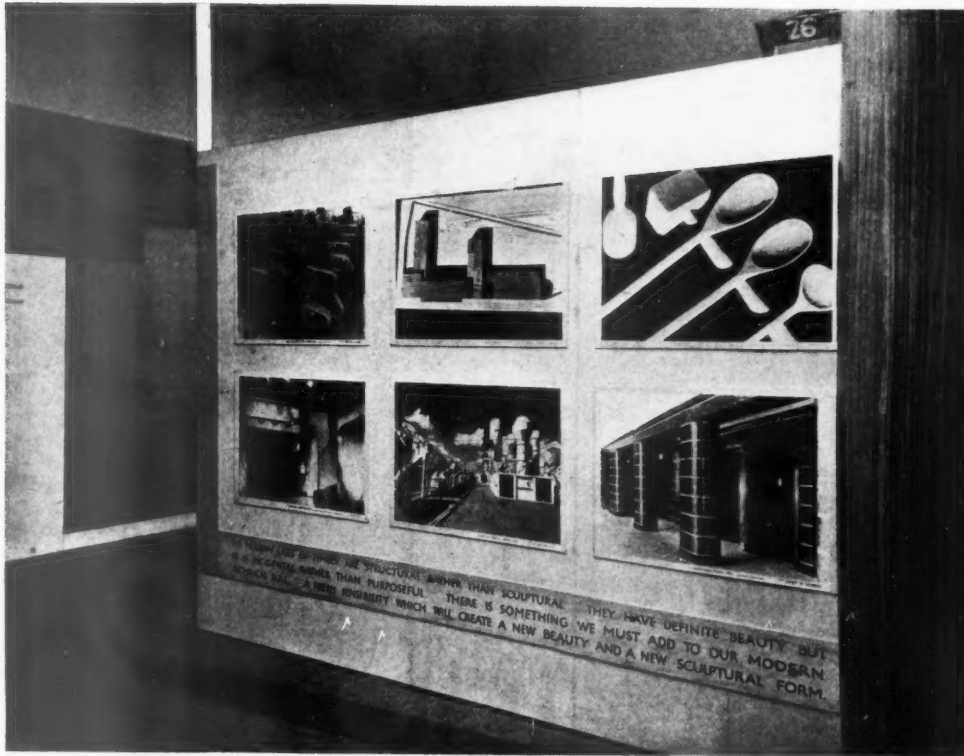


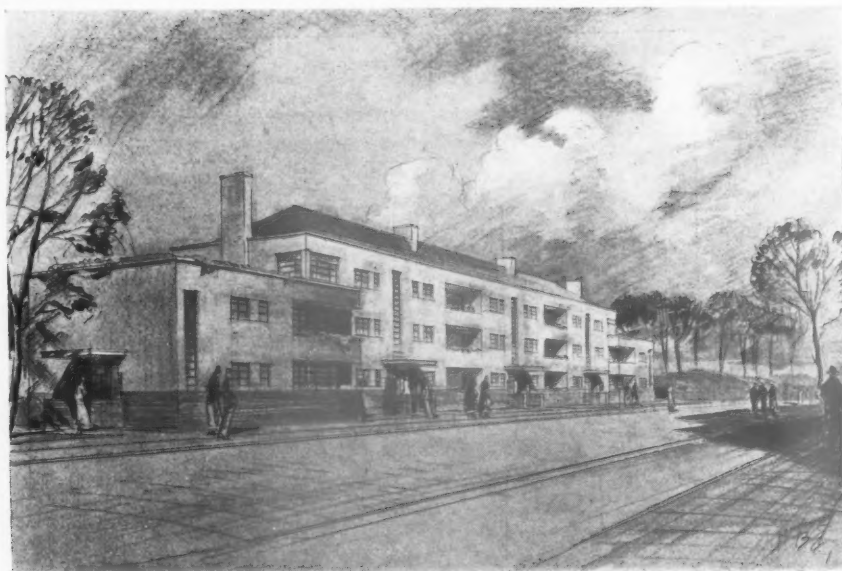
TIMBER THROUGH THE AGES EXHIBITION AT CHARING CROSS STATION



AN exhibition entitled "Timber Through the Ages" was opened last week in the main hall of Charing Cross Underground Station, London, by Sir Frederick Marquis. The exhibition, which will remain open until March 21, was designed by Paul Nash for the Timber Development Association.

The photographs show: above, the section devoted to the modern uses of timber; right, a general view.

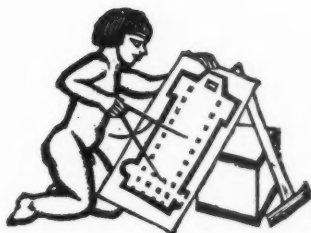




HOUSING SCHEME

Two drawings of the proposed housing scheme near Johnstone, Renfrewshire, for the Johnstone Town Council. The architect is T. S. Tait, of Sir John Burnet, Tait and Lorne. The drawings were executed by Cyril A. Farey (top) and J. D. M. Harvey.

A description of the scheme is given on page 366 of this issue.



A MISSING AUTHORITY

THE housing of Britain has now grown into so big a thing that there are probably only a few people who have full knowledge of all its aspects. One might go further, and say that not many people understand what the country, as represented by multitudinous authorities and associations, is trying to do about its housing.

Terms like vast and complex have lost their meaning in the stupendous entanglement of the housing problem, and human nature has almost universally taken refuge in a narrowed view.

Members of the Commons stick closely to the provisions of Acts past and to come; the Ministry of Health and local authorities concern themselves with the obligations of legislation already enacted; architects have their hands full with the improvement of lay-out, planning and construction; and the general public, whilst sincere in its wish that slums should be abolished, usually enters into detail only in the ceaselessly popular debate of cottage versus flat.

