in which they have been made is particularly commendable.

Both books will give pleasure not only to those interested in archæology but to all who would know about two of the most famous and interesting churches in Christendom. G. E. C.

CONCRETE

Properties of Concrete. Vol. 2. By J. Singleton-Green. Charles Griffin. Price 8s.

IT is not always fully realized that ultra-conservatism in structural regulations results in a low standard of workmanship. Regulations such as those of the London County Council, which govern reinforced concrete construction in London and influence it outside, furnish a good illustration of this. They are twenty years old and therefore their working stresses are based on conditions and materials of twenty years ago. From a purely material point of view there is therefore little advantage, when working under such regulations, in using modern materials in the best way to make really good concrete, since, with these materials, poorly made concrete will in most cases safely carry the stresses allowed. Consequently one frequently finds among foremen, and others, a feeling that anything will do for concrete and a lack of interest in the science of making good concrete. Fortunately this attitude is changing and when, or should it be *if*, the L.C.C. uses its twenty-year-old privilege of revising their regulations and bring them up to date, the standard of concrete workmanship will undoubtedly improve.

A book which tells us how to make good concrete and how the subsequent behaviour of the concrete depends on its constituents and the way in which we handle them, is therefore particularly valuable at the present time.

In an earlier volume Mr. Singleton-Green dealt with the materials used for concrete, the designing of the mix and the making, the placing and curing of the concrete. In this second volume he deals with the properties of the finished concrete under such headings as—strength, volumetric changes due to moisture, temperature and flow, waterproofing, fire resistance, failure or disintegration, fluorescence, cracks and crazing.

His method of treatment of the subject is to summarize and comment on the research work done on these subjects in various countries. American sources are drawn on to a large extent.

A very excellent book for all interested in the science of good concrete making.

W. E. J. B.

WORKING DETAILS : 395

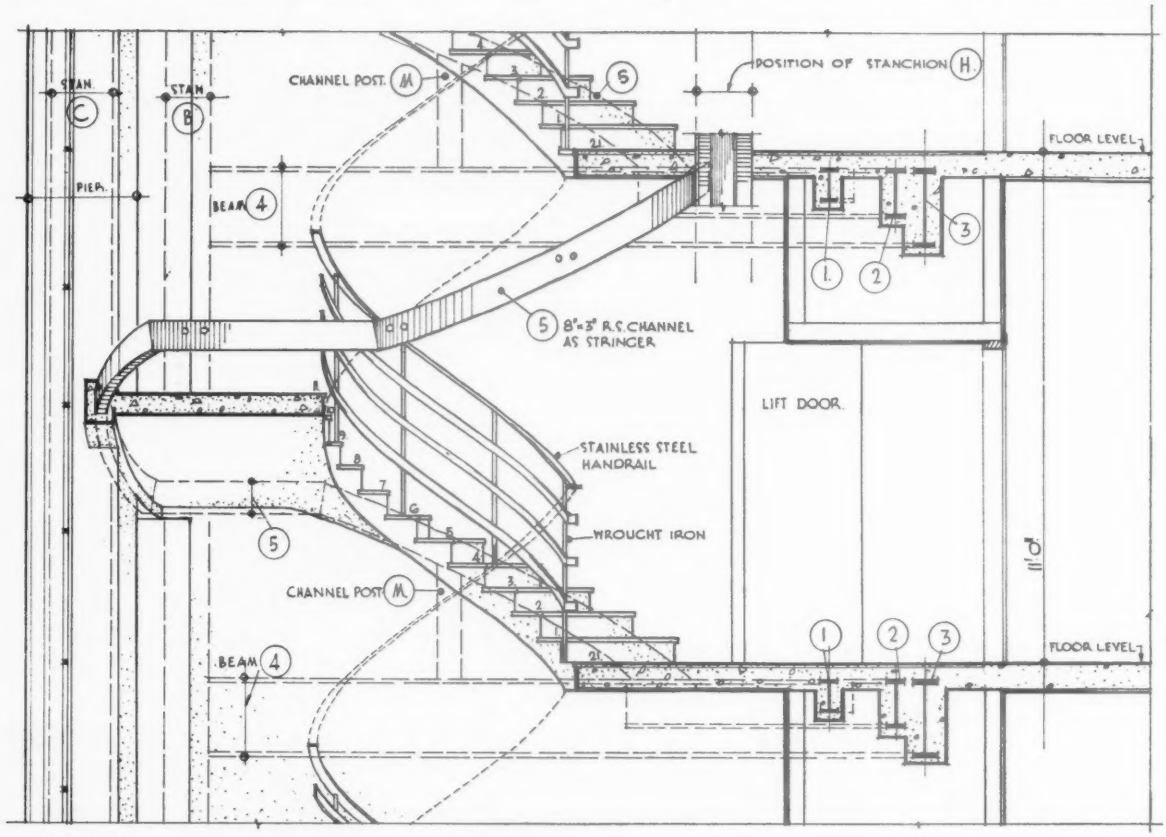
STAIRCASE • CIRCUS HOUSE, GT. TITCHFIELD STREET, W.1 • COURTENAY CONSTANTINE

Above are two photographs of the main spiral staircase in an office block: the top photograph shows the completed staircase; below is the steelwork. Overleaf are constructional details. (See also pages 203 to 206 of this issue.)

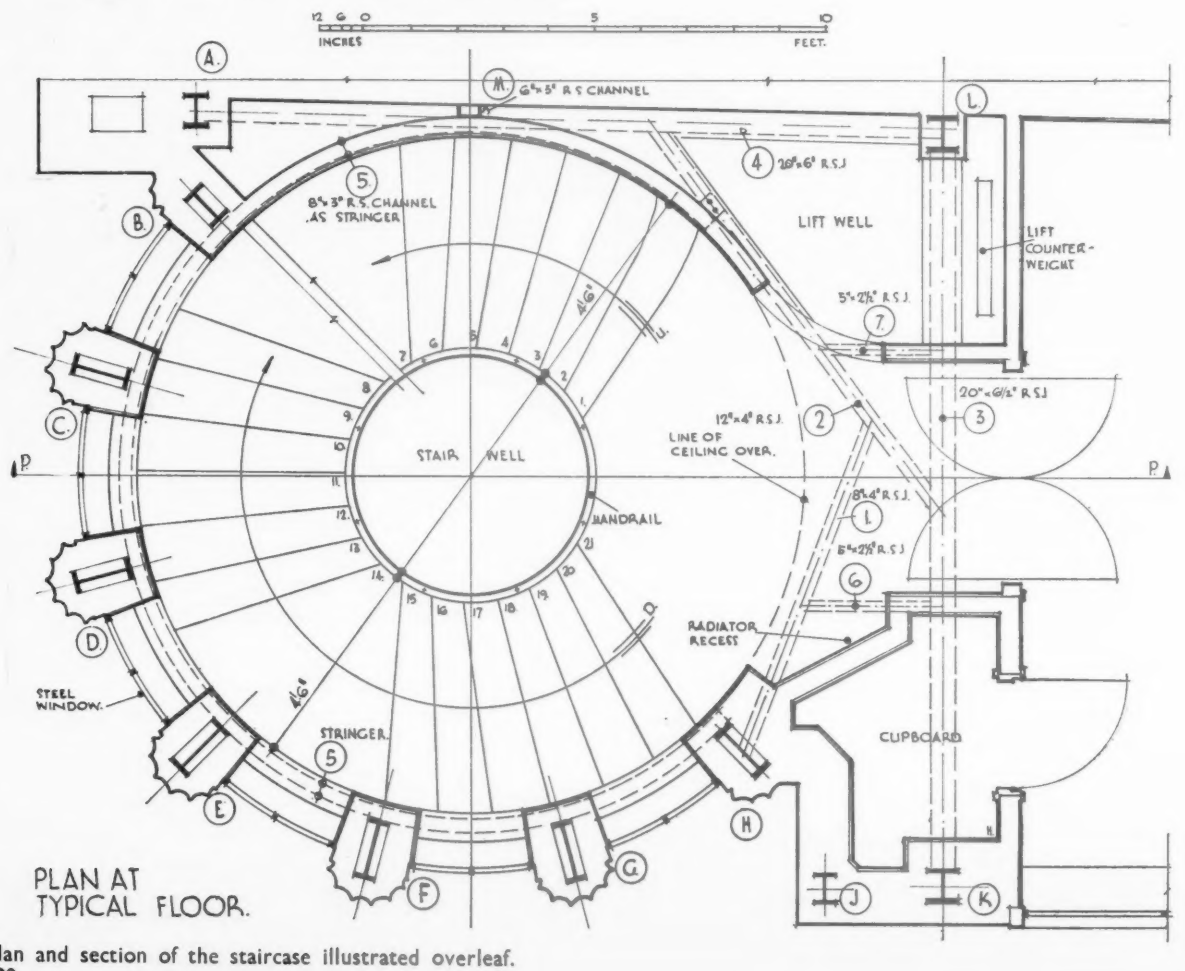
FILING REFERENCE:

WORKING DETAILS : 396

STAIRCASE • CIRCUS HOUSE, GT. TITCHFIELD STREET, W.1. • COURTENAY CONSTANTINE



SECTION P·P (SHOWING COMPLETE STRINGER BEAM)



PLAN AT TYPICAL FLOOR.

Plan and section of the staircase illustrated overleaf.

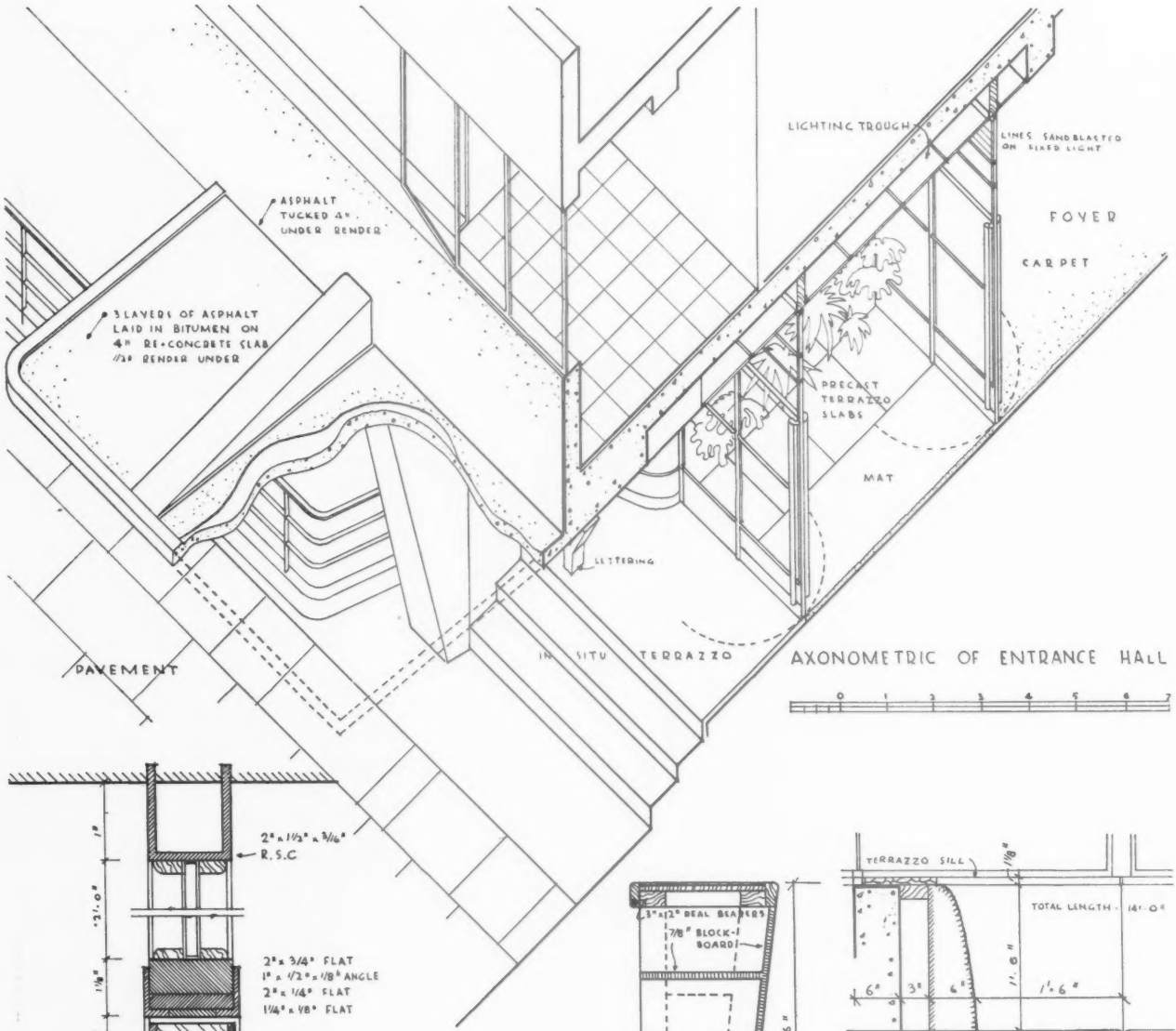
WORKING DETAILS : 397

ENTRANCE HALL • EMBASSY COURT, BRIGHTON • WELLS COATES

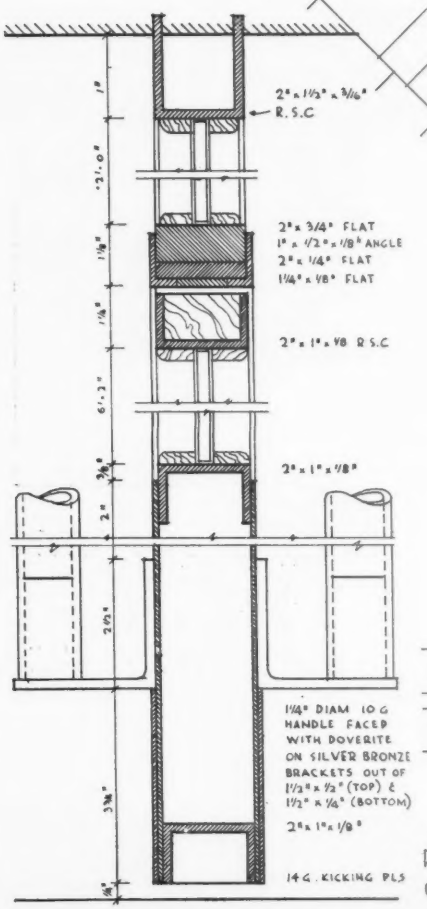
The illustrations on this page show the exterior and interior of the entrance to a large block of reinforced concrete flats. Overleaf is an axonometric showing the general arrangement of the entrance hall and cantilevered hood, with sections of the porter's desk, doors and banquette.

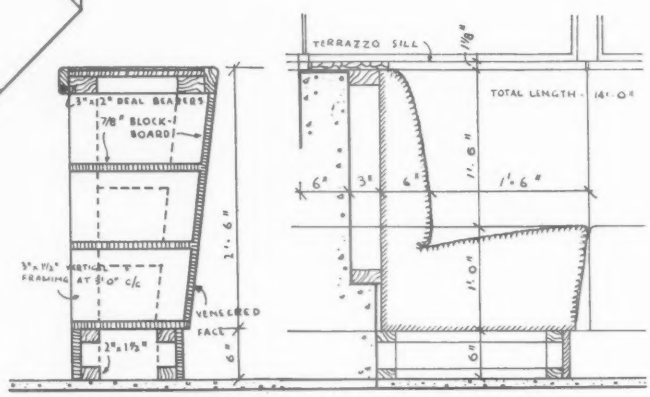
WORKING DETAILS : 398

ENTRANCE HALL • EMBASSY COURT, BRIGHTON • WELLS COATES

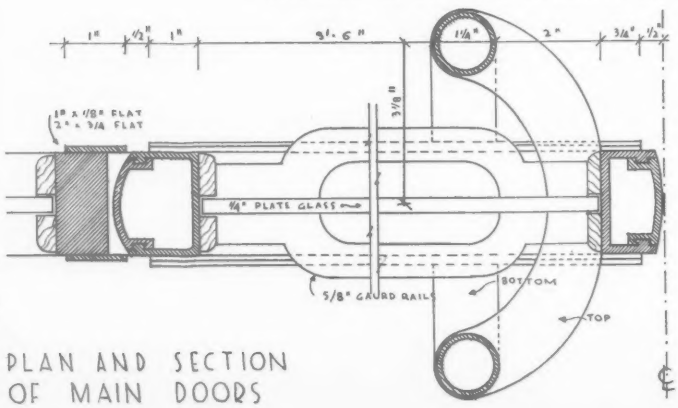


AXONOMETRIC OF ENTRANCE HALL





SECTIONS OF DESK AND BANQUETTE IN FOYER



PLAN AND SECTION OF MAIN DOORS

Axonometric and details of the entrance hall illustrated overleaf.