The most serious student of housing, led on from the comforting solidity of buildings to industry and leisure, finance and politics until he becomes surrounded with the imponderabilia of future social, economic, industrial and political changes, has nearly always been compelled to impose an arbitrary limit to his enquiries.

Housing has become too big to be seen clearly by most of those who are engaged from day to day on some small part of it. And the thought that so basic a part of living may have outgrown a steady and careful control is not comforting. For it is not many months since new dwellings were being completed at the rate of a thousand a day.

The significance of this rate of production should not be lost. Such housing development imposes upon town-planning a terrific strain. But instead of being intimately co-ordinated with housing progress town-planning itself has tended to become a self-contained and daunting subject, still hesitating between a policy of restriction alone and that of economic and industrial prophecy.

To the untutored, housing has seemed to be a question of sweet clarity—the providing of a new dwelling for each family badly housed. Town-planning, save as the regulation of density per acre, has not seemed to come into the matter.

But strange things have resulted from such a simplification. And the Interim Report of the National Housing Committee, published last week, pointed

out some of them with damning common sense.

It pointed out that the factories on a specially equipped site at Slough are hampered by the lack of workers' housing; at Becontree there is a new town of 25,000 dwellings for workers in London; and the costly new traffic exits from London are all rapidly being rendered useless for their purpose.

To such examples almost infinite additions may be made. New factories throughout all the home counties draw their labour from considerable distances. Thousands of new dwellings are being built in areas where industrial depression is so acute that, without special remedial measures, only a minority of their inhabitants can hope for continuous employment in the future. And all over the country new roads are having the whole object of their construction rapidly defeated by ribbon development.

The reasons for these things we have already mentioned. The Ministry is concerned with administration; local authorities with local housing; local town-planners with local town-planning. With a Government, as always, averse from further regulation of private initiative, and local authorities entangled with day-to-day affairs, local interest and local jealousies, there is no one whose business it is to watch the national interest, to prevent incalculable national waste.

The National Housing Committee, perhaps because of a detachment which is only obtainable in a body which is voluntary and non-political as well as intelligent, has seen these things clearly. It has stated that unless housing and town-planning can be nationally planned in co-ordination with national industry no remedies for the Special Areas can be other than makeshift expedients. It is impossible to imagine a more important conclusion.

It is to be hoped that the Committee's Report, coming as a reinforcement to the many similar statements in the past, will at last produce an effect. This JOURNAL has constantly repeated that the economic efficiency of Britain as well as the living conditions of its inhabitants must depend in the future upon the proper co-ordination of housing and town-planning. It remains for the Government to decide whether a proper territorial planning authority will be set up before the huge expenditure upon housing and roads is irremediably wasted, and before the energies of town-planners are exhausted in the uselessness of petty restrictions.



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N O T E S & T O P I C S

EVERYDAY THINGS

I MAKE no apology for writing again of the "Everyday Things" Exhibition at the R.I.B.A. Its London run has been extended for another week and it is already booked for several provincial centres.

What will be thought there about some of the exhibits? The provinces are much more critical of these things than we are in London—they *make* most of them, after all, in the provinces.

Carefully as the exhibits have been chosen, I agree with many of the architects and designers who attended the soiree last Monday that a further purging of the exhibits is desirable.

Exception was regularly taken to about half the exhibits in the plastics section, the church fittings corner, and the building finishes display, and most people were at a loss to understand why so many similar lighting fittings were shown among the baths and the lavatory basin.

It is to be regretted that more *everyday* fabrics are not included. The everyday house of £1,500 seldom rises to more than the 5s. 6d.—6s. 6d. a yard range for curtaining, and even this in the more important rooms only. The average price of the textiles shown must be well over 10s. a yard.

But I found myself agreeing with everyone that the best and most useful exhibition is the catalogue—the best production of its kind I have seen.

"GREEN VEGETABLE BELT"

Returning from the country last week-end, I pulled up at a very small inn in an unfrequented part of Sussex—there are a surprising number of such places still to be found.

Some bound volumes of *The Cottage Gardener and Country Gentleman's Companion* attracted my attention on a shelf in

the corner. Opening the volume for 1849, I discovered a series of articles on the vegetable, poultry and meat supplies of London.

This writer of some 86 years ago was particularly entertaining. After declaiming the virtues of modern science and transport (in contrast to some of our gardens of today) he said "by means of the telegraph, the steam-boat and the railroad we annul the effects of frost, obliterate the sea and command, at a few hours' notice, the produce of the continent."

He told his readers that in 1849 35,000 persons were employed in market gardens in the Metropolitan area alone, and continued to deplore the lack of planning whereby the "old gardens are obliged to move further afield through the continued extension of the Metropolis."

And then he rose to prophetic heights and suggested the reservation of a "green vegetable belt" around London.

We could have entered the northern area of that green belt immediately out of Regent's Park—nowadays it is still struggling for existence, and the nearest edge is somewhere between Stanmore and Watford, and it takes a Green Line coach to reach it.

WHAT'S NEW AT CHARING CROSS?

The name of Paul Nash attached to a piece of display or industrial design is always as much a guarantee of liveliness and economy of means as it has been for years when attached to a painting.

It is economy of means that strikes one in the Timber Development Association's display at Charing Cross Station, which Paul Nash has designed. The problem, as he has simplified it, was to display some attractive specimens of timber and to show at the same time the widespread uses to which timber can be put.

The former part of the show includes an abstract mural in wood-veneers which covers the whole back wall, designed to show up the grain and colouring of a number of exotic, polysyllabic but Empire-produced timbers; and the latter includes some really excellent photography, some from the masterly camera of Paul Nash himself, some from the recent Timber Issue of the *Architectural Review*.

Unfortunately, to mar an otherwise fine display, the already-commended economy of means has been carried a little too far. On approaching the stand one can't help observing the rather arbitrary relation between the screens and background and the floor, which latter has been left in its permanent paved form. Then one finds, framed beside the entrance to the stand, the charming design that Nash made for the whole floor to be laid in another wood pattern. I suppose it eventually turned out too costly to execute; decidedly a pity.

And, while on the subject of design and the T.D.A., may one suggest that that admirable body improves the design of the little symbol or trade-mark it attaches to its products and advertisements.

The poverty and ungainliness of this is strikingly brought



The late Rudolf Dircks.

to one's notice by the excellent poster that Mr. Griffin has designed to advertise the exhibition where this and the Underground sign are shown side by side.

RUDOLF DIRCKS

Mr. Dircks, who died last week at the age of 72, showed himself to be a man of wide powers and interests during his thirty-eight years as Librarian of the R.I.B.A.

His principal interest was naturally the Library, where his work of achieving a world-famous centre of architectural scholarship and research increased enormously with the fourfold increase of membership which took place during his term as Librarian.

But Rudolf Dircks was interested in many other things. He was an able writer, and contributed to many journals, and published several books during his early years at the Institute, whilst his monograph on Rodin in 1908 first really introduced that sculptor to English appreciation.

After the war Mr. Dircks took over the editorship of the R.I.B.A. *Journal*, a position he held in addition to his other work until his retirement in 1930.

As organizer, scholar and as a librarian possessed of a keen sense of the Institute's responsibilities as a learned society, Mr. Dircks showed himself an official which the Institute was lucky in possessing.

BUILDING SOCIETIES AND AMENITIES

Sir Harold Bellman recently deplored the fact that so many new houses were shoddily built, and suggested that the building societies "should seriously consider co-operating with any appropriate agency which has for its object the enforcement of decent standards of building and the preservation of amenities generally."

I have often felt that if the building societies had been a little more public spirited or intelligent they might have exercised a very good influence over the suburban development which has taken place since the war and which, to a considerable extent, their money has made possible. It therefore seems to me that if Sir Harold Bellman's suggestion really *does* indicate a general change of outlook it is rather an important one. Finance and

amenity so rarely appear hand in hand that I hope something may come of it.

ENGLISH HOMES

Surely *The Times* could have done better with its English Home Supplement? It could well have been so good, so lacking in the bogus that I found on such a distressingly high proportion of the pages.

And was it *really* necessary to give an article on bedside books that appalling title? "Printed Nightcaps" sounds like "Beachcomber" at his best.

CINEMA WAIVER

The Regulations issued in 1929 controlling places of public entertainment, forbade the building of one cinema over another.

Now, the old Cinema House in Oxford Street has been rebuilt as two cinemas, which we are to know as Studios 1 and 2. One is built over the other—and so far as I can see there is no reason why they should not be so.

This is another welcome sign that our local authorities are willing to relax building rules and regulations when a strict interpretation would unnecessarily hinder building development.

It gives point too to the remark of an architect wag, who said in my presence the other day:—

"Six years make one waiver,

Ten thousand waivers one new regulation."

FOOTINGS WAIVERS

Which reminds me that a waiver is still required in London and other centres when brick footings are to be omitted above concrete foundations.

A very simple calculation proves that brick footings are quite unnecessary in most simple buildings on modern concrete foundations, and it is very tiresome constantly to have to decide between waiting for a waiver or spending unnecessary money.

FAMILIAR QUOTATIONS

While looking at the winning design of a competition for a town hall in a past issue of the *JOURNAL* the line "I am but a gatherer and disposer of other men's stuff" came into my mind.

As I couldn't remember where it came from I looked it up in Bartlett's *Familiar Quotations*, and discovered it was from the Preface to *Elements of Architecture* by Sir Henry Wotton.

I then turned to the index to see how architects and architecture fared in the quotations and found both very badly represented. They are mentioned only three times: "Architecture is Frozen Music," "All are Architects of Fate, working on the Walls of Time," and "Architect of His Own Fortunes."

It is a disappointing batch to find representing such an ancient profession. Even the toad (if numbers count) has aroused greater enthusiasm.

ASTRAGAL

NEWS

POINTS FROM
THIS ISSUE

"Unless housing and town-planning can be nationally planned in co-ordination with national industry no remedies for the Special Areas can be other than makeshift expedients" 363

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Conditions of the open competition for a school for boys, Luton, are now obtainable 367

"Large stone removed from the House of Commons and suitable for rock gardens is being disposed of in large or small quantities at ten shillings a ton" 384

L.C.C. HOUSING

On Tuesday last the L.C.C. discussed details of two new sites which it is proposed to acquire compulsorily for housing purposes. One of them is in Camberwell and lies on the northern side of Peckham Rye. It is four acres in area, and the estimated cost of acquiring and clearing the existing eighteen old and out-of-date houses is £36,000. Under the scheme of redevelopment proposed by the Housing and Public Health Committee of the Council, the site will be used for the erection of seven blocks of flats, comprising 193 dwellings.

The other site is on the south side of Tufnell Park Road, Islington. It is $4\frac{3}{4}$ acres in area, and is occupied by old houses in large gardens. On it nine five-storey blocks containing 232 flats can be erected. The cost of acquisition, clearance and partial development will be about £75,000.

PARLIAMENT SQUARE

Ninety M.P.s have signed a memorial urging the Cabinet to reconsider its decision not to co-operate with the London and Middlesex County Councils in securing Parliament Square as an open space.

An office building now stands on part of the land for which £375,000 was paid a year ago in the hope of Government assistance and to prevent the erection of a new tall, office building. If the Government still declines to help the Middlesex Council may have to use the site for an extension to the Guildhall.