CIRCUS HOUSE, GT. TITCHFIELD STREET, W.

DESIGNED BY COURTENAY CONSTANTINE

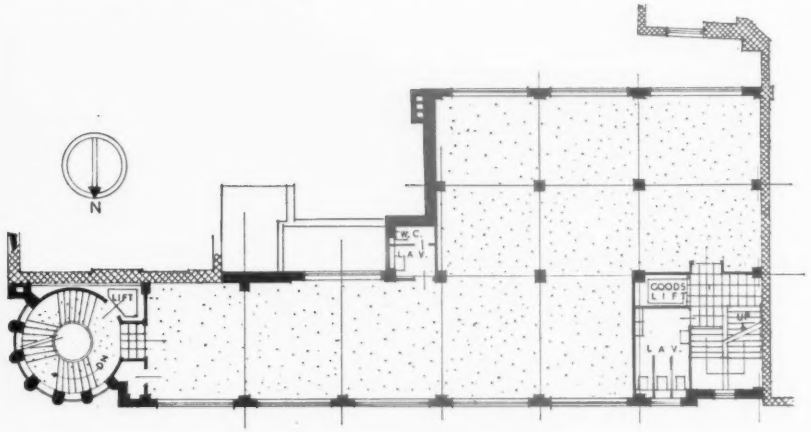
PURPOSE.—*The building was designed for showrooms and workrooms for a wholesale firm of women's dress manufacturers on all the upper floors, and is situated in the centre of a district largely occupied by similar businesses.*

CONSTRUCTION.—*The building is steel framed with cantilever foundations in order to keep the stanchion bases within the site curtilage. Floors are of R.C. hollow tile and walls of brick, white brick being used for rear walls.*

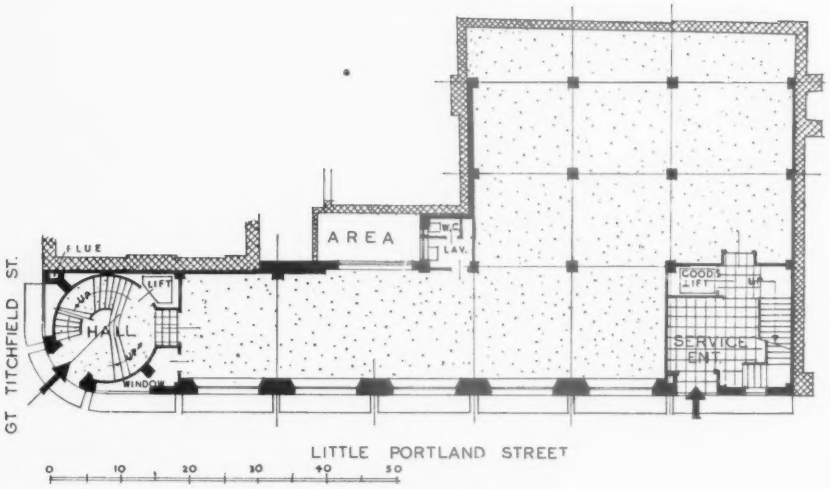
ELEVATIONS.—*Precast Portland stone finish, with steel windows, and buff and red facing bricks.*

Above is a general view of the building, with the Little Portland Street front on the right.

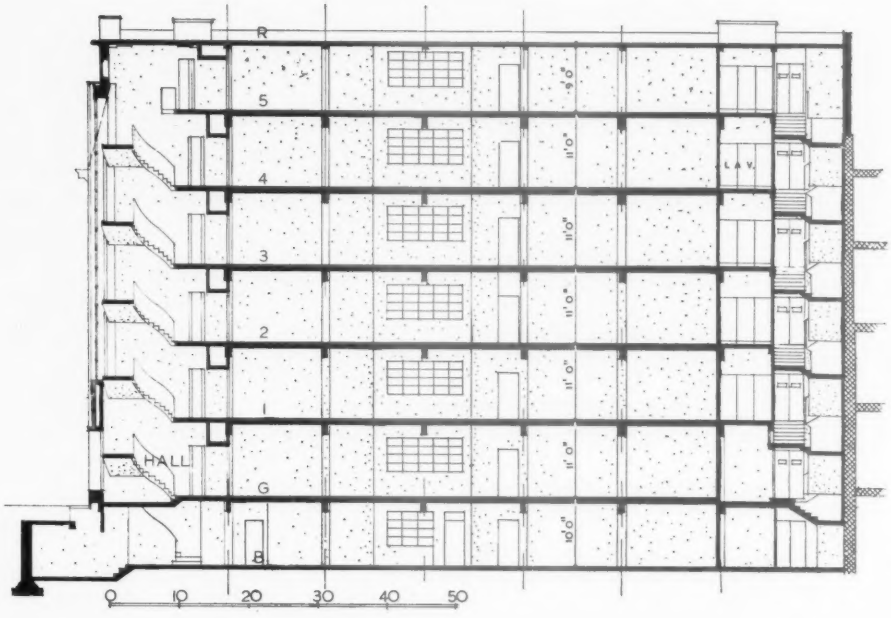
CIRCUS HOUSE, GT. TITCHFIELD STREET, W.:



UPPER FLOOR PLAN



GROUND FLOOR PLAN



SECTION

DESIGNED BY COURTENAY CONSTANTINE

SITE AND PLAN.—*The site having a frontage of only 16 ft. to the principal thoroughfare, Great Titchfield Street, the main entrance and stairway were emphasized by devoting to them the whole east corner of the site.*

In addition, for workroom purposes, as much north light as possible was desired. On the upper floors, the narrow portion of floor space adjoining the main stair is therefore used as show space and the remainder, lit on both sides, with separate access and lavatories, is used for work space. Each upper floor is capable of accommodating 100 persons.

Above is a photograph of the building at night showing the principal staircase tower.

CIRCUS HOUSE, GT. TITCHFIELD STREET, W.

DECORATIVE FINISH.—*The finish is kept strictly utilitarian throughout. Floors are of boarding on battens, doors are of flush hardwood, wax polished, walls and ceilings are distempered plaster. The staircases are of reinforced concrete, granolithic finished.*

CONTRACTS.—*The cost of the building worked out at 1s. 9d. per cubic foot, exclusive of architect's and other fees and party-wall payments.*

Above is a detail of the principal staircase.

For list of general and sub-contractors, see page 212.

DESIGNED BY

COURTENAY CONSTANTINE

LAW REPORTS

RIGHT TO SUPPORT

Vinten and Another v. *Pullman (Spring Filled) Ltd., and Another—Chancery Division. Before Mr. Justice Farwell.*

THIS was an action by Mr. Wm. Charles Vinten and W. Vinten, Ltd. of North Circular Road, Cricklewood, against Pullman (Spring Filled) Ltd., of North Circular Road, Cricklewood, and Commercial Structures, Ltd., of Canal Road, Kingsland, N., for the alleged wrongful withdrawal of support from the plaintiffs' land at North Circular Road, and for alleged negligence.

It appeared that Mr. W. C. Vinten was the owner of fee simple in land on the north side of the road, on which a factory was erected, and the plaintiff company was and had at all material times been in possession of Mr. Vinten's land and factory, as tenants at will of Mr. Vinten. The defendants, the Pullman Co., were at all material times in occupation of an accommodation road adjoining the plaintiffs' land on the south-western side and of a factory abutting on that road. In May or June, 1934, the Pullman Co. employed the Commercial Structures, Ltd., to lay and the contractors duly laid under the road a drain which continued the whole length of the south-western wall of the plaintiffs' factory, and the centre line of which was at the north-western end of such wall 13 ft. 1 in. distant therefrom and at the south-eastern end of the wall 16 ft. 3 in. therefrom. In laying out the drain, the contractors excavated and subsequently filled in a trench which continued along the whole length of the south-western boundary of plaintiffs' land, and was of a depth of approximately 18 ft. at the north-western end thereof, and 22 ft. at the south-eastern end, and of a width of about 3 ft. throughout. The plaintiffs' case was that the excavation, opening, and filling in of the trench was wrongfully carried out by the contractors, and in such a manner as to cause a withdrawal of support to which the plaintiffs' land was by law entitled from the Pullman Co.'s land, and so as to interfere with the natural easement and support from the Pullman Co.'s land, and as a result of what had been done the plaintiffs' land had subsided and given way, and cracks and fissures had appeared in the land, and in the south-western wall and floor of the plaintiffs' factory, with the result that the foundations of the factory had sunk and become displaced and their land and factory otherwise damaged.

The defence of the Pullman Co. was that if any land of the plaintiffs' had subsided, given way, or cracked, or any injury such as alleged had occurred in the wall or floor or foundations of plaintiffs' factory, it was not as the result or consequence of any act of the company or of the contractors. They also pleaded that the Commercial Structures Co. were at all times acting as independent contractors, and at no time acted as the servants of the Pullman Co., so as to make that company liable to the plaintiffs. In the alternative, the Pullman Co. pleaded that if the injury was caused by the act or default of the contractors, and the Pullman Co., Ltd., liable to the plaintiffs, the company claimed to be indemnified by the contractors in respect of such liability.

The contractors pleaded a denial of negligence, and they also denied that the plaintiffs' land was entitled to, nor ever had it enjoyed any easement of support from the Pullman Co.'s land other than or in excess of the natural right of support attaching to, or enjoyed by plaintiff's land unburdened by any building. In the alternative, the contractors pleaded that if the injuries or damage were held to make them liable, they claimed to be indemnified by the Pullman Co. in respect of such liability.

Mr. Spens, K.C., and Mr. M. Berkeley appeared for plaintiffs and defendants were represented by Mr. H. V. Babagliati and Mr. Graham Mould.

His lordship, after hearing the evidence, dismissed the action with costs, holding that the plaintiffs had failed to prove their case, the onus of which was upon them.

THE CHESTERFIELD HOUSE CASE

Fishenden v. *Higgs and Hill, Ltd.—Court of Appeal. Before the Master of the Rolls and Lord Justice Romer.*

THIS was an appeal by Messrs. Higgs and Hill, Ltd., builders and contractors, from a judgment of Mr. Justice Eve, sitting in the Chancery Division, declining to make an order calling upon Mr. R. C. Fishenden, of Chesterfield Gardens, to give further particulars of the damages he claimed from Higg and Hill, Ltd., under the judgment of the Court of Appeal in the action which Mr. Fishenden brought against them for obstruction of his ancient lights of his house in Chesterfield Gardens by reason of a large block of flats which Higgs and Hill, Ltd., had erected on the site of Chesterfield House.

The action was originally tried by Mr. Justice Crossman, when Mr. Fishenden claimed a mandatory injunction, and his lordship held in favour of Mr. Fishenden and granted the mandatory injunction. (The case was fully reported in the columns of THE ARCHITECTS' JOURNAL.)

Higgs and Hill, Ltd., appealed to the Court of Appeal, who held that under the circumstances the remedy was to award Mr. Fishenden damages for the injury he had sustained, and they remitted the case to the Chancery Division for the purposes of ascertaining what damages Mr. Fishenden was entitled to under it, and they discharged the mandatory order.

Higgs and Hill, Ltd., issued a summons, asking that Mr. Fishenden should give particulars as to the £8,000 damages he claimed.

Mr. Justice Eve made no order on the summons, except that the costs would be Mr. Fishenden's in any event.

Higgs and Hill, Ltd., now appealed from that decision.

For them it was argued that they could not prepare for the enquiry as to damages unless they knew in respect of which windows Mr. Fishenden claimed damages.

Mr. Fishenden contended that he was entitled to claim damages as a whole, and that he was entitled to the full amount. The proper measure of damages was the premises as a whole.

The Master of the Rolls said the Court had come to the conclusion that the appeal must stand over generally. The matter would be referred back to the Master, who would decide on affidavits filed by Mr. Fishenden what facilities should be given to Higgs and Hill, Ltd., to prepare their case on the enquiry as to damages. Leave would be given to either party to apply to the Court.

•

The annual general meeting of Benham and Sons, Ltd., was held at their offices in Wigmore Street, London, W.1.

Mr. Stanley J. Benham (managing director), who presided, said: "The very great increase in orders which we have experienced this year is not reflected in the accounts for the year ending on September 30 last. The total value of the orders booked was far greater than in any previous year, and was nearly £100,000 up on last year, including our subsidiary company, whereas the increase in our turnover for the year is under £8,500, and the net profit is actually £71 less than last year. The reason for this is undoubtedly that a large proportion of our orders was still unexecuted on September 30, and that there had been a very small carry-over on October 1, 1934, from the previous year; we should, therefore, feel the benefit 12 months hence.

"The largest increase this year has been in the central heating department which has been and still is very busy. We have had a number of blocks of flats in hand, several large drapery stores, and several public schools, private houses, etc. We have done fairly well in export, including kitchens for the three leading hotels in Johannesburg; Government House, Cyprus and several orders for New Zealand and Australia.

"The stainless steel sink business has increased enormously during the year, and we are getting a great many orders for flats and private houses. I expect some of you saw a recent advertisement in an evening paper by our Swedish rivals from which you may have assumed that they had supplied the stainless steel sinks for the King's House, but I can assure you that all the sinks were manufactured in our own works and constructed of Firth's Staybrite. So far as I know we are the only manufacturers of all British stainless steel sinks on any large scale.

"The directors finally recommend that £1,000 be added to the reserve fund, making this £75,000, and that a final dividend at the rate of 6 per cent., less tax, be paid, making 10 per cent., less tax, for the year, and the balance carried forward."

The report and accounts and the dividend as recommended were carried unanimously.

HOUSE AT FURZE PLATT, MAIDENHEAD:

SITE.—*The house stands on an open site on an estate of 17 acres of which the development is to be under the architect's control and which is of a very open nature with houses set well back from the road and surrounded by trees. The central area will remain unbuilt on. The present house, being the first building on the estate, was designed to allow a certain flexibility in the appearance of future houses without any pronounced disharmony.*

PLAN.—*The orientation of the house allows east, south and west sunlight in the sitting room and main bedroom, whilst the garage was placed at the side to prevent its doors dominating either of the main elevations, and so that, at a later date, it may perhaps be converted into a study opening off the dining room.*

CONSTRUCTION.—*The external walls are 9 in. Fletton brickwork, rendered and distempered externally. The roof is covered with hand-made sand-faced tiles. The floors of hall and dining room are of oak blocks. The sitting room has an oak-strip floor, and the kitchen deal blocks. The whole of the first floor is deal T. and G. boarding.*

The fireplaces in the sitting room and main bedroom have "open" fires, the recesses, surrounds and hearths being of firebrick (selected for colour), wax-polished.

An independent boiler provides the hot water and also serves a radiator in the hall. Rooms without fireplaces are provided with electric fires in marble panels.

COST.—*£1,000 including drainage and services. Price per cubic foot worked out at 1s. 5d.*

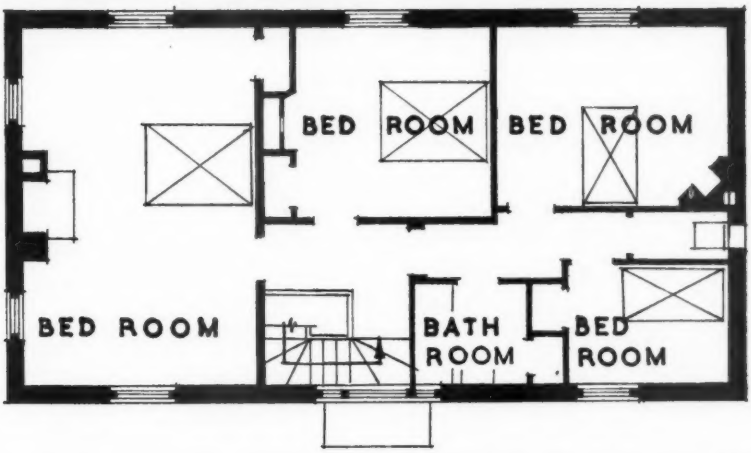
The photographs show: left, a detail of the main entrance; and, below, a general view from the south-east.