£1,500,000 FOR GREEN BELT

The General Purposes Committee of the Middlesex County Council proposes the expenditure of £1,500,000 to secure for the "green belt" a 10,000 acre stretch of open

THE
ARCHITECTS'
DIARY

Thursday, March 5

R.I.B.A., 66 Portland Place, W.1. Exhibition of "Everyday Things." The Exhibition is open free to the public until March 21, 10 a.m. to 8 p.m. (Saturdays, 10 a.m. to 5 p.m.)

INTERNATIONAL EXHIBITION OF CHINESE ART. At the Royal Academy, Burlington House, Piccadilly, W.1. 9.30 a.m. to 7 p.m.

ARCHITECTURAL ASSOCIATION, 36 Bedford Square, W.C.1. Exhibition of Present-day Calligraphy and Illuminating organized by the Society of Scribes and Illuminators. Until March 20. 10.30 a.m. to 7.30 p.m. (Saturdays 10 a.m. to 1 p.m.)

AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, 29 Lincoln's Inn Fields, W.C.2. "The Building Society Valuer: His Present and Future Problems." By Arthur Hollis 7 p.m.

GEFFRYE MUSEUM, Kingsland Road, Shoreditch, E.2. "Looking Backward: Furniture of the Past." By Ernest Hawking. 7.30 p.m.

INSTITUTION OF STRUCTURAL ENGINEERS, Lancashire and Cheshire Branch. Annual Dinner. At the Midland Hotel, Manchester South-Western Counties Branch. At Exeter. "Arches." By S. J. Crispin.

TIMBER DEVELOPMENT ASSOCIATION. Exhibition entitled "Timber Through the Ages." At Charing Cross Station, W.C. Until March 21.

INSTITUTION OF ELECTRICAL ENGINEERS, Savoy Place, Victoria Embankment, W.C.2. "The High-Pressure Mercury-Vapour Lamp in Public Lighting." By G. H. Wilson, E. L. Darnett and J. M. Waldram. 6 p.m.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS. At the London School of Hygiene and Tropical Medicine, Gower Street, W.C.1. "The Kata Thermometer and Its Uses." By T. C. Angus. 7 p.m.

Friday, March 6

INSTITUTION OF STRUCTURAL ENGINEERS, Western Counties Branch. At the Merchant Venturers' Technical College, Bristol. "Some Bridge Foundation Problems." By Leslie Turner. 7.15 p.m.

INSTITUTION OF SANITARY ENGINEERS. At Caxton Hall, Caxton Street, S.W.1. "Specifications: the Engineer's Point of View." By E. C. Hiffe. 6.30 p.m.

INSTITUTION OF HEATING AND VENTILATING ENGINEERS, Liverpool and District Branch. At 312 India Building, Water Street, Liverpool. "Practical Pipe Fitting." By H. Ashford. 7 p.m.

Saturday, March 7

INCORPORATED CLERKS OF WORKS' ASSOCIATION. Annual Dinner. At the Café Royal, W.1. 6.30 p.m.

Monday, March 9

R.I.B.A., 66 Portland Place, W.1. General meeting. "Some Recent Bridges." By H. Chilton Bradshaw. 8 p.m.

Tuesday, March 10

R.I.B.A., 66 Portland Place, W.1. Informal Talk on the Exhibition of "Everyday Things." "Design of Everyday Things." By Sir Eric Maclagan. 6 p.m.

ROYAL SANITARY INSTITUTE. 90 Buckingham Palace Road, S.W.1. Discussion on "The Housing Problem: How Planned Distribution may prevent Crowding." To be opened by Sir Raymond Unwin. 5.30 p.m.

Wednesday, March 11

ROYAL SOCIETY OF ARTS, John Street, Adelphi, W.C.2. "The Acoustics of Halls." By G. Kaye. 8 p.m.

BRITISH RED CROSS SOCIETY AND ORDER OF ST. JOHN HOSPITAL LIBRARY. At the Foyle Art Gallery, Charing Cross Road, W.C.2. Debate: "You should be told how to live," E. Maxwell Fry; "You should live as you like," R. A. Duncan. 5.30 p.m.

R.I.B.A., 66 Portland Place, W.1. Informal General Meeting: "The Place of the Architect in the Community." Speakers: Charles Marriott, Verner O. Rees, and R. L. Davies. 6.15 p.m.

country running from the north-east of the county to Buckinghamshire.

TIMBER DEVELOPMENT
ASSOCIATION

On February 26 Sir Frederick Marquis opened, at Charing Cross Station, W.C., an exhibition entitled "Timber Through the

Ages," photographs of which are reproduced on page 361 of this issue. Sir Frederick said: "The Exhibition is designed in order to give you some impression of the uses of timber throughout the ages. Its object is to show the services that timber has rendered not only as a domestic article, but to all the different forms of civilization. The Exhibition in its setting is interesting, because it has been designed by one of the most celebrated of our English artists, Mr. Paul Nash, who is himself not only a great painter, but a man who has brought his quite exquisite artistic talent to bear on the common things of life.

"One of the things which strikes me most about the use of timber is that it is one of the things which is not dated. It does not get old-fashioned. Those of us who try to collect some of the furniture of the past constantly find ourselves buying it not for the beauty of the design, but for the beauty of the wood. And of this I am personally satisfied, that the modern designers are using wood in such a manner that future generations will be buying the artistic craftsmen's products of this generation."

I.A.A.S.

On Saturday last Sir Edwin Lutyens, R.A., was re-elected president of the Incorporated Association of Architects and Surveyors. Mr. Gilbert Bayes, vice-president of the Royal Society of British Sculptors, was elected a vice-president.

SHOP FRONTS

Mr. G. Noel Hill, speaking at a meeting of the Arundel Society at the College of Technology, Manchester, last week, made a plea for co-operation among architects and shopfitters in order that the appearance of our streets might be improved.

There was no dignity in the façades of most streets, he said, because there was no harmonious transition from one building to another, no sense of mutual deference, no uniformity of character, materials, or levels. A series of unrelated façades, even though they might be good individually, was aesthetically chaotic. Architects might achieve a little by co-operation, but individual taste was a bar to complete harmonious transition, as also was the difference in heights caused by differing needs. It was particularly important that there should be uniformity in the levels of shop fronts. Most shopping streets presented a ragged line of shop-front fascias, which contributed greatly to the general untidiness of street façades, and here there was opportunity for co-operation.

HOUSING SCHEME, RENFREWSHIRE

"A magnificent effort . . . to secure greatly improved amenities with first-class architecture in our housing schemes" is the description applied by Sir Godfrey Collins, Secretary of State for Scotland, to proposals for a new housing development submitted by the Town Council of Johnstone, Renfrewshire. The plans, which have been approved by the Department of Health for Scotland, were prepared by Mr. T. S. Tait, F.R.I.B.A.

A site of about 63 acres, with provision for a future extension of over 17 acres, has been obtained at New Howwood.

The following official description of the scheme has just been issued:—

"The houses will consist of flats, cottages

and tenements, providing in all, in the first development, for 892 flats and, in the future extension, for another 274 flats. The whole estate, when completed, will house an average of 4,000 people.

"A community centre will be placed in the middle of the site between the cottages and tenements. It will consist of club houses for boys and girls, social club rooms and library for children people, dental and maternity clinics, post offices, administration offices and a chemist's shop. A children's and infants' playground is also provided for and there is space for a school and a church.

"The estate will be planted with trees and shrubs, and the roads laid out so as to prevent through motor traffic and to keep them safe for children and pedestrians.

"All unit parts of the houses, so far as possible, will be standardized in order to cheapen the cost. The flat cottages will be two floors, and the tenement blocks three floors high. All living-rooms will have east, west or southern aspects; in the tenements a small balcony will be provided to all living-rooms above the ground floor level. The tenements will have pram sheds and garbage chutes.

"The exterior walls of the houses will be finished in white Portland cement and coloured to give variety and to emphasize the design. Colour will be used also for the entrance doors and window boxes."

HACKNEY MARSHES

A meeting of the Garden Cities and Town Planning Association was held last week at the Housing Centre, London, to discuss the proposed appropriation of 30 acres of Hackney Marsh for building purposes by the London County Council.

Sir Theodore Chambers said that the Hackney Marsh controversy was really of the greatest value in that it acted as a pointer to the lost opportunities of the last 30 years, and he wondered if those who took part in it really perceived the significance of the case. The London County Council was face to face with really terrible conditions in that area, and no one who knew the facts could fail to sympathize with them as the statutory housing authority. The minds of the opponents of the scheme were set rather on a minor issue of the loss of 30 acres of open space, because they thought that it might be the "thin end of the wedge." It seemed, he said, to be left to the Garden Cities and Town Planning Association to represent the wider aspect and to propose the only sound and permanent solution of the problem, which was a whole-hearted and determined effort at decentralization. The policy should be to lift people from the overcrowded parts into satellite towns or areas planned on open lines in the outer suburbs.

ROME SCHOLARSHIP

Sixteen candidates have been chosen by the Rome Faculty of Architecture for admission to the Final Competition for this year's Rome Scholarship. Seven schools are represented by these finalists. Four candidates from the Liverpool School of Architecture entered and three have been selected. Of the remaining twelve, three came from the Bartlett School, University of London, three from the University of Manchester School, three from the Leeds School, two from the Welsh School of Architecture, Cardiff, one from the Edin-

burgh School and one from the Royal Academy School, London.

The successful Liverpool finalists are T. P. Bolton, E. A. Green and P. E. D. Hirst.

All three of the Liverpool Finalists are graduates. This is a consequence of a change in the School's policy in regard to the Rome Scholarship. Up to last session degree and diploma students in their fifth year were encouraged to enter for the Scholarship and, if they succeeded in being admitted to the Final Competition, were permitted to offer the subject set for that competition in place of the large thesis subject required under the regulations governing their courses. As the work in connection with the theses has for educational reasons been considerably increased, the Rome programme has ceased to be comparable in weight and it has therefore been decided that now and in future Rome schemes cannot be accepted as equivalent to theses. The result of such a decision is in effect automatically to defer a student's candidature for the Rome Scholarship until he or she has graduated. In future, in so far as the Liverpool School may be represented in the Final Competition for the Rome Scholarship it will be by graduates.

The Liverpool School is the first formally to adopt this policy but it is evident that there is a growing tendency for the Rome Scholarship to be regarded as a post-graduate affair. Of the thirty-nine candidates who entered this year nineteen were graduates. Whilst the tendency may be welcomed primarily because it is clearly an advantage that school training should not be deflected from its systematic course by a major interruption in the final year, it should incidentally be all to the good that competitors for the Rome Scholarship should be sufficiently mature to derive the greatest benefits from the opportunities it offers.

HOUSING SOCIETIES

A leaflet describing the formation of a housing society and the financial assistance available under the various Housing Acts has just been published by the newly formed National Federation of Housing Societies. Copies are obtainable from the Federation, 13, Suffolk Street, London, S.W.1. Price 6d.

SOUTH WALES INSTITUTE OF ARCHITECTS

At the annual general meeting of the Central Branch of the South Wales Institute of Architects, held at Cardiff on February 25, the following were elected officers for the coming year: Chairman: Mr. C. F. Jones, A.R.I.B.A. Hon. Treasurer: Mr. H. Teather, F.R.I.B.A. Hon. Secretary: Mr. W. S. Purchon, M.A., F.R.I.B.A. Executive Committee: Messrs. Ivor Jones, A.R.I.B.A., T. Alwyn Lloyd, F.R.I.B.A., M.T.P.I., Percy Thomas, P.R.I.B.A., J. Williamson, A.R.I.B.A., J. A. Hallam, M.T.P.I. Representatives of Associates and Students: Messrs. N. P. Thomas and L. W. D. Wall.