For list of general and sub-contractors, see page 212.

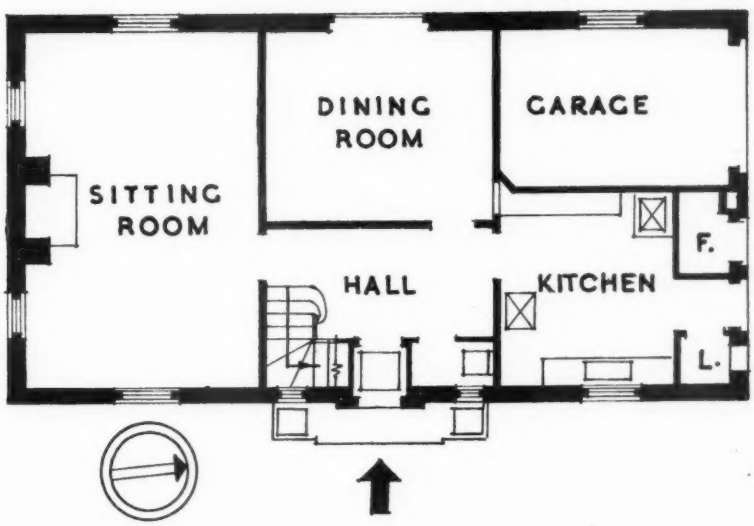
SITE PLAN

DESIGNED BY E. C. P. ALLEN

Above is a view of the garden front.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

ON KEEPING AN
OFFICE DIARY

[BY F. R. JELLEY]

I HAVE it on the authority of my old friend Backchat—who is, of course, the well-informed Society correspondent of the paper with the largest net circulation in the Solar System—that all the best people of his acquaintance are busily engaged on autobiography.

In the near future, indeed, I gather that admittance to those exclusive circles frequented by Backchat will be denied to all who have not first unloaded volumes of their personal reminiscences on a docile and submissive public.

It is even possible that during the next twelve months or so the vogue will become so universal that the R.I.B.A. may bow to the inevitable and accept autobiography (enriched with snapshots) instead of the written thesis hitherto demanded of candidates presenting themselves for the Final Examination.

If in the year 1913 I had given the R.I.B.A. autobiography instead of expending my youthful energies on a monumental thesis entitled "Architecture in the Epping Forest" (embellished with quotations from Alexander Pope and a sixpenny guide-book) it is now apparent that my professional status in the year 1936 might have been far less obscure.

For instance, should I now be commissioned to investigate and report on methods to be adopted to deal with some mysterious smell emanating from a hole in the corner of the magnificent walnut-panelled Board room of The Universal Dust Bin and Ash Can Exploration Corporation, Inc., I believe I could secure the confidence of the managing director of that august body by handing him a copy of my autobiography, printed in Baskerville and bound in embossed leather. As I am unable to do so, my considered opinion that his office-boy lunches surreptitiously in that palatial room during the absence of the Board and leaves bits of cold ham about will be received with contempt. In all probability he will retort that the junior member of his staff never eats cold ham and we shall part on unfriendly terms, after I have recommended him to cancel his request for an architect's report and engage a professional rat-catcher.

Again, the truculent manner of my old antagonist Perce, the foreman bricklayer, whenever I remind him that bricks must not be laid with the frogs downwards has hastened my determination to have no more of his nonsense, and if the Editor will oblige me with an additional copy of this issue of the JOURNAL I think I shall present it to Perce at our next encounter, with compliments and a courtly old-world bow.

When Perce realizes that I can, if provoked, write autobiography and that, in such an event, he will appear in it, I believe he and I will understand one another in future. It may come as a shock to him to learn that in my time I also have enjoyed the privileges of the sergeants' mess and sat at meat with England's most redoubtable exponents of robust cross-talk.

I do not know whether an architect who discloses the contents of his office diary is deemed to be guilty of a breach of professional etiquette in this country, for the only revelations I have ever seen of that sort appeared in the columns of an American publication.

After careful study of that Transatlantic epic I rejected a theory that its author was slightly insane and came to the conclusion that the whole thing was a subtle advertisement for Punkah Wallah Non-Absorbent Roofing Tiles. For all I know to the contrary, it has already been discovered and broadcast as an inspired human document, penned by the hand of a master. I should not be surprised to hear that it has been set to music or made into a talking-picture with a final "close-up" showing the diarist clasping in his arms the only daughter of his only client and murmuring, "Pop Sez Yep If We Use Punkah Wallahs for Roof Trim."

It seems clear, however, that the earnest student must seek elsewhere that inspiration and example so essential if extracts from an office diary are ever to be considered worthy of inclusion in full-dress architectural autobiography.

In this connection it will probably be agreed that Master Pepys provides a very bad model, for no man of business has ever been able to understand how Samuel managed to spend so much time with his diaries and attend to the job for which he was paid. The standard set by Montaigne is, alas, a little too high. That of Benvenuto Cellini is a little too low; Marco Polo and Geoffrey of Monmouth recount occurrences so fantastic that they must shock any conscientious architect who desires to keep a truthful diary. The life of Jem Mace and W. H. Davies' Autobiography of a Super-tramp can hardly be regarded as models on which a member of a dignified profession should base any written record of his daily exploits. The narrative of Giraldus the Welshman has a taproom flavour. John Evelyn is boring. Barbellion is most depressing, and the psycho-analytical revelations of many of Backchat's bright young friends are merely insanitary.

I shall, therefore, begin the New Year by continuing to keep my office diary in my own way, without psycho-analysis, conceit or conscious prevarication.

There will be no Rabelaisian episodes or cryptic annotations in the Pepysian manner.

I shall avoid the use of such phrases as "O.K.'d foundations," or "Phoned L.C.C. Escapes Dept. re Fire Exits."

If there is nothing of any interest to record on any particular day, the page reserved for that day's exploits will remain blank.

I shall not cheat my client by entering the cost of a taxi-cab fare when I travel on his business by bus.

Should George, the housebreakers' chief craftsman in the art of demolition, continue to create a lot of dust during 1936 I shall continue to record, to the best of my ability, the full torrent of abuse of every adjoining owner's architect who dashes to the telephone to notify me of the fact.

Although there is a special page provided in my office diary for intimate personal details, I shall not, in 1936, record my height, weight, size of collar, size of hat, number of watch, telegraphic address or trains to Town.

* * *

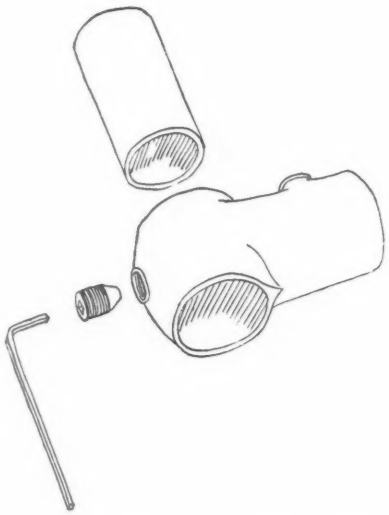
I am a suburban fellow and pay my rates and taxes on receipt of a final demand note printed in red. I shave before breakfast, travel up with Romance on the 8.45, spend my holidays with my wife and daughter and, like Candide, cultivate my garden.

When I go West my office diaries will be carted away in a sack by a dustman and consigned to the flames at that place where rubbish is now incinerated by the Borough Council in a most up-to-date and hygienic manner.

On that day, if the wind is favourable, it may be that a few fragments of charred paper will blow out of the top of the magnificent chimney stack

of the corporation dust destructor and, floating unnoticed through interstices in the golden gates of heaven, pass lightly in at the open window and come to rest on the office table of the Recording Angel.

Should there be anything mean or vindictive still legible in the inky scrawl on those blackened bits I feel I shall be safe in the hands of One Who, on the occasion of a somewhat similar lapse on the part of My Uncle Toby, shed a tear upon the offence and blotted it out for ever.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Gravity Fed Boilers

MESSRS. Hartley and Sugden, of Halifax, have sent me a booklet describing their Gravico gravity fed boilers, which are designed for use with coke.

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The system is simple enough: the grate is V-shaped in section, and the fuel slides down automatically from the magazine, thus giving a constant depth of fuel bed. Ash need only be removed on alternate days. Control is by thermostats, which operate a small fractional horse power motor linked up to the air supply and flue damper.

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The diagrams on this page show two typical arrangements for fuel storage, though this can, of course, be arranged in a variety of ways. With all of them, however, it is only necessary for the boiler to be charged once every 24 hours or more, according to climatic conditions.

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The booklet itself is almost a model of its kind. The various types available are fully described, with all the essential dimensions, including that necessary in front of the boiler for clinkering and tube cleaning purposes, and also notes on the calculation of fuel bunkerage for a reserve supply of any given number of days.

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And whilst I am on the subject of this particular type of boiler, it occurs to me that not everyone realizes that it is possible to arrange for fuel supply, charging, supervision, repairs and any other necessary work for a flat rate of so much per annum. The Gas Light and Coke Company does this, and for all I know others may. The system is, I think, a good one, particularly for semi-speculative schemes, such as flat blocks, where it is a great advantage to know the annual cost of heating and hot water before the job is begun.

Light Constructional Work

Considered as a structural member, the ordinary tube has a good many advantages, but it suffers from the great difficulty of securing adequate joints. In an attempt to remedy this state of affairs the G. H. Gascoigne Co., Ltd., have introduced the patent clamp which is shown at the head of these notes.

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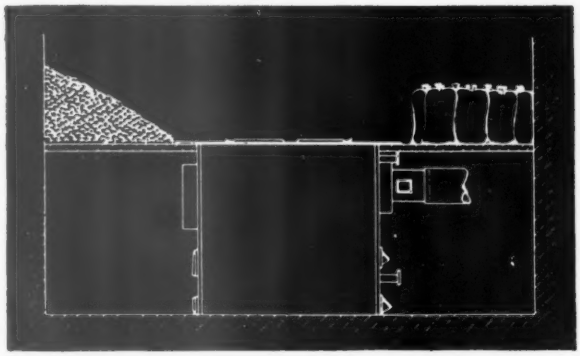
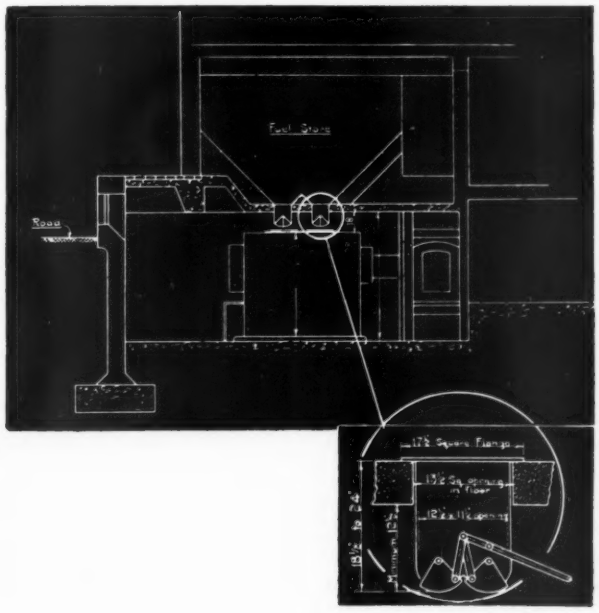
Numerous other fittings are, of course, available, but the principle is the same in all of them. The tube is a sliding fit in the socket and is nipped by a small hardened grub screw. The cup end of the grub screw bites into the tube and holds the

Two arrangements of fuel storage for use with automatic gravity-fed coke boilers. Below, where the top of the boiler is at floor level; right, where reserve bunkers can be provided above the boilers.





joint securely, and for this reason it seems to me that the joint is suitable mainly for permanent work.

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For scaffolding I should imagine that the ends of the tubes would suffer before very long, though I should add that the manufacturers do not suggest their clamp for such a purpose.

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There seems to be, none the less, a variety of purposes for which it should be very suitable—fencing, balcony railings, machinery guards; the list could be added to almost indefinitely. The fittings are available in most of the standard tube sizes, from ¾ to 2 in. diameter.

Manufacturers' Items

An illustrated booklet devoted to Noel floors has just been issued by Messrs. Noel Floors, Ltd., of 70 Leather Lane, E.C.1. The firm point out, in the section entitled "Design," that "The Noel wood mosaic floor applies to wood the Greco-Roman principles of mosaic construction, inasmuch as it is composed of hardwood blocks (the standard size of which is 4⅜ in. by 1 in. by ⅜ in. thick, with two shallow grooves on the underside) bedded in ⅛ in. of Noel wood-cement, and with a joint or pointing of Noel wood-cement ⅛ in. wide separating each wood block from its neighbours. (The sizes of the wood blocks can be increased when certain approved woods, such as teak, etc., are used.) The ⅛ in. joints separating the wood blocks enable an unlimited variety of patterns to be used without extra cost. The joints may be coloured to match or contrast with the woods employed.

"Whilst the Noel wood-cement joint has a high decorative value, its primary function is to absorb any movement in the wood blocks and to secure the adhesion of the blocks to the foundation. Noel wood-cement has the same wearing qualities as the woods with which it is used, adhesion six times that of Portland cement, and possesses sufficient elasticity for its purposes set out above. The Noel wood-cement is laid in a plastic state and sets hard in from 12 to 24 hours, depending on temperature and humidity conditions."

The booklet is obtainable, free of charge, on application to Messrs. Neol Floors, Ltd., at the address given above.

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The Tunnel Portland Cement, Ltd., have removed their offices from Victoria Station House, S.W.1, to Horseferry House, Westminster, London, S.W.1. The telephone number and abbreviated telegraphic address will remain unaltered.

*

Messrs. Riley Stoker Co., Ltd., have sent us four illustrated booklets devoted to the various types of the Robot stoker. The firm point out that the most business at the moment is being done by the Class B self-contained stoker. This stoker, as its name implies, is a self-contained machine, the fan motor and ducting all forming an integral part of the grate, so eliminating any necessity for independent driving gear, shafting or ducting; and, further, has the advantage that there is no mechanical connection between the stoker and the firing floor through which noise can be transmitted. The stoker is described in the booklet as follows: "The stoker consists of a hopper for the fuel, the base of which connects by means of a pipe with a horizontal trough or combustion retort within the furnace or boiler. This trough or retort contains a screw or worm conveyor of special design for feeding the coal and is actuated through the medium of a gear box drive. The stoker can be so arranged that it is regulated by means of automatic control.

"The stoker is so designed that complete combustion can be obtained with a particularly low suction in the furnace and will, in fact, work quite satisfactorily with 0.15 in. water gauge. By means of this type of grate, even feeding of the coal and distribution of the fuel over the bed is assured and the carbon loss in the ash is reduced to an absolute minimum. Combustion conditions are also improved, due to the fact that admission of excess air is reduced to a minimum, in so far as the fire doors are not continually being opened for re-fuelling.

"The grate consists of a fuel magazine in the lower part of which revolves a taper feeding worm which conveys the coal. This action causes an upward thrust on the fuel and the green coal which is gradually pushed up to the burning point, commences to ignite when it meets the incoming air from the tuyeres which form the grate surface. In its upward passage, the volatiles from the fuel are driven off and become burned in their passage through the glowing fuel bed and, in this way, the danger of smoke is entirely eliminated. Further, due to the design of the grate, any small particles in the coal become coked as they pass through the incandescent bed and so obviate any danger of fly dust being carried away through the stack."

Copies of the booklets are obtainable from the firm at Palace Chambers, Bridge Street, S.W.1.

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We are informed by Messrs. Newalls Insulation Co. that they were responsible for the provision of correct acoustical conditions at the City Cinema, Aberdeen. Asbestos was applied to the ceiling and side wall bays of the auditorium as well as to the rear wall and balcony front. In the case of the latter a corrugated base was employed.

Bank News

The directors of Westminster Bank Ltd., state that the net profits of the bank for the past year, after providing for the centenary bonus to the staff, pensioners and widows, and for rebate and income tax, and after appropriations to the credit of contingency accounts, out of which accounts full provision for bad and doubtful debts has been made, amount to £1,402,655 14s. 9d. This sum, added to £481,084 11s. 1d. brought forward from 1934, leaves available the sum of £1,883,740 5s. 10d. The dividend of 9 per cent. paid in August last on the £4 shares and 6¼ per cent. on the £1 shares absorbs £602,145 11s. 7d. A further dividend of 9 per cent. is now declared in respect of the £4 shares, making 18 per cent. for the year; and a further dividend of 6¼ per cent. on the £1 shares will be paid, making the maximum of 12½ per cent. for the year. In addition, a special centenary bonus of 2 per cent. of the £4 shares has been declared. The dividends and bonus will be payable (less income tax) on February 1. £200,000 has been transferred to officers' pension fund, leaving a balance of £369,848 15s. 9d. to be carried forward.

THE BUILDINGS ILLUSTRATED

SHOWROOMS, OXFORD STREET (pages 191-194). The general contractors were Holland & Hannen and Cubitts, Ltd. The principal sub-contractors and suppliers included: J. Starkie Gardner, Ltd., shopfront, metalwork; James Gibbons, Ltd., door furniture; Barrett and Wright, Ltd., heating; Pinching and Walton, electrical work; Inlaid Ruboleum Tile Co., Ltd., floor covering; General Electric Co., Ltd., and Best and Lloyd, Ltd., light fittings; Pilkington Bros., Ltd., glass; British Glasurit, Ltd., paint; C. E. Welstead, Ltd., laylight to staircase; John Elbo, Ltd., and G. Stephenson & Co., Ltd., cork; London Sand Blast Decorative Glass Works, Co., Ltd., heraldic plaques to shop front (designed by Norman James); Claude General Neon Lights, Ltd., neon lighting; Daymonds Ltd., clock.

CIRCUS HOUSE, GREAT TITCHFIELD STREET (pages 203-206). The general contractors were Courtney and Fairbairn, Ltd. The principal sub-contractors and suppliers included: Dawnays, Limited, steelwork; Diespeker & Co., Ltd., floors and staircase; D. G. Somerville & Co., Ltd., stonework; Crittall Manufacturing Co., Ltd., metal windows and main entrance doors; Haywards, Ltd., concrete pavement lights. *Finishes.*—W. W. Jenkins & Co., Ltd., granite and marble work; Diespeker & Co., Ltd., terrazzo to main staircase and entrance hall; Limmer and Trinidad Lake Asphalt Co., asphalt to roofs and gutters; Walpamur Co., Ltd., internal distemper; T. and W. Ide, Ltd., patent roof glazing. *Equipment.*—Haywards, Ltd., iron escape balconies; Stitson White & Co., Ltd., sanitary goods, heating and hot water; Duncan Watson (Electrical Engineers), Ltd., electrical work; Express Lift Co., Ltd., lifts; J. Stone & Co., Ltd., metalwork; Yannedis & Co., Ltd., ironmongery; Nash and Hull, Ltd., name plates and letter boxes; Central Perivale Co., Ltd. hardwood flush doors.

"FIVE TREES," MAIDENHEAD (pages 208-209). The general contractors were: J. K. Cooper and Sons. The principal sub-contractors and suppliers included:—

Maidenhead Brick and Tile Co., tiles; Stevens and Adams, Ltd., oak strip and woodblock floors; Bratt Colbran & Co., grates; W. N. Bishop, electric wiring; Leeds Fireclay Co., Ltd., sanitary fittings; Yannedis & Co., door and window furniture; The Walpamur Co., Ltd., external distemper; Central Joinery Co., staircase joinery; M. and R. Moore, Ltd., electric fire surrounds; James Newton and Sons, fire tiles; Stuart and Boothman, shrubs and trees.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILES RADIUS)

ACTON. *Flats.* The Corporation has approved an amended scheme, submitted by Mr. L. M. Gotch, for the erection of 152 flats in Gunnersbury Avenue.

ACTON. *Cinema.* Mr. G. Coles, architect, has prepared plans for the erection of a cinema in King Street, Acton.

ADDINGTON. *Houses.* First National Housing Trust, Ltd., are to erect 18 houses on the Lodge Farm estate, Addington.

BOREHAM WOOD. *Shops and Flats.* Proposals for the erection of shops and flats in Shenley Road have been submitted by Messrs. Marshall and Tweedy, on behalf of the Barham Land and Development Co., Ltd.

CHELSEA. *Shops, Flats, etc.* Messrs. Carter and Sloot are to prepare revised plans for the erection of a block of shops, flats and offices on a site at Knightsbridge, Seville Street and William Street, Chelsea.

EASTCOTE. *Church.* The Ruislip-Northwood U.D.C. has approved an application by Mr. A. O. Jones for consent to the erection of a new Methodist Church at the junction of Chapel Hill and Pamela Gardens.

FULHAM. *Housing Sites.* The B.C. has purchased housing sites in Fulham Palace Road.

FULHAM. *Baths.* The B.C. recommends the appointment of Messrs. A. W. S. and K. M. B. Cross as architects for the reconstruction of the baths, a scheme estimated to cost £48,400.

LEWISHAM. *Additions, etc.* Plans passed by the B.C.: Additions, Summerfield Tavern, Baring Road, for Mr. J. E. Evans; shops and flats, Verdant Lane and St. Mildred's Road, for Mr. A. Frampton; additions, Bromley Court Hotel, Coniston Road, for En Tout Cas Co., Ltd.; 24 houses, Fairlee Gardens, for Messrs. S. C. C. Cronk, Ltd.; 60 houses, Sydenham Park Road, for Mr. John Hodges; development, Hermitage site, Lewisham Hill, for Mr. P. G. Sedgwick; development, 172 Perry Vale, for Mr. C. H. Linnell; additions, Liversay Memorial Hall, Perry Hill, for South Suburban Gas Co.; site development, Southend Lane, for Messrs. T. Spencer Bright & Co.; houses, Verdant Lane, for Messrs. Wates (Streatham), Ltd.; maisonettes, site of 176 Devonshire Road, for Messrs. Furnsales, Ltd.; factory, St. Mildred's Road, for Messrs. Henry Butcher & Co.; site development, St. Mildred's Road, for Mr. B. G. Utting; five blocks of flats, Morden Hill, for Mr. A. J. Caney: extensions, 114 High Road, for Mr. G. T. Harman.

PUTNEY. *Flats.* Blocks of flats are to be erected on a site of Lower Grove, Roehampton Lane, by C. F. Kearley, Ltd.

STREATHAM. *School.* The B.C. has approved plans submitted by Messrs. Henry Knight and Son for the erection of a new building for the Battersea Grammar School on the western side of Abbotswood Road.

TWICKENHAM. *Technical Institute.* The Board of Education has now consented to the erection by the Middlesex E.C. of a Technical Institute at Twickenham, at a total estimated cost of £120,000. Approval has also been given to the acceptance of the tender of Mr. W. S. Try, of Uxbridge, at £93,108.

WANDSWORTH. *Flats.* The B.C. has approved a scheme by Mr. G. L. Elkington, F.R.I.B.A., for the further development of the Wandsworth Plain Clearance Area, by the erection of two blocks containing 48 flats. Tenders are to be invited.

WEALDSTONE. *Licensed Premises.* Plans have been approved by the Petty Sessions for the rebuilding of the Case is Altered P.H., for Benskins Watford Brewery Co.; plans were also approved for the rebuilding of the Timber Carriage, South Harrow, and the Plough at Alperton.

SOUTHERN COUNTIES

ORPINGTON. *Shopping Parade.* Messrs. Marshall and Tweedy have been appointed architects for the new shopping parade at the junction of the High Street and by-pass road for Messrs. Morrell (Builders), Ltd.

OTFORD. *Houses.* The Sevenoaks R.D.C. has approved a layout submitted by Messrs. Howis and Belcham for the proposed development of an estate of approximately 100 acres near Otford Station. The lay-out provides for 604 houses and estate roads.

PATCHAM. *Library.* The Brighton Corporation has asked the borough engineer to prepare plans for the erection of a branch library at Warmdene Road, Patcham.

PATCHAM. *School.* The Board of Education has approved the plans of the Brighton Education Committee for the erection of a junior school at Patcham, at a cost of £13,142.

PORTSMOUTH. *Alterations, etc.* Plans passed by the Corporation: Alterations and additions, 92 High Street, for Portsmouth Cathedral Chapter; stores, Fratton Road, for Portsea Island Co-operative Society, Ltd.; sugar warehouse extensions, Wellington Place, for Messrs. Burton and Sanders, Ltd.: business premises, Kingston Road, for Mr. G. Knipe; offices, King's Terrace, for Brighton and Sussex Building Society: four houses, Beaconsfield Avenue, for Mr. C. R. Attwell; factory alterations, Brunswick Street, for Portsmouth Ice Co., Ltd.; two shops, Havant Road, for Mr. W. Welsh; rebuilding, 32 Albert Road, for Messrs. Jno. Croad, Ltd.; 12 houses, Lower Drayton Lane, for Messrs. Cook and, Bamber: two shops and flats, London Road, Hilsea, for Mr. G. A. Day; extensions, 53-5 Russell Street, for Messrs. E. and S. Sprigings: hotel, Lonsdale Avenue, for Portsmouth and Brighton United Breweries, Ltd.: café alterations, 42 South Parade, for Messrs. Barnes and Elliott, Ltd.; four bungalows, off Jubilee Avenue, for Mr. J. McDermott; shops and flats, 269-285 Commercial Road, for Baring Estates, Ltd.: alterations and additions, 173 Commercial Road, for Messrs. Marks and Spencer, Ltd.

PORTSMOUTH. *Flats and Houses.* The Corporation is to erect 202 flats on clearance areas and 165 houses on the Wymering estate.

REIGATE. *Nurses' Home.* The Governors of the Reigate Hospital are to erect a new nurses' home at an estimated cost of £12,000.

SOUTH-WESTERN COUNTIES

BARNSTAPLE. *Schools.* The Town Council are to proceed with the preparation of plans for the reconstruction of the Ashleigh Road Senior Girls' School and the erection of a new senior boys' school.

EXETER. *City Hall.* The City Council is to consider a plan for the erection of a City Hall near the Guildhall. The proposal is for a building to seat about 3,000 with full accommodation for national conferences. The cost is estimated to be £125,000. It is also proposed to provide accommodation on the site for new police headquarters.

ILFRACOMBE. *Swimming Pool.* The Harbour Committee are to consider the construction of a swimming pool on the present site of the pavilion at the pier; other improvements are also suggested.

PENZANCE. *Crematorium.* The T.C. has agreed to the reservation of a site for the purposes of a crematorium, which it is estimated would cost £4,000.

PENZANCE. *Flats.* The Minister of Health has approved designs of 248 houses in blocks of flats in connection with the development of the Gwavas Estate. Plans by the Borough Surveyor, Capt. Latham.

TRURO. *Houses.* The City Council has decided to erect a further 70 houses on the Tregolls site, to plas by Mr. F. A. Barnes, Borough Surveyor.

MIDLAND COUNTIES

CORBY. *Houses.* Messrs. Stewarts and Lloyd, Ltd., are to erect another 400 houses at Corby, Northants.

ISHAM. *Development.* Messrs. Lewis (Investments), Ltd., of Kettering, are to develop an estate at Isham, Northants.

MOULTON. *Development.* Mr. J. E. Lucas, of Moulton, is to develop an estate of six acres at Moulton, Northants.

NORTHERN COUNTIES

ACCRINGTON. *Lay-out of Central Area.* The Corporation has approved a scheme prepared by Mr. Percy Thomas, P.R.I.B.A., for the lay-out of the central area.

BARROW-IN-FURNESS. *Houses.* The Corporation has approved plans of the borough engineer for the erection of 126 houses on the Roosegate estate and 82 on the Risedale estate.

BLACKPOOL. Plans passed by the Corporation: Four houses, Napier Avenue, for Blackpool Pre-cast Stone Co., Ltd.; two houses, Napier Avenue, for Messrs. Beardshaw and Boardman; hotel and boarding houses, Clifton Drive and Wimborne Place, for Mr. J. Fitton; four houses, off Canterbury Avenue, for Mr. Jas. Seddon; two houses, Preston New Road, for Mr. G. L. F. Smith; two houses, Stoney Hill Avenue, for Mr. G. Woodhead; 40 houses, Wollowbank Avenue, for Messrs. Rimmer and Foster; four houses, Lomond Avenue, for Hall Estates, Ltd.: 30 houses, North Drive, for Mr. W. Spencer; three houses, Kingscote Drive, for Mr. H. Grimbledeston; two houses, Merlyn Road, for Mr. J. Eastwood; four houses, Cherry Tree Road, for Mr. H. Radcliffe; 68 houses, Poulton Road, for Messrs. R. Fielding and Son.

BLACKPOOL. *Maternity Hospital.* The Corporation is to acquire a site for the erection of a maternity hospital.

BLACKPOOL. *Clinic and Library.* The Corporation has asked the borough engineer to prepare plans for the clinic and library to be erected at Bispham.

BLACKPOOL. *Concert Hall.* The Blackpool Corporation has instructed the borough engineer to prepare plans for the erection of a concert hall on the cliffs at Bispham.

BLACKPOOL. *Hall.* The Education Committee is to erect a hall at the Revoe School.

BOOTLE. *Houses, etc.* Plans passed by the Corporation: 36 houses, Harris Drive, for Messrs. Hugh Pritchard and Sons; alterations and additions, Merton Hotel, for Threlfall's Brewery Co., Ltd.; presbytery, Orrell Road, for St. Robert Bellarmine Church trustees.

BRADFORD. *Houses.* The Corporation has approved plans by the city architect for the erection of 546 houses on the Canterbury estate.

CARLISLE. *Houses.* Plans passed by the Corporation: 16 houses, Knowe Park, for Messrs. J. Laing and Son, Ltd.; two houses, Newtown Road, for Mr. H. E. Scarborough; 10 houses, Scalegate Road, for Mr. H. Graham Irving; four houses, Knowefield, for Mr. N. Willis.

CARLISLE. *Developemnt.* Messrs. John Laing and Son, Ltd., are to develop an estate on the London Road, Harraby, Carlisle.

HARTON. *Maternity Hospital.* South Shields Corporation is to prepare a scheme for the erection of a maternity hospital at Harton.

SOUTH SHIELDS. *School.* The South Shields Education Committee has approved a scheme for the erection of a high school for boys, at a cost of £48,400.

SOUTH SHIELDS. *Hotel Premises.* Messrs. T. A. Page, Son and Bradbury have prepared plans for the erection of hotel premises at Sea Road, South Shields.

SOUTH SHIELDS. *Development.* The Corporation is to prepare a scheme for the redevelopment of the Drakes Street and Laygate Square areas.

SOUTH SHIELDS. *Houses.* The Corporation is to erect 46 houses in Commercial Road at a cost of £23,300.

SOUTH SHIELDS. *Dwellings.* Church Army Housing, Ltd., are negotiating for land in South Shields for the erection of dwellings.