Members of Council. The following were elected as the representatives of the Branch on the Council of the South Wales Institute of Architects: Messrs. C. F. Jones, A.R.I.B.A., T. A. Lloyd, F.R.I.B.A., M.T.P.I., Percy Thomas, P.R.I.B.A., J. Williamson, A.R.I.B.A., J. A. Hallam, M.T.P.I., A. J. Hayes, J. H. Davies, L.R.I.B.A., Gordon Griffiths, L.R.I.B.A., A.M.T.P.I., Edgar Smith, L.R.I.B.A., C. J. Ward, F.S.I., and A. C. Light, B.A., A.R.I.B.A. Representatives of Associ-

ates and Students: Messrs. N. P. Thomas and L. W. D. Wall.

ANNOUNCEMENT

Mr. J. L. Cohen, A.R.I.B.A., has removed his offices to No. 100 Shoot-up-Hill, N.W.2. Telephone No.: Gladstone 5105.

APPOINTMENTS

Mr. Ralph H. Clay, A.R.I.B.A., has been appointed assistant architect to the Somerset County Council.

Mr. J. B. Johnston has been appointed Technical Manager of The Building Centre. Mr. Johnston, who was chief assistant to Mr. Winsor, is a quantity surveyor, and was at one time attached to the Intelligence Staff of the Building Research Station.

A NEW COMPETITION

The Bedfordshire County Council invites architects to submit in competition designs for a new secondary school for boys at Luton. The assessor is Professor W. G. Newton, F.R.I.B.A.; and the following premiums are offered: £200, £100, and £50. Conditions are obtainable from Mr. J. B. Graham, Clerk of the Bedfordshire County Council, Shire Hall, Bedford (Deposit £1 is.). The last day for questions is Wednesday, March 25, and designs must be submitted by Wednesday, May 27.

R. I. B. A.



"EVERYDAY THINGS" EXHIBITION

We are informed by the R.I.B.A. that so great has been the public interest aroused by the Exhibition of "Everyday Things," at the Institute, that it has been decided to extend it for another week, until March 21. Since the Exhibition was opened by Lord Bessborough on February 19 the daily attendance has never been less than one thousand.

It is also stated that the Board of Education has asked that facilities should be given for parties of senior school children—particularly from trade schools—to visit the Exhibition and it has circulated the education authorities in and around London. Of these authorities the London County Council, for example, has sent notices of the arrangement to seven hundred schools under its control.

THE NEXT MEETING

A lecture entitled "Some Recent Bridges" will be given by Mr. H. Chalton Bradshaw, C.B.E., F.R.I.B.A., at a general meeting of the R.I.B.A. on Monday next, March 9, at 8 p.m.

COUNCIL MEETING

Following are some extracts from the minutes of a recent meeting of the R.I.B.A.: *Election of Royal Gold Medallist, 1936:* Mr. Charles Henry Holden (Vice-President) was formally elected Royal Gold Medallist 1936. *Examinations for Building Surveyors:* Mr. W. H. Ansell [F.] and Mr. A. B. Knapp-Fisher [F.] were appointed to represent the R.I.B.A. on a Joint Committee composed of representatives of the R.I.B.A., the

Institution of Municipal and County Engineers, the Institution of Structural Engineers, with advisers from the Ministry of Health, to consider the possibility of arranging a national scheme for the examination of building surveyors under local authorities.

British Standards Institution Sub-Committee B/24/2, Terms and Definitions of Hardwoods: Mr. G. N. Kent [L.] was appointed to represent the R.I.B.A. on the British Standards Institution Sub-Committee B/24/2, set up to prepare a British Standard Specification for the terms and definitions applicable to Hardwoods.

R.I.B.A. Architectural Medals: *West Yorkshire Society of Architects:* Mr. F. J. Horth [F.] was appointed as the R.I.B.A. representative on the Jury for the award of the medal in the area of the West Yorkshire Society of Architects. *South Wales Institute of Architects:* Mr. H. Stratton Davis [F.] was appointed as the R.I.B.A. representative on the Jury for the award of the medal in the area of the South Wales Institute of Architects.

The Architects' Registration Council: The following members were appointed to represent the R.I.B.A. on the Architects' Registration Council of the United Kingdom for the year ending March, 1937: Messrs. W. H. Ansell [F.]; Henry V. Ashley [F.]; T. A. Darcy Braddell [F.]; John Dower [A.]; Henry M. Fletcher [F.]; C. Lovett Gill [F.]; A. G. Henderson [F.]; A. B. Knapp-Fisher [F.]; Hubert Lidbetter [F.]; A. H. Moberly [F.]; J. Alan Slater [F.]; Sydney Tatchell [F.]; E. Berry Webber [A.]; and Percival C. Blow [A.].

The Architects' Registration Council: Admission Committee: The following members were appointed to represent the R.I.B.A. on the Admission Committee of the Architects' Registration Council for the year ending March, 1937: Messrs. Kenneth M. B. Cross [F.]; J. Douglas Scott [A.]; Thos. E. Scott [F.]; and Geoffrey C. Wilson [F.].

The Forty-seventh Health Congress and Exhibition of the Royal Sanitary Institute, Southport: Mr. W. E. Vernon Crompton [F.] was appointed as the R.I.B.A. delegate to the Forty-seventh Health Congress and Exhibition of the Royal Sanitary Institute to be held at Southport from July 6 to 11.