WALLASEY. *Nurses' Home.* The Corporation has sold a site in Woodstock Road to the

(*Continued on page xxviii.*)

RATES OF WAGES

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

			I s. d.	II s. d.
A_1	ABERDARE ..	S. Wales & M.	1 5½	1 1½
A	Aberdeen ..	Scotland	1 6½	1 2
A_1	Abergavenny	S. Wales & M.	1 6	1 1½
A_2	Abingdon ..	S. Counties	1 5	1 0½
A	Accrington ..	N.W. Counties	1 6½	1 2
A_2	Addlestone ..	S. Counties	1 5	1 0½
A	Adlington ..	N.W. Counties	1 6½	1 2
A	Airdrie ..	Scotland	*1 6½	1 2
C	Aldeburgh ..	E. Counties	1 2½	11
A	Altrincham ..	N.W. Counties	1 6½	1 2
B_2	Appleby ..	N.W. Counties	1 3	11½
A	Ashton-under-Lyne	N.W. Counties	1 6½	1 2
B_1	Aylesbury ..	S. Counties	1 4	1 0
B_1	BANBURY ..	S. Counties	1 4	1 0
B_1	Bangor ..	N.W. Counties	1 4	1 0
A_2	Barnard Castle	N.E. Coast	1 5	1 0½
A	Barnsley ..	Yorkshire	1 6½	1 2
B	Barnstaple ..	S.W. Counties	1 4½	1 0½
A	Barrow ..	N.W. Counties	1 6½	1 2
A	Barry ..	S. Wales & M.	1 6½	1 2
B_1	Basingstoke ..	S.W. Counties	1 4	1 0
A_2	Bath	S.W. Counties	1 5½	1 1½
A	Batley ..	Yorkshire	1 6½	1 2
A_2	Bedford ..	E. Counties	1 5½	1 1½
A_2	Berwick-on Tweed	N.E. Coast	1 5½	1 1½
A_2	Bewdley ..	Mid. Counties	1 5½	1 1½
B_2	Bicester ..	S. Counties	1 3	11½
	Birkenhead ..	N.W. Counties	*1 7½	1 2½
A	Birmingham ..	Mid. Counties	1 6½	1 2
A_1	Bishop Auckland	N.E. Coast	1 6	1 1½
A	Blackburn ..	N.W. Counties	1 6½	1 2
A	Blackpool ..	N.W. Counties	1 6½	1 2
A	Blyth	N.E. Coast	1 6½	1 2
B_1	Bognor ..	S. Counties	1 4	1 0
A	Bolton ..	N.W. Counties	1 6½	1 2
A_2	Boston ..	Mid. Counties	1 5	1 0½
A_2	Bournemouth ..	S. Counties	1 5½	1 1½
B_2	Bovey Tracey	S.W. Counties	1 3½	11½
A	Bradford ..	Yorkshire	1 6½	1 2
A_1	Brentwood ..	E. Counties	1 6	1 1½
A	Bridgend ..	S. Wales & M.	1 6½	1 2
B	Bridgwater ..	S.W. Counties	1 4½	1 0½
A_1	Bridlington ..	Yorkshire	1 6	1 1½
A	Brighouse ..	Yorkshire	1 6½	1 2
A_2	Brighton ..	S. Counties	1 5½	1 1½
A	Bristol ..	S.W. Counties	1 6½	1 2
B	Brixham ..	S.W. Counties	1 3½	11½
A	Bromsgrove ..	Mid. Counties	1 5½	1 1½
B	Bromyard ..	Mid. Counties	1 3	11½
A	Burnley ..	N.W. Counties	1 6½	1 2
A	Burslem ..	Mid. Counties	1 6½	1 2
A	Burton-on-Trent	Mid. Counties	1 6½	1 2
A	Bury	N.W. Counties	1 6½	1 2
A	Buxton ..	N.W. Counties	1 6	1 1½
A_1	CAMBRIDGE ..	E. Counties	1 6	1 1½
B_1	Canterbury ..	S. Counties	1 4	1 0
A	Cardiff ..	S. Wales & M.	1 6½	1 2
A	Carlisle ..	N.W. Counties	1 6½	1 2
B	Carmarthen ..	S. Wales & M.	1 4½	1 0½
B	Carnarvon ..	N.W. Counties	1 4½	1 0½
A	Carnforth ..	N.W. Counties	1 6½	1 2
A	Castleford ..	Yorkshire	1 6½	1 2
A_2	Chatham ..	S. Counties	1 5	1 0½
A	Chelmsford ..	E. Counties	1 5	1 0½
A	Cheltenham ..	S.W. Counties	1 5	1 0½
A	Chester ..	N.W. Counties	1 6½	1 2
A	Chesterfield ..	Mid. Counties	1 6½	1 2
B_1	Chichester ..	S. Counties	1 4	1 0
A	Chorley ..	N.W. Counties	1 6½	1 2
B_1	Cirencester ..	S. Counties	1 4	1 0
A	Clitheroe ..	N.W. Counties	1 6½	1 2
A	Clydebank ..	Scotland	1 6½	1 2
A	Coalville ..	Mid. Counties	1 6½	1 2
A_2	Colchester ..	E. Counties	1 5½	1 1½
A	Colne	N.W. Counties	1 6	1 1½
A_2	Colwyn Bay	N.W. Counties	1 5½	1 1½
A_1	Consett ..	N.E. Coast	1 6	1 1½
A_2	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 6½	1 2
A_2	Crewe ..	N.W. Counties	1 5½	1 1½
A	Cumberland	N.W. Counties	1 5	1 0½
A	DARLINGTON	N.E. Coast	1 6½	1 2
A	Darwen ..	N.W. Counties	1 6½	1 2
B_1	Deal	S. Counties	1 4	1 0
A_2	Denbigh ..	N.W. Counties	1 5	1 0½
A	Derby ..	Mid. Counties	1 6½	1 2
A	Dewsbury ..	Yorkshire	1 6½	1 2
B	Didcot ..	S. Counties	1 4½	1 0½
A	Doncaster ..	Yorkshire	1 6½	1 2
B_1	Dorchester ..	S.W. Counties	1 4	1 0
A	Driffield ..	Yorkshire	1 5	1 0½
A_2	Droitwich ..	Mid. Counties	1 5½	1 1½
A	Dudley ..	Mid. Counties	1 6½	1 2
A_2	Dumfries ..	Scotland	1 6	1 1½
A	Dundee ..	Scotland	1 6½	1 2
A	Durham ..	N.E. Coast	1 6½	1 2
A_2	EASTBOURNE ..	S. Counties	1 5½	1 1½
A_1	Ebbw Vale ..	S. Wales & M.	1 6	1 1½
A	Edinburgh ..	Scotland	1 6½	1 2
A_1	E. Glamorgan-shire. Rhondda Valley District	S. Wales & M.	1 6	1 1½
A_2	Exeter	S.W. Counties	*1 5½	1 1½
B	Exmouth ..	S.W. Counties	1 4½	1 0½
A_2	FELIXSTOWE ..	E. Counties	1 5	1 0½
A	Filey	Yorkshire	1 5	1 0½
A	Fleetwood ..	N.W. Counties	1 6½	1 2
B_1	Folkestone ..	S. Counties	1 4	1 0
A	Frodsham ..	N.W. Counties	1 6½	1 2
B_2	Frome ..	S.W. Counties	1 3½	11½
A	GATESHEAD ..	N.E. Coast	1 6½	1 2
B	Gillingham ..	S. Counties	1 4½	1 0½
A	Glasgow ..	Scotland	1 7	1 2½
A_2	Gloucester ..	S.W. Counties	1 5½	1 1½
A_2	Goole	Yorkshire	1 5½	1 1½
A_2	Gosport ..	S. Counties	1 5½	1 1½
A_2	Grantham ..	Mid. Counties	1 5	1 0½
A_1	Gravesend ..	S. Counties	1 6	1 1½
A	Greenock ..	Scotland	*1 6½	1 2
A	Grimsby ..	Yorkshire	1 6½	1 2
B	Guildford ..	S. Counties	1 4½	1 0½
A	HALIFAX ..	Yorkshire	1 6½	1 2
A	Hanley ..	Mid. Counties	1 6½	1 2
A	Harrogate ..	Yorkshire	1 6½	1 2
A	Hartlepools ..	N.E. Coast	1 6½	1 2
B	Harwich ..	E. Counties	1 4½	1 0½
B_1	Hastings ..	S. Counties	1 4	1 0
A_2	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S.W. Counties	1 4½	1 0½
A_2	Hertford ..	E. Counties	1 5½	1 1½
A	Heysham ..	N.W. Counties	1 6½	1 2
A	Howden ..	N.E. Coast	1 6½	1 2
A	Huddersfield ..	Yorkshire	1 6½	1 2
A	Hull	Yorkshire	1 6½	1 2
A	ILKLEY ..	Yorkshire	1 6½	1 2
A	Immingham ..	Mid. Counties	1 6½	1 2
A_2	Ipswich ..	E. Counties	1 5½	1 1½
B_2	Isle of Wight ..	S. Counties	1 4½	1 0½
A	JARROW ..	N.E. Coast	1 6½	1 2
A	KEIGHLEY ..	Yorkshire	1 6½	1 2
A_2	Kendal ..	N.W. Counties	1 5	1 0½
A_3	Keswick ..	N.W. Counties	1 5	1 0½
A_1	Kettering ..	Mid. Counties	1 6	1 1½
A_2	Kidderminster	Mid. Counties	1 5½	1 1½
B_1	King's Lynn ..	E. Counties	1 4	1 0
A	LANCASTER ..	N.W. Counties	1 6½	1 2
A_1	Leamington ..	Mid. Counties	1 6	1 1½
A	Leeds	Yorkshire	1 6½	1 2
A	Leek	Mid. Counties	1 6½	1 2
A	Leicester ..	Mid. Counties	1 6½	1 2
A	Leigh	N.W. Counties	1 6½	1 2
B	Lewes	S. Counties	1 3	11½
A_2	Lichfield ..	Mid. Counties	1 5½	1 1½
A	Lincoln ..	Mid. Counties	1 6½	1 2
	Liverpool ..	N.W. Counties	*1 8	1 3
A_2	Llandudno ..	N.W. Counties	1 5½	1 1½
A	Llanelly ..	S. Wales & M.	1 6½	1 2
	London (12-miles radius)		1 8	1 3
	Do. (12-15 miles radius)		1 7½	1 2½
A	Long Eaton ..	Mid. Counties	1 6½	1 2
A	Loughborough	Mid. Counties	1 6½	1 2
A_1	Luton	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 6½	1 2
A_1	MACCLESFIELD	N.W. Counties	1 6	1 1½
A_2	Maidstone ..	S. Counties	1 5	1 0½
A_3	Malvern ..	Mid. Counties	1 5	1 0½
A	Manchester ..	N.W. Counties	1 6½	1 2
A	Mansfield ..	Mid. Counties	1 6½	1 2
B_1	Margate ..	S. Counties	1 4	1 0
A	Matlock ..	Mid. Counties	1 5	1 0½
A_1	Merthyr ..	S. Wales & M.	1 6	1 1½
A	Middlesbrough	N. E. Coast	1 6½	1 2
A_2	Middlewich ..	N.W. Counties	1 5½	1 1½
B_2	Minehead ..	S.W. Counties	1 3½	11½
B_2	Monmouth .. & S. and E. Glamorganshire	S. Wales & M.	1 3½	11½
A	Morecambe ..	N.W. Counties	1 6½	1 2
A_2	NANTWICH ..	N.W. Counties	1 5½	1 1½
A	Neath	S. Wales & M.	1 6½	1 2
A	Nelson ..	N.W. Counties	1 6½	1 2
A	Newcastle ..	N.E. Coast	1 6½	1 2
A	Newport ..	S. Wales & M.	1 6½	1 2
A	Normanton ..	Yorkshire	1 6½	1 2
A	Northampton	Mid. Counties	1 6½	1 2
A	North Staffs ..	Mid. Counties	1 6½	1 2
A	North Shields	N.E. Coast	1 6½	1 2
A_1	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham ..	Mid. Counties	1 6½	1 2
A	Nuneaton ..	Mid. Counties	1 6½	1 2
A	OAKHAM ..	Mid. Counties	1 5	1 0½
A	Oldham ..	N.W. Counties	1 6½	1 2
A_2	Oswestry ..	N.W. Counties	1 5	1 0½
A_1	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 6½	1 2
B_2	Pembroke ..	S. Wales & M.	1 3	11½
A	Perth	Scotland	*1 6½	1 2
A_1	Peterborough	E. Counties	1 6	1 1½
A	Plymouth ..	S.W. Counties	*1 6½	1 2
A	Pontefract ..	Yorkshire	1 6½	1 2
A_1	Pontypridd ..	S. Wales & M.	1 6	1 1½
A_2	Portsmouth ..	S. Counties	1 5½	1 1½
A	Preston ..	N.W. Counties	1 6½	1 2
A	QUEENSFERRY	N.W. Counties	1 6½	1 2
A_2	READING ..	S. Counties	1 5½	1 1½
B	Reigate ..	S. Counties	1 4½	1 0½
A	Retford ..	Mid. Counties	1 5	1 0½
A_1	Rhondda Valley	S. Wales & M.	1 6	1 1½
A	Ripon	Yorkshire	1 5	1 0½
A	Rochdale ..	N.W. Counties	1 6½	1 2
B	Rochester ..	S. Counties	1 4½	1 0½
A_1	Ruabon ..	N.W. Counties	1 6	1 1½
A	Rugby ..	Mid. Counties	1 6½	1 2
A_2	Rugeley ..	Mid. Counties	1 5½	1 1½
A	Runcorn ..	N.W. Counties	1 6½	1 2
A_1	ST. ALBANS ..	E. Counties	1 6	1 1½
A	St. Helens ..	N.W. Counties	1 6½	1 2
B_3	Salisbury ..	S.W. Counties	1 3½	11½
A_1	Scarborough ..	Yorkshire	1 6	1 1½
A	Scunthorpe ..	Mid. Counties	1 6½	1 2
A	Sheffield ..	Yorkshire	1 6½	1 2
A	Shipley ..	Yorkshire	1 6½	1 2
A_2	Shrewsbury ..	Mid. Counties	1 5½	1 1½
A_2	Skipton ..	Yorkshire	1 5½	1 1½
A_2	Slough ..	S. Counties	1 5½	1 1½
A_1	Solihull ..	Mid. Counties	1 6	1 1½
A_2	Southamton ..	S. Counties	1 5½	1 1½
A_1	Southend-on-Sea	E. Counties	1 6	1 1½
A	Southport ..	N.W. Counties	1 6½	1 2
A	S. Shields ..	N.E. Coast	1 6½	1 2
A_1	Stafford ..	Mid. Counties	1 6	1 1½
A	Stirling ..	Scotland	1 7	1 2½
A	Stockport ..	N.W. Counties	1 6½	1 2
A	Stockton-on-Tees	N.E. Coast	1 6½	1 2
A	Stoke-on-Trent	Mid. Counties	1 6½	1 2
B	Stroud	S.W. Counties	1 4½	1 0½
A	Sunderland ..	N.E. Coast	1 6½	1 2
A	Swansea ..	S. Wales & M.	1 6½	1 2
A	Swindon ..	S.W. Counties	1 5	1 0½
A_1	TAMWORTH ..	N.W. Counties	1 6	1 1½
B	Taunton ..	S.W. Counties	1 4½	1 0½
A	Teesside Dist. ..	N.E. Counties	1 6½	1 2
A_2	Teignmouth ..	S.W. Coast	1 5½	1 1½
A	Todmorden ..	Yorkshire	1 6½	1 2
A_1	Torquay ..	S.W. Counties	1 6	1 1½
B_2	Truro	S.W. Counties	1 3½	11½
A_3	Tunbridge Wells	S. Counties	1 5	1 0½
A	Tunstall ..	Mid. Counties	1 6½	1 2
A	Tyne District	N.E. Coast	1 6½	1 2
A	WAKEFIELD	Yorkshire	1 6½	1 2
A	Walsall ..	Mid. Counties	1 6½	1 2
A	Warrington ..	N.W. Counties	1 6½	1 2
A_1	Warwick ..	Mid. Counties	1 6	1 1½
A_1	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 6½	1 2
A_2	Weston-s.-Mare	W. Counties	1 5½	1 1½
A_2	Whitby ..	Yorkshire	1 5½	1 1½
A	Widnes ..	N.W. Counties	1 6½	1 2
A	Wigan ..	N.W. Counties	1 6½	1 2
B	Winchester ..	S. Counties	1 4½	1 0½
A_2	Windsor ..	S. Counties	1 5½	1 0½
A	Wolverhampton	Mid. Counties	1 6½	1 2
A_2	Worcester ..	Mid. Counties	1 5½	1 1½
A_3	Worksop ..	Yorkshire	1 5	1 0½
A_1	Wrexham ..	N.W. Counties	1 6	1 1½
A	Wycombe ..	S. Counties	1 5	1 0½
B	YARMOUTH ..	E. Counties	1 4½	1 0½
A	Yeovil ..	S.W. Counties	1 4½	1 0½
A	York	Yorkshire	1 6½	1 2

* 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.