The Annual Congress of the Royal Institute of Public Health: Mr. A. F. Balfour Paul [F.], President of the Edinburgh Architectural Association, was appointed as the R.I.B.A. delegate to the next Annual Congress of the Royal Institute of Public Health to be held at Edinburgh from May 26 to 30.

IMPROVEMENT SCHEME?

ARTERIAL ROAD THROUGH HAMMERSMITH AND CHISWICK

[By M. R. Jenkinson]

IN dealing with a question as complicated as the present discussion regarding the improvements in Hammersmith and Chiswick, it is perhaps well to know that there are three parties connected with the case. The London County Council constitutes the first party; the Ministry of Transport, the second; and the Hammersmith and Chiswick Borough Councils, the third. The third party is supported by the Hammersmith and Chiswick Improvement Society, but for whose foresight and energy the ball of opposition might never have started rolling.

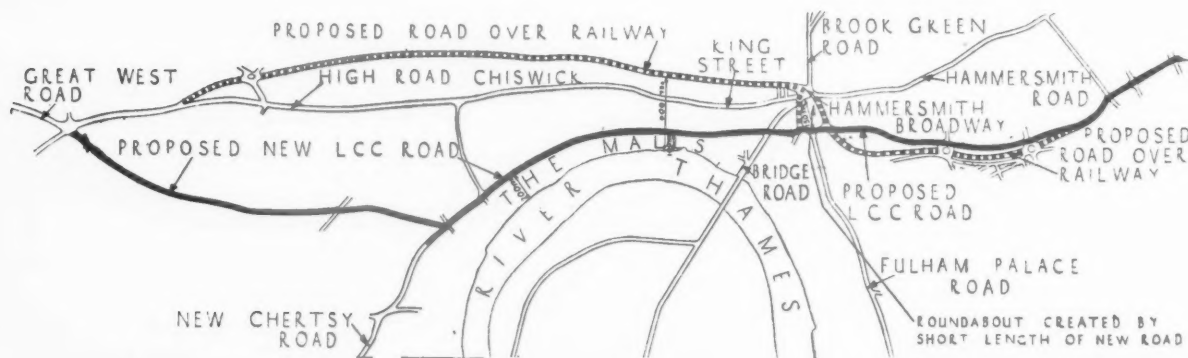
In advancing its scheme the London County Council firmly believes that necessary improvements for that district's road transport are being carried out. The scheme has two aims: namely, to provide an adequate outlet for traffic to the Great West Road, and also to segregate a portion of traffic in order that it may leave London via the Chertsey By-pass. The main aim is to skirt Hammersmith Broadway and King Street because of the congestion caused there by five intersecting roads. The one point the London County Council has entirely overlooked is the fact that these two congested areas will be in just the same condition five years hence, will still need a maximum expenditure in repairs—in fact, will be just as much of a hindrance as they are at the present time.

Now for the second party, the Ministry of Transport. In a very impersonal way, the Minister has approved the scheme and given permission

for its execution to the London County Council. He has not suggested that it is good or bad; he has merely bowed to the London County Council and stepped out of its way. The Ministry of Transport disowns all responsibility, as its officials make clear.

The opposition has come from the third party, Hammersmith and Chiswick, the two boroughs most affected. Their plea is certainly one that cannot be utterly disregarded. "We want time to consider the scheme carefully; to determine whether or not the best possible plan has been proposed; and to obtain advice concerning an alternative scheme." These are reasonable requests when one considers the manner in which the scheme was pushed up to Parliament without any agreement on the part of the councils. Everyone agrees that a solution must be found to the existing congestion, but everyone does not agree that a new main road driven through the boroughs' residential areas is a proper solution. Various alternatives have been suggested which appear to be sensible ones, and both Chiswick and Hammersmith ask for time so that these may be scrutinised. A well-known architect has summed up the case against the London County Council's proposal in the following points:—

1. Ultimate dislocation of the trading community.
 2. Loss of nine acres of land to the borough, the disturbance of approximately a further 120 acres, and the loss of rateable value.
 3. Destruction of the historical character and amenities of one of the most interesting parts of the riverside.
- From these a disinterested member of the public might be driven to conclude that there are arguments on both sides, and that in the circumstances, the London County Council, having gone into the whole matter thoroughly, may be thought to know what is in the best interests of London. He would hardly hold the same view, however, if he were told that in view



The above map indicates the proposed London County Council road (in heavy black line) showing how it cuts through the residential district of Hammersmith and Chiswick. The dotted line shows some alternate proposals which are in progress at the moment—namely, a road extending along the railway.

of the importance and expense of the scheme, Parliament had placed the whole matter in the hands of a Royal Commission, and that the Royal Commission had turned the scheme down. But that is exactly what a Royal Commission, sitting on the question, did ten years ago when the same Bill came before Parliament. What the public ought to know is that, having gone into the case with utmost care and consideration, the Royal Commission decided that the plan did not attain its main object.

An interesting situation. A Royal Commission has been held and has turned down the scheme; its findings have been quietly put away and allowed to be forgotten. When the public is supposed to have "forgotten" the verdict, the London County Council comes forward with the very same scheme. In fact, it is not now a dispute between the London County Council and the local councils, but rather between public policy, as directed by a Parliamentary Royal Commission, and officialdom within the London County Council.

Under the circumstances the public can surely hold no other opinion than that the advantages of the proposed road must at least be open to question. Architects and town planners can hold a rather stronger view. To cut a new by-pass plumb through a residential area when other alternatives are available, is an elementary town-planning howler; to site the road so that it does irreparable damage to the amenities of Chiswick and Hammersmith Malls which are two of the few remaining examples in London of enlightened development, and which, on account of their history and urbane charm, have actually been scheduled for preservation by their respective borough councils, is rather worse than that.