CURRENT PRICES

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

WAGES

		s.	d.
Bricklayer	per hour	1	8
Carpenter	,,	1	8
Joiner	,,	1	8
Machinist	,,	1	8
Mason (Banker)	,,	1	8
,, (Fixer)	,,	1	9
Plumber	,,	1	8
Painter	,,	1	7
Paperhanger	,,	1	7
Glazier	,,	1	7
Slater	,,	1	8
Scaffolder	,,	1	4
Timberman	,,	1	4
Navvy	,,	1	3
General Labourer	,,	1	3
Lorryman	,,	1	5½
Crane Driver	,,	1	7
Watchman	per week	2	10	0

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	,,	1	16	6
Hydrated Lime	,,	3	0	9
Portland Cement, in 4 ton lots (d/d site, including Paper Bags)	,,	1	19	0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags)	,,	2	5	0
White Portland Cement, in 1 ton lots	,,	8	15	0
Thames Ballast	per Y.C.		6	6
⅜" Crushed Ballast	,,		7	0
Building Sand	,,		7	6
Washed Sand	,,		8	6
2" Broken Brick	,,		8	0
⅜" ,, ,,	,,		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
⅛" 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.
Fletton	per M.	2	15	0
Grooved do.	,,	2	17	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	17	6
,, Wirecuts	,,	7	17	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

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

SLATER AND TILER

First quality Bangor or Portmadoc slates d/d F.C.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, ⅝"	Sq.	18	6
,, ¾"	,,	1	1	6
,, 1"	,,	1	2	0
,, 1¼"	,,	1	5	0
,, 1½"	,,	1	10	0
Deal matchings, ⅝"	,,		14	0
,, ¾"	,,		15	6
,, 1"	,,	1	4	0
Rough boarding, ¾"	,,		16	0
,, 1"	,,		18	0
,, 1¼"	,,	1	6	0

Plywood, per ft. sup.

Thickness	⅜" A	B	BB	½" A	B	BB	⅝" A	B	BB	¾" A	B	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	0	1/-	9	–

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings:

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

	¼"	½"	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	65	Galvanized gas	52½
Water	61½	,, water	47½
Steam	57½	,, steam	42½

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

SMITH AND FOUNDER—*continued*

		s.	d.
Rolled steel joists cut to length	cwt.	12	9
Mild steel reinforcing rods, ⅜"	,,	10	6
,, ,, ½"	,,	10	3
,, ,, ⅝"	,,	10	0
,, ,, ¾"	,,	9	6
,, ,, ⅞"	,,	9	6
,, ,, 1"	,,	9	6
,, ,, 1¼"	,,	9	6
,, ,, 1½"	,,	9	6

		⅜" s.	d.	4" 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.	24	6
,, drawn pipes	,,	24	6
,, soil pipe	,,	30	0
,, scrap	,,	16	0
Solder, plumbers'	lb.		9½
,, fine do.	,,	1	0
Copper, sheet	,,		8½
,, tubes	,,		11

L.C.C. soil and waste pipes:	3"	4"	6"
Plain cast F.R.	1 0	1 2	2 6
Coated ,,	1 1	1 3	2 8
Galvanized ,,	2 0	2 6	4 6
Holderbats each	3 10	4 0	4 9
Bends ,,	3 9	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	5	0
Plaster, coarse	,,	2	10	0
,, fine	,,	4	15	0
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, 21 oz., squares n/e 2 ft.			s.	F.S. 2¼
,, ,, 26 oz. ,, ,,				3
Flemish, Arctic, Figures (white)*	,,			7
Blazoned glasses	,,		2	6
Reeded: Cross Reeded	,,			11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	,,			6
Crown sheet glass (n/e 12 in. x. 10 in.)	,,		2	0
Flashed opals (white and coloured)	,,	1 6 and	2	0
¼" rough cast: rolled plate	,,			5½
¼" wired cast; wired rolled	,,			9½
¼" Georgian wired cast	,,			11
¼" Polished plate, n/e 1 ft.	,,	†10 to	‡1	1
,, ,, 2	,,	†1 2 ,,	‡1	4
,, ,, 4	,,	†2 3 ,,	‡2	6
,, ,, 8	,,	†2 9 ,,	‡3	2
,, ,, 20	,,	†3 7 ,,	‡4	2
,, ,, 45	,,	†3 11 ,,	‡4	7
,, ,, 100	,,	†5 0 ,,	‡5	7
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 ¼"	,,	8½ ,,	1	0
Putty, linseed oil	lb.			3

* Colours, 1d. F.S. extra.

† *Ordinary glazing quality.* ‡ *Selected glazing quality.*

PAINTER

		£	s.	d.
White lead in 1 cwt. casks	cwt.	2	8	6
Linseed oil	gall.		2	3
Boiled oil	,,		2	9
Turpentine	,,		4	1½
Patent knotting	,,		14	0
Distemper, washable	cwt.	2	6	0
,, ordinary	,,	2	0	0
Whitening	,,		4	0
Size, double	firkin		3	0
Copal varnish	gall.		13	0
Flat varnish	,,		14	0
Outside varnish	,,		16	0
White enamel	,,	1	15	0
Ready mixed paint	,,		13	6
Brunswick black	,,		7	6

CURRENT PRICES FOR MEASURED WORK

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

EXCAVATOR AND CONCRETOR

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

DRAINLAYER

		4" s. d.	6" s. d.
Stoneware drains, laid complete (digging and concrete to be priced separately)	F.R.	1 6	2 3
Extra, only for bends	Each	2 8	3 9
" junctions	"	3 9	4 6
Gullies and gratings	"	16 6	18 0
Cast iron drains, and laying and jointing	F.R.	4 9	6 9
Extra, only for bends	Each	10 6	15 6

BRICKLAYER

		£ s. d.
Brickwork, Flettons in lime mortar	Per Rod	26 10 0
" " in cement	"	27 12 6
" Stocks in cement	"	34 0 0
" Blues in cement	"	50 0 0
Extra only for circular on plan	"	2 0 0
" backing to masonry	"	1 10 0
" raising on old walls	"	2 0 0
" underpinning	"	5 10 0½
Fair Face and pointing internally	F.S.	1¼
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 labours hoisting, fixing and cleaning down, complete	F.C.	17 9
Bath stone and do., all as last	"	13 6
Artificial stone and do	"	13 0
York stone templates, fixed complete	"	10 6
" thresholds	"	13 6
" sills	"	1 0 6

SLATER AND TILER

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

CARPENTER AND JOINER

		£ s. d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2 2 6
Shuttering to sides and soffits of beams	F.S.	7
" to stanchions	"	7
" to staircases	"	1 6
Fir and fixing in wall plates, lintols, etc.	F.C.	3 9
Fir framed in floors	"	4 6
" " roofs	"	6 6
" " trusses	"	7 6
" " partitions	"	8 6
⅞" deal sawn boarding and fixing to joists	Sqr.	1 14 6
1" " " " "	"	1 17 6
1½ " " " "	"	2 3 0
½" × 2" fir battening for Countess slating	"	9 6
Do., for 4" gauge tiling	"	12 0
Stout feather-edged tilting fillet	F.R.	4½
Patent inodorous felt, 1 ply	Y.S.	2 3
" " " 2 "	"	2 9
" " " 3 "	"	3 3
Stout herringbone strutting to 9" joists	F.R.	10½
1" deal gutter boards and bearers	F.S.	1 2
1½" " " "	"	1 6
2" deal wrought rounded roll	F.R.	8
1" deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2 1 0
1¼" do.	"	2 10 0
1½" do.	"	2 17 0
1" deal moulded skirting, fixed on, and including grounds plugged to wall	F.S.	1 6
1½" do.	"	1 9

CARPENTER AND JOINER—*continued*

		s. d.
1¼" deal moulded sashes of average size	F.S.	1 9½
2" " " "	"	1 11½
1¼" deal cased frames double hung, of 6" × 3" oak sills, 1¼" pulley stiles, 1¼" heads, 1" inside and outside linings, ¾" parting beads, and with brass faced axle pulleys, etc., fixed complete		3 7
2" " " " "	"	3 10
Extra only for moulded horns	Each	6
1¼" deal four-panel square, both sides, door	F.S.	2 0
2" " " "	"	2 8
1¼" " but moulded both sides	"	2 4
2" " " "	"	3 0
4" × 3" deal, rebated and moulded frames	F.R.	1 0
4½" × 3½" " "	"	1 4
1¼" deal tongued and moulded window board, on and including deal bearers	F.S.	1 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
1½" × 1½" " "	"	2 9
3" × 3" deal wrought framed newels	F.R.	1 3
Extra only for newel caps	Each	6 0
Do., pendants	"	6 0

SMITH AND FOUNDER

		£ s. d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.	16 6
Riveted plate or compound girders, and hoisting and fixing in position	"	1 0 6
Do., stanchions with riveted caps and bases and do.	"	19 0
Mild steel bar reinforcement, 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.	1 18 6
Do. in flashings	"	2 2 0
Do. in covering to turrets	"	2 7 6
Do. in soakers	"	1 13 3
Labour to welted edge	F.R.	3½
Open copper nailing	"	3
Close " "	"	3

		½" s. d.	¾" s. d.	1" s. d.	1¼" s. d.	2" s. d.	4" s. d.
Lead service pipe and fixing with pipe hooks	F.R.	10	1 0	1 3	2 0	2 10	—
Do. soil pipe and fixing with cast lead tacks		—	—	—	—	—	5 6
Extra, only to bends	Each	—	—	—	—	2 0	6 9
Do. to stop ends	"	6½	8	9	11	1 0	—
Boiler screws and unions	"	3 3	3 9	5 0	8 0	—	—
Lead traps	"	—	—	—	6 3	8 9	—
Screw down bib valves	"	6 9	9 6	11 0	—	—	—
Do. stop cocks	"	7 0	9 6	12 6	—	—	—

		£ s. d.
4" cast-iron ½-rd. gutter and fixing	F.R.	1 0
Extra, only stop ends	Each	1 0
Do. angles	"	1 6
Do. outlets	"	2 9
4" dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.	1 2
Extra, only for shoes	Each	1 3
Do. for plain heads	"	5 6

PLASTERER AND TILING

		s d.
Expanded metal lathing, small mesh	Y.S.	2 0
Do. in n/w to beams, stanchions, etc.	"	2 9
Lathing with sawn laths to ceilings	"	1 3
½" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1 5
Do. vertical	"	1 7
Rough render on walls	"	1 2½
Render, float and set in lime and hair	"	1 9
Render and set in Sirapite	"	1 11
Render, backing in cement and sand, and set in Keene's cement	"	2 9
Extra, only if on lathing	"	4
Keene's cement, angle and arris	F.R.	6
Arris	"	1½
Rounded angle, small	"	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	1½
1" granolithic pavings	Y.S.	3 6
1½" " "	"	4 6
6" × 6" white glazed wall tiling and fixing on prepared screed	"	17 6
9" × 3" " " " "	"	1 2 6
Extra, only for small quadrant angle	F.R.	8

GLAZIER

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

PAINTER

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

18.

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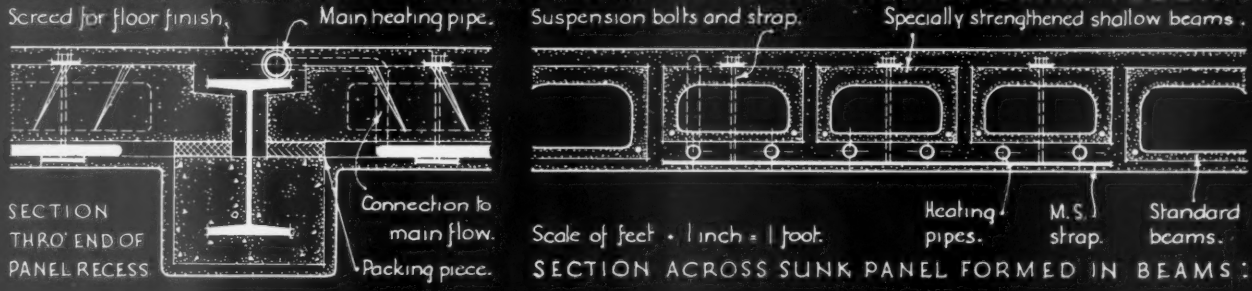
PROVISION FOR PANEL HEATING IN A SIEGWART PRECAST BEAM FLOOR:



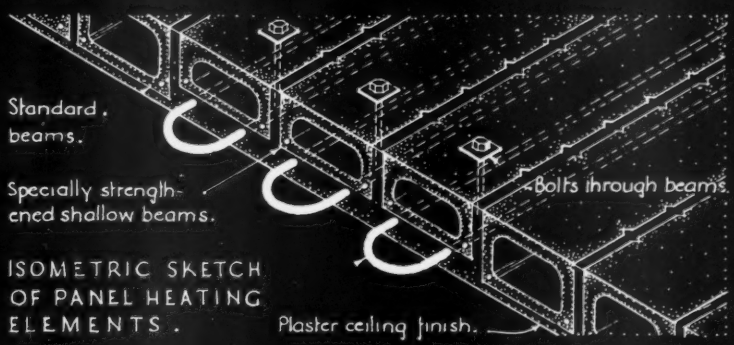
SECTION ACROSS SUNK PANEL FORMED IN BEAMS:

METHOD OF CONSTRUCTION:

Recesses are formed in the under side of the floor to accommodate the panel heating elements in the thickness of the floor without affecting its self-centering character.

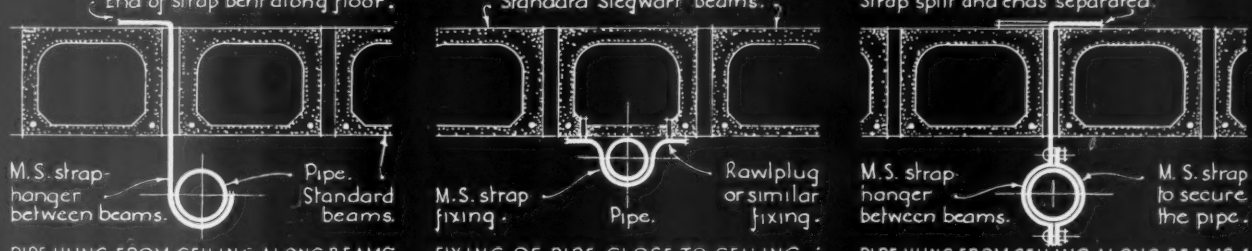
The recess is formed by the use of specially strengthened shallow beams resting on packing pieces at the joist supports.

The heating element is fixed into the recess formed by the difference in thickness of the beams after the floor is completed so that there is no delay in the construction of the floor.

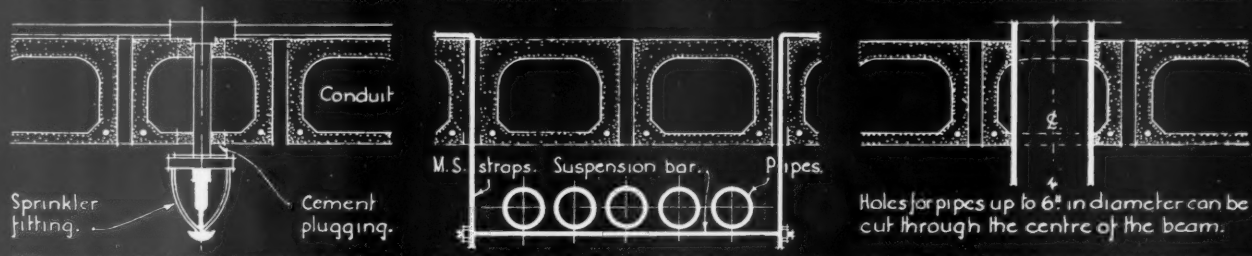


ISOMETRIC SKETCH OF PANEL HEATING ELEMENTS.

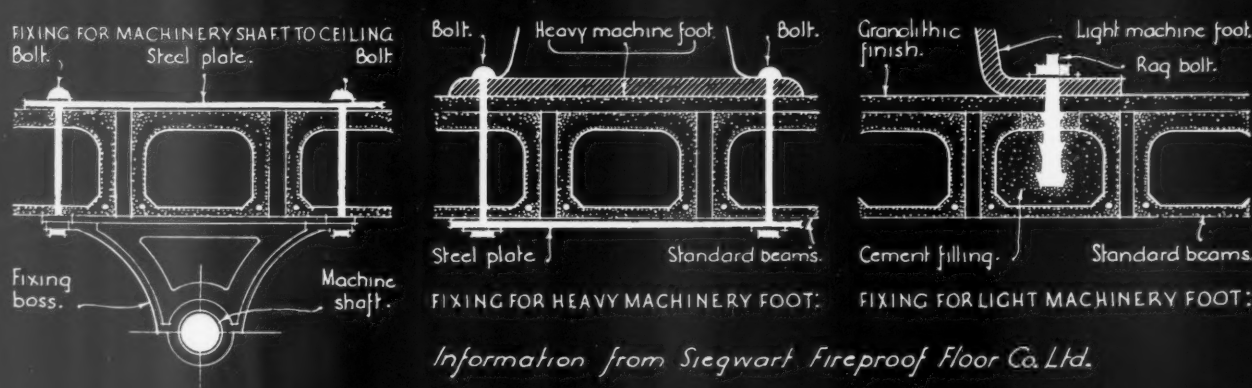
VARIOUS METHODS OF FIXING SERVICES TO A SIEGWART PRECAST FLOOR:



PIPE HUNG FROM CEILING ALONG BEAMS: | FIXING OF PIPE CLOSE TO CEILING: | PIPE HUNG FROM CEILING ALONG BEAMS:



SPRINKLER BRANCH THROUGH FLOOR | SEVERAL PIPES FIXED BELOW CEILING: | FOR PIPES PASSING THROUGH A FLOOR:



FIXING FOR HEAVY MACHINERY FOOT: | FIXING FOR LIGHT MACHINERY FOOT:

Information from Siegwart Fireproof Floor Co. Ltd.

INFORMATION SHEET: SIEGWART PRECAST FLOORS: No 3:

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 · Olive A. Rayne

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INFORMATION SHEET

• 307 •

FLOOR CONSTRUCTION

Type of Product : Siegwart Precast Floors

This is the third of a series of Sheets devoted to precast floor construction, and sets out the methods used for incorporating in the floor a panel heating system, together with the various methods used for obtaining fixings and hangings for light and heavy work, the method of running sprinkler pipes, etc.

Panel Heating :

Recesses to take panel heating pipes are formed wherever they are required by using shallower floor beams over the recess. These shallow beams are of the standard type, but are suitably strengthened to allow of the reduced depth, and are bedded at the ends on suitable packing pieces supplied. The heating pipes are then fixed as shown, and the connections are run through the floor.

Heating coils and pipe work are run and fixed after the erection of the floor, so that no delay is caused in the completion of the floor construction.

When the heating coils are bolted into position and the connections made, the recess is filled in flush by the plasterer.

Direction of Heating Coils :

Heating coils may be run either with or across the direction of the precast beams. It is more economical, however, for the coils to be run in the same direction.

Hangers :

Several different forms of M.S. strap-hanger are shown on this Sheet, and it should be noted that hangers may be twisted to receive pipes running at any angle across the floor beams.

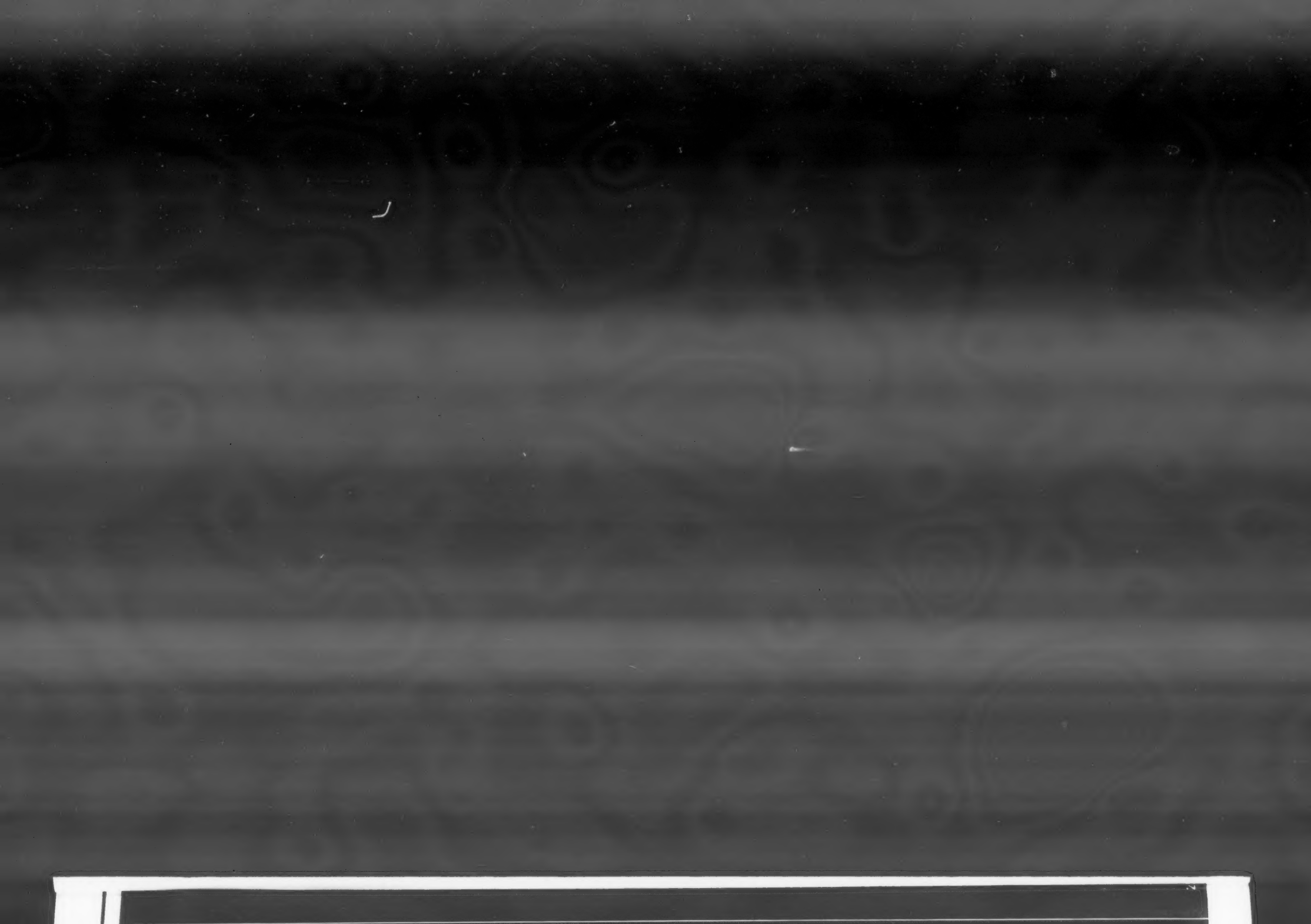
Fixings for Heavy Machinery :

As shown in the detail on this Sheet, heavy machinery may be fixed by bolting through the floor to a steel plate on the underside. The precast beams in such cases are specially strengthened to take the load required.

Previous Sheets :

Previous Sheets of this series are Nos. 266 and 285, which dealt in detail with the standard beams, the bearings used, and methods of trimming large and small openings.

Manufacturers : Siegwart Fireproof Floor Co., Ltd.
London : Thanet House, 231 Strand, W.C.2
Telephone : Central 4894
Birmingham : Winchester House, Victoria Square
Telephone : Birmingham, Midland 1664
Manchester : Millgate Buildings, 18, Long Millgate
Telephone : Manchester, Blackfriars 3033
Glasgow : 121, St. Vincent Street
Telephone : Central 7277
Belfast : c/o Robert Kirk, Ltd., Exchange Street
Telephone : Belfast 24681
Leicester : Enderby
Telephone : Narborough, Leicester 67



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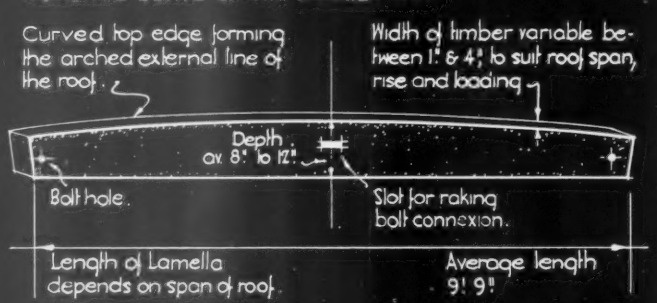
LAMELLA TRUSSLESS WOOD ROOF CONSTRUCTION :

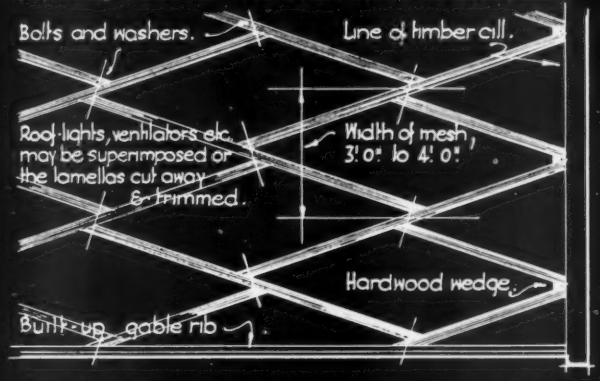
ISOMETRIC DETAIL OF THE LAMELLA UNIT :



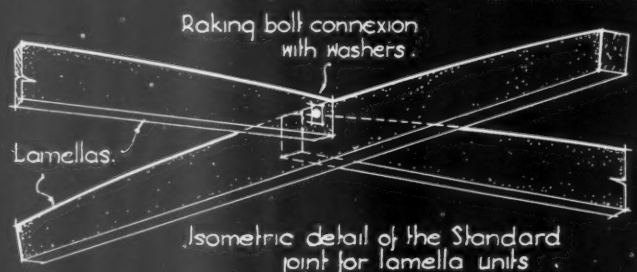
Note · depth of unit increases with large spans & steep rises.

Both ends of unit are bevelled and splayed.

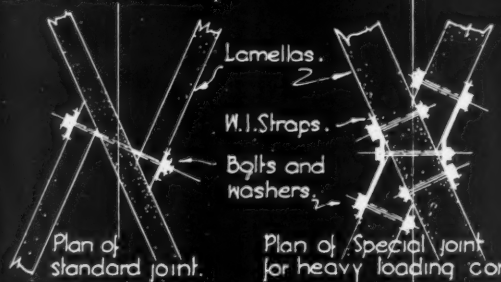
TYPICAL PLAN OF THE ROOF UNITS ASSEMBLED :



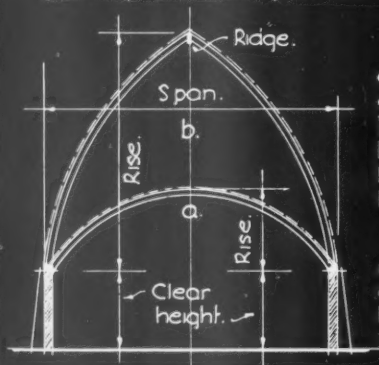
JOINTING OF UNITS : (according to thickness of Lamella used)



Isometric detail of the Standard joint for lamella units.



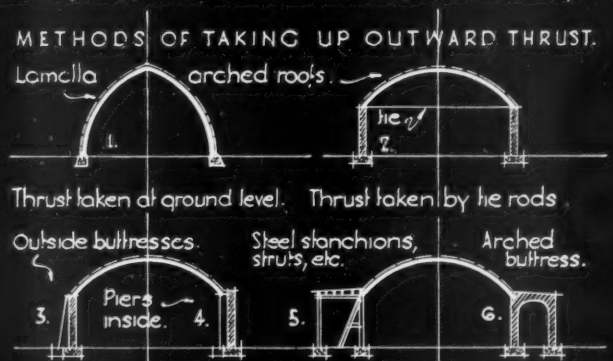
THE MAIN ARRANGEMENTS OF LAMELLA ARCHED ROOFS : (Note · In both types a. and b. shown, the span may be varied very considerably, while the ratio of rise to span may vary from a semicircle to one eighth of the span.)



a. Continuous segmental or barrel vault roof with cylindrical surface carried from end to end of building. Known as two-hinged arch. Rectangular or multi-sided hips may be incorporated.

b. Three-hinged arch, Gothic style. Segments leaning against each other at ridge. This type may be continuous or hipped as for type a. above.

METHODS OF TAKING UP OUTWARD THRUST.



TYPES OF WALL BEAM BEARING AT SPRING OF LAMELLA ARCH :

Information from the Timber Development Association.

INFORMATION SHEET : LAMELLA TRUSSLESS WOOD ROOFS.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 · Joan A. Bayne.

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INFORMATION SHEET

• 308 •

ROOF CONSTRUCTION

Product : Lamella Trussless Wood Roofs

The Lamella principle of roof construction is one in which numbers of comparatively short wood members are built up to form a network of framing timbers of the shape and size desired. This network of Lamellas forms a barrel-like surface of mutually braced and stiffened timbers arching over the area to be covered.

Standardised Units :

The units or Lamellas used are the same in principle and general form for all Lamella roofs. The detailed shape and size of the Lamella unit is, however, especially designed and standardised for each job and the units used throughout any one roof are always identical.

The Lamella Unit :

The size of the timber used in each unit is determined by the span of the roof and the shape of the roof in section ; Lamellas are curved on the top edges and bevelled and splayed at the ends.

Types of Roof :

While there is no limit to the variety of shape in which Lamella roofs can be built, all Lamella roofs fall into one of the two types, either :

(*a*) The " continuous " segmental or barrel-like vault roof, with cylindrical surface carried from end to end of the building, forming a two-hinged arch. Modifications may be made by hipping, either rectangular or multi-sided corresponding to roofs used commonly in house construction.

(*b*) The three-hinged arch is merely two segmental Lamella surfaces leaning against each other at the ridge. This type of construction also can be continuous from end to end of the building or can be hipped.

Design :

In both of the types of Lamella roof set out above, the stresses in the units are either compression or bending, and can be calculated. The system therefore uses timber in the most efficient way ; timber being more suitable for bending and compression than for tensile stresses. The design of all Lamella roofs in this country is carried out by The Merchant Trading Company, Ltd., of Columbia House, Aldwych, London, W.C.2, who are the sole Licensees for Great Britain and Ireland.

Support :

All arched constructions give an outward thrust down into the supports which, therefore, must be tied in. The simplest method is the use of tie rods, but as the appearance of tie rods is generally to be avoided, it is more usual to provide support adequate to take the outward thrust.

These supports vary according to conditions and may be heavy walls, lighter walls with buttresses or stays, stanchions, girders or any form which will give the support and resistance required in the particular case.

Span-rise Ratio :

In general it is usually best for the rise in segmental roofs with tie rods to be from one sixth to one seventh of the span. Where tie rods are not used, the rise is usually made slightly greater, up to one fourth of the span.

Span :

Spans of up to 165 ft. clear between supports have been roofed with wood Lamella construction without tie rods ; the conditions of support, rise-span ratio and such conditions are usually found to be the limiting factors.

Timber :

The timbers generally used are Columbian pine or Douglas fir, red or yellow deal.

Fire Resistance :

Fire hazard with the Lamella Wood Roof is greatly reduced by the entire elimination of trusses and columns. The pockets formed by the network act as firestops and since there is no load concentration, the load-carrying members being distributed over the entire roof area, the roof structure is very hard to destroy.

The whole character of the Lamella Roof construction, eliminating supporting members, and arched high above the floor, protects it from early damage by fire. An ignition temperature must be built up practically throughout the whole enclosure before the fire can seriously affect the roof. Ordinary means of ventilation will prevent this development for some time after a fire starts.

Timber is less quickly weakened by high temperature than is steel, and a Lamella wood roof 20 to 25 ft. from the floor can confidently be expected to remain in position and safe, under attack by fire, as long as, and probably far longer than, roofs supported by unprotected steel.

Lighting, Ventilation and Acoustics :

Any width of glazing can be accommodated, and the Lamella network does not interfere with the diffusion of light. The clear barrel-vault roof gives an even and unimpeded distribution of ventilating air. Roof lights, louvres, ventilators, can be superimposed on the roof, or, if desired, Lamellas can be cut away and the openings framed out to take the lights, etc.

The diamond-shaped network of the Lamellas, giving the effect of coffering, serves to break up sound-waves and so aid even distribution, giving a uniform " sound pattern " over the whole of an auditorium. In addition, the considerable area of exposed Lamellas helps to reduce reverberation.

Costs :

Approximate indication of prices per square yard of projected area for Lamella roofs (excluding coverings) for varying ratios of span to rise (see table below).

Roof Covering :

Any type of roofing may be used over Lamella construction, provided it will take the curvature of the roof ; and provided that in the case of sheet roofs the sheet over the crown can be properly jointed, i.e., metal sheeting, asbestos sheet or tiles, tiles, boarding and felt, built-up roofings, etc.

Issued by : The Timber Development Association, Ltd.
Address : 69 Cannon Street, E.C.4
Telephone : City 2714

Approximate Size of Lamellas (Nominal). (W = Width of mesh.)

Span in feet.	Ratio of Rise to Span. 1 in 7	1 in 5½	1 in 4
40	W = 4′ 10′ 3″ × 1″ × 8″	W = 3′ 9″ 9′ 9″ × 1″ × 8″	W = 3′ 6″ 9′ 3″ × 1″ × 8″
70	W = 4′ 10′ 3″ × 1¼″ × 8″	W = 3′ 9″ 9′ 9″ × 1½″ × 8″	W = 3′ 6″ 9′ 3″ × 1½″ × 9″
100	W = 4′ 10′ 3″ × 1½″ × 10″	W = 3′ 9″ 9′ 9″ × 2″ × 10″	W = 3′ 6″ 9′ 3″ × 2″ × 10″
140	W = 4′ 10′ 3″ × 2″ × 12″	W = 3′ 6″ 9′ 3″ × 2″ × 12″	W = 3′ 8′ 3″ × 2″ × 14″

Span in feet.	Span to Rise. Prices per Square Yard Projected. Ratio of 7 : 1	5 : 1	3 : 1
37–43	8 6 to 9 –	9 6 to 10 –	11 – to 12 –
45–53	8 – to 8 6	9 – to 9 6	10 – to 11 6
55–65	7 6 to 8 6	8 6 to 9 6	10 – to 11 –
75–90	9 – to 10 –	10 6 to 11 6	13 – to 14 6
100–120	11 6 to 12 6	13 6 to 15 –	16 – to 18 –

Acknowledgment must be made of the valuable assistance given by Mr. Hector O. Hamilton, Architect, in the preparation of this Sheet.

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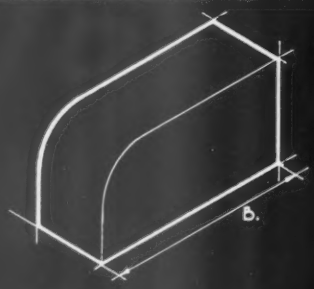
All specials are made in 8⅞"×4⅝"×2⅝" sizes, & where not otherwise shown, conform to the R.I.B.A. Standard sizes.

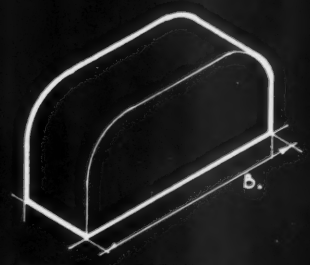
SCHEDULE OF MOULDED BRICKS.

The numbers given below are the reference Nos of Midhurst Brick Co. Ltd.



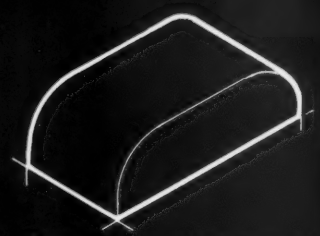
Catalogue number	RADIUS.	B.
100	1⅛"	8⅞"
101	2¼"	8⅞"
105	2¼"	4½"

SINGLE BULLNOSE



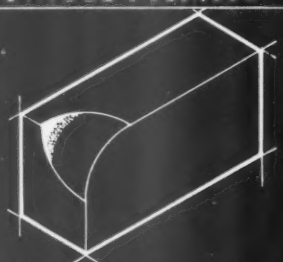
Catalogue number	RADIUS	B.
130	1⅛"	8⅞"
131	2¼"	8⅞"
132	1⅛"	5⅞"

DOUBLE BULLNOSE.



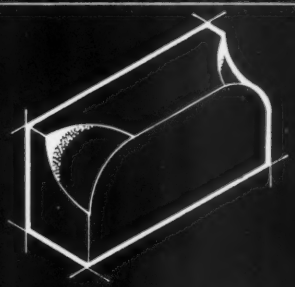
Catalogue number	RADIUS.
150	1⅛"
151	2¼"

DOUBLE HEADED BULLNOSE



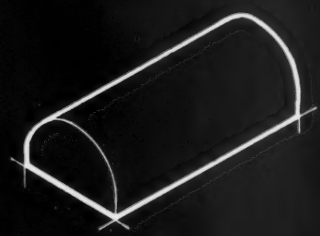
Catalogue number	RADIUS.	HAND.
110	1⅛"	L.H.
111	1⅛"	R.H.
112	2¼"	L.H.
113	2¼"	R.H.

BULLNOSE STOP SINGLE



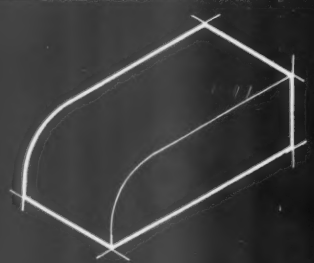
Catalogue number	RADIUS.
135	1⅛"
136	2¼"

DOUBLE BULLNOSE STOP.



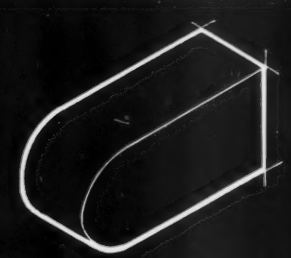
Catalogue number	RADIUS.
155	1⅛"
156	2¼"

DOUBLE STRETCHER BULLNOSE



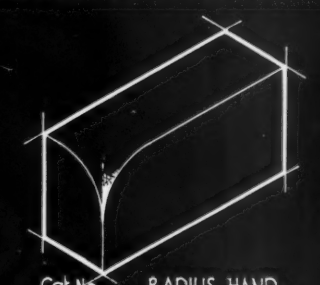
Catalogue number	RADIUS.
120	1⅛"
121	2¼"

SINGLE BULLNOSE HEADER



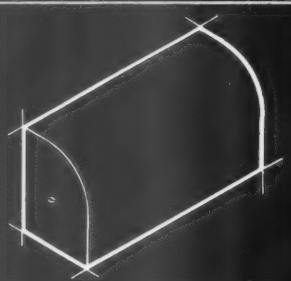
Catalogue number	RADIUS.
140	2¼

BULLNOSE-ON-END-COWNOSE.



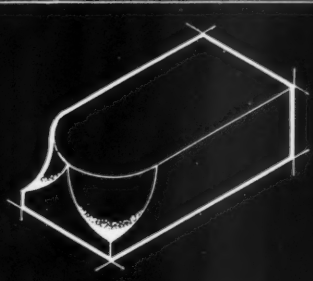
Cat. No.	RADIUS.	HAND.
160	1⅛"	R.H.
161	1⅛"	L.H.
162	2¼"	R.H.
163	2¼"	L.H.

BULLNOSE INTERNAL RETURN ON END.



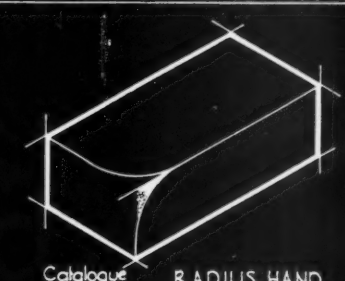
Catalogue number	RADIUS.
125	1⅛"
126	2¼"

SINGLE BULLNOSE STRETCHER



Catalogue number	RADIUS.
145	2¼"

COWNOSE STOP.



Catalogue number	RADIUS.	HAND.
170	1⅛"	R.H.
171	1⅛"	L.H.
172	2¼"	R.H.
173	2¼"	L.H.

BULLNOSE INTERNAL RETURN ON EDGE.

Information from the Midhurst Brick Co. Ltd.

INFORMATION SHEET :: CALCIUM-SILICATE BRICKS · No 1 · MIDHURST WHITES

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

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INFORMATION SHEET

• 309 •

CALCIUM SILICATE BRICKS

Type of Product : Midhurst Whites

This is the first of a series of Information Sheets setting out the standard sizes and shapes of the Midhurst White moulded bricks.

Standard Size :

Midhurst Whites are made to conform with the B.S.S. standard sizes and are $8\frac{7}{8} \times 4\frac{5}{16} \times 2\frac{5}{8}$.

Special Sizes :

The standard size of brick can be varied to give any required thickness : and the method of manufacture permits of the economical production of special sizes and shapes to specification.

Characteristics :

The various characteristics of the brick, such as porosity, strength, reflection, etc., will be dealt with on succeeding Sheets.

Method of Manufacture :

The method of manufacture is one in which sand and lime are mixed in certain definite proportions, and subjected to a high pressure of super-heated steam, to produce a chemical combination known as Calcium Silicate.

The sand is carefully graded and mixed with the correct proportion of finely ground lime, which has been burnt in kilns which ensure 95 per cent. purity.

The sand-lime mixture is passed into a revolving hydrator and water added to slake the lime.

From the hydrator the material is passed through a rolling mill which ensures a consistent and uniform mixture, and eliminates all possibility of caking.

This mixture is then fed automatically into the moulds of the presses and subjected to a pressure of over 100 tons per brick.

These presses form the mixture into bricks with sharp clean shape and great density.

The bricks are then passed into hardening chambers or autoclaves, where they are subjected to superheated steam treatment for ten hours at a pressure of 130 lbs. per square inch.

Packing :

The bricks are packed and delivered to the site in straw or sawdust in special containers, to ensure unbroken arrisses and undamaged faces.

Manufacturers : The Midhurst Brick Co., Ltd.

Address : Windsor House, Victoria, S.W.1

Telephone : Victoria 5551-2

Works: Midhurst and Cocking, Sussex

Schedule of Moulded Bricks

			Radius
100	Single Bullnose		$1\frac{1}{8}$″
101			$2\frac{1}{4}$″
105			$2\frac{1}{4}$″
110	Bullnose Stop Single	Left hand	$1\frac{1}{8}$″
111		Right hand	$1\frac{1}{8}$″
112		Left hand	$2\frac{1}{4}$″
113		Right hand	$2\frac{1}{4}$″
120	Bullnose Header Single		$1\frac{1}{8}$″
121			$2\frac{1}{4}$″
125	Bullnose Stretcher Single		$1\frac{1}{8}$″
126			$2\frac{1}{4}$″
130	Double Bullnose		$1\frac{1}{8}$″
131			$2\frac{1}{4}$″
132			$1\frac{1}{8}$″
135	Double Bullnose Stop		$1\frac{1}{8}$″
136			$2\frac{1}{4}$″
140	Bullnose on End (Cownose)		$2\frac{1}{4}$″
145	Cownose Stop		$2\frac{1}{4}$″
150	Double Headed Bullnose		$1\frac{1}{8}$″
151			$2\frac{1}{4}$″
155	Double Stretcher Bullnose		$1\frac{1}{8}$″
156			$2\frac{1}{4}$″
160	Bullnose Internal Return	Right hand	$1\frac{1}{8}$″
161	on end	Left hand	$1\frac{1}{8}$″
162		Right hand	$2\frac{1}{4}$″
163		Left hand	$2\frac{1}{4}$″
170	Bullnose Internal Return	Right hand	$1\frac{1}{8}$″
171	on edge	Left hand	$1\frac{1}{8}$″
172		Right hand	$2\frac{1}{4}$″
173		Left hand	$2\frac{1}{4}$″
180	Bullnose Internal Return	Left hand	$1\frac{1}{8}$″
181	on flat	Right hand	$1\frac{1}{8}$″
182		Left hand	$2\frac{1}{4}$″
183		Right hand	$2\frac{1}{4}$″
190	Bullnose External Return	Right hand	$1\frac{1}{8}$″
191	on flat	Left hand	$1\frac{1}{8}$″
192		Right hand	$2\frac{1}{4}$″
193		Left hand	$2\frac{1}{4}$″
200	Bullnose External Return	Left hand	$1\frac{1}{8}$″
201	on edge	Right hand	$1\frac{1}{8}$″
202		Left hand	$2\frac{1}{4}$″
203		Right hand	$2\frac{1}{4}$″
210	Stop end to Double Bullnose		$1\frac{1}{8}$″
215	Stop end to Standard Double Bullnose		$2\frac{1}{4}$″
220	Cill Brick		$1\frac{1}{8}$″
225	Bullnose Mitre	Left hand	$2\frac{1}{4}$″
226		Right hand	$2\frac{1}{4}$″
227		Left hand	$1\frac{1}{8}$″
228		Right hand	$1\frac{1}{8}$″
235	Bullnose Mitre Block		$2\frac{1}{4}$″
240	Bullnose Mitre Block	Left hand	$2\frac{1}{4}$″
241	on edge	Right hand	$2\frac{1}{4}$″
242		Left hand	$1\frac{1}{8}$″
243		Right hand	$1\frac{1}{8}$″
250	Pistol Brick (Circular Corner)		

		Angle
260	Squint Brick	30°
261		45°
262		45°
263		60°
264		60°
265		70°
270	Angle Brick	113°
271		113°
272		135°
273		135°
274		153°
275		153°

			Angle
280	Angle Brick		135°
290	Birdsmouth		130°
291			135°
292			165°
300	Header Splay		$8\frac{7}{8}$″-$8\frac{1}{2}$″
301			$9\frac{1}{4}$″-$8\frac{3}{4}$″
302			$8\frac{7}{8}$″-$7\frac{5}{8}$″
303			$8\frac{7}{8}$″-$8\frac{3}{4}$″
304			$8\frac{7}{8}$″-8 ″
305			10″-9″
350	Cant Brick		
360	Double Cant		
365	Cant Stop	Right hand	
366		Left hand	
367		Right hand	
368		Left hand	
375	Plinth Header		
385	Plinth Stretcher		
395	Plinth Internal Return	Right hand	
396		Left hand	
400	Plinth Internal Return	Right hand	
401		Left hand	
405	Plinth External Return	Right hand	
406		Left hand	
415	Plinth Internal Angle	Right hand	
416		Left hand	
425	Plinth External Angle	Right hand	
426		Left hand	
435	Cant Mitre Block		
440	Cill Brick		
450	Culvert Header		3″-2″
451			3″-$2\frac{1}{4}$″
452			3″-$2\frac{1}{2}$″
453			3″-$2\frac{3}{4}$″
460	Culvert Stretcher		3″-2″
461			3″-$2\frac{1}{4}$″
462			3″-$2\frac{1}{2}$″
463			3″-$2\frac{3}{4}$″
465			$2\frac{1}{2}$″-$2\frac{1}{4}$″
466			$2\frac{3}{4}$″-$2\frac{1}{2}$″

		Radius
480	Concave Header	4′ 9″
481		3′ 9″
490	Concave Stretcher	5′ 2″

		Diameter
500	Chimney (or Well Header)	4′ 0″
501		6′ 0″
502		8′ 0″
503		11′ 0″
504		13′ 0″
505		16′ 0″
510	Chimney (or Well Stretcher)	4′ 0″
511		6′ 0″
512		8′ 0″
513		11′ 0″
514		13′ 0″
515		16′ 0″
520	Convex Header	4′ 9″
530	Convex Stretcher	4′ 9″
550	Coping Brick	
560	Arch Brick	
600	Special Purpose Bricks	
650	Air Brick	
700	Key Brick	