The present London County Council has as its main object the replanning of London. A worthy object, indeed. The removal of slums and the erection of houses adequately planned to suit the smallest wage-earner, is a great cause. Let the Council, by all means, proceed with this noble task, which is a task of improvement. But it is necessary to distinguish between improvement and its opposite, and the Hammersmith and Chiswick Scheme is not improvement. Public opinion is not in favour of it, and the London County Council most certainly depends upon the public for support. The present council will ask the electorate of London to return it to power next year. It should not embark on schemes which the electors do not and cannot endorse.

EXHIBITION

An exhibition of water-colours by Mr. Leonard R. Squirrell, A.R.W.S., is now being held at the Walker Galleries, 118 New Bond Street, London, W.1.

LETTERS

FROM

READERS

Appreciating the Architect

SIR,—May I, through your columns, draw attention to the abysmal ignorance displayed by the layman regarding the duties and uses of an architect?

As a member (howbeit, in a very minor capacity) of the profession I have frequently been struck by the fact that an unbelievably large percentage of our (apparently) well-educated and (doubtless) successful business and commercial men still labour under the delusion that an architect is a sort of glorified builder, and that he will, upon being approached, give a price for the erecting of a proposed building, this price being (naturally) vastly in excess of an estimate obtained from a contractor. He will also, upon the slightest provocation, erect a building much larger and much more costly than that originally imagined and intended by the client.

Is it not possible that these misguided souls could be enlightened in some way and that the architect may have his profession known and his services, if not valued, at least tolerated?

When ill one consults a doctor, to make a will or convey property a solicitor is consulted, even an accountant can be utilized in the (vain) endeavour to avoid payment of income tax; but to build a house or erect an ice cream factory the architect, as usual, is left out, most definitely, in the cold.

There is, of course, the unkind and possibly biased school of thought which holds that a man is successful only so long as he is not associated with an architect; but there again the same would apply to an undertaker.

If only the term "architect" could be more generally known and appreciated this difficulty would, I am convinced, be greatly minimized and the lot of the architect would become indeed a happy one.

L. O. BICKERS
Yorkshire

Architectural Education

SIR,—At the informal general meeting at the R.I.B.A. last December, arranged by the Junior Members' Committee, Professor Gropius opened a discussion on architectural education. There were so many suggestions and queries that a sub-committee was formed to consider the subject, which is naturally of great interest to junior members, who include all the students and many of the staff of the schools. This sub-committee has sorted out the various points raised and is collecting information

L. O. BICKERS

M. J. BLANCO-WHITE

"X"

ERNEST VAN SOMEREN

NINE SIGNATORIES

G. B. J. ATHOE

(Secretary, Incorporated Association of Architects and Surveyors)

I. About existing systems of education, and
II. About suggested systems and alterations.

The facts being collected under I are mainly:

1. The numbers of students being educated under various systems.

2. The time spent on other work, i.e., in an architect's office, and the total hours of work.

3. The age and previous education of students; facilities for further general education and for co-operation with other specialists — engineers, sculptors, etc.

4. The time spent on studio work, practical work, lectures, etc.; the type of subjects set and whether these and history as taught are related to sociological needs and technical progress; the amount of construction taught; the system of criticisms, etc.; the books and periodicals available.

5. The organization of the school; co-operation between students in committee, group working, etc., and between students and staff.

It is also intended to receive evidence from responsible people about the theories of education on which these and other systems are based, and the questions of the relation of architectural education to earlier non-specialized education and to industry and design for mass production.

It is proposed to collect the suggestions of as many junior members as possible during the investigation, and finally to write a report.

It is hoped that this announcement of the questions raised by the discussion at the informal general meeting of the R.I.B.A. will help towards the discussion of them at the general meeting in March.

M. J. BLANCO-WHITE
(Convener, Students' Sub-Committee of the Junior Members' Committee of the R.I.B.A.).

London

SIR,—For the last few weeks there has been an intensive correspondence in these columns bemoaning the state of architectural education.

Its intention is no doubt very genuine, but it seems to have degenerated into little but a repetition of long-winded destructive criticism, more in the nature of a private correspondence between the students, who prefer to see their opinions in print, than to discuss their ideas amongst themselves and

arrive at some conclusions and proposals before voicing them.

I am writing in the hope that this letter will make them see their youthful vanity, but I hope it will not damp their enthusiasm.

This is a letter to end these letters, and I only hope it will be more successful than wars have been to end war!

But that rests with you.

"X"
London

Noise

SIR,—I am not a flat-dweller, and one of the reasons why I am afraid to become one is that one is liable to be unnecessarily conscious of one's neighbours' activities.

Besides the noises of music-lovers and amateur carpenters, which might be controlled in any block of flats where the inhabitants develop a sensitive social conscience, flat life is frequently disturbed by the noise of flushing water-closets.

It appears to me unnecessary that plumbing should be such that a flat-dweller is annoyed by the noise of his neighbours' w.c.s. as well as his own, and I would like to suggest that some impartial body should conduct an investigation on the relative noisiness of various w.c.s.

The results of their investigation would best be presented in the form of sound-records (gramophone or film) of the flushing of various types and makes of w.c., each recorded in a standard bathroom of the usual resonant pattern. These might be made available to architects and others in a small listening-room in the bathroom department of the Building Centre. They should, of course, be listened to from outside the listening-room as well as from inside it.

ERNEST VAN SOMEREN
London

Housing Exhibition

SIR,—We wish to draw the attention of your readers to an exhibition of housing to be held during March, 1936, under the auspices of the Architects' and Technicians' Organization.

The A.T.O. consists of architects, engineers, surveyors and members of other professions in allied spheres who are anxious to analyse the social implications of their work and to awaken in other members of their profession an understanding of their social responsibilities.

The exhibition is concerned primarily with the housing of the working classes and attempts to portray the developments during the past few years and to illustrate the present situation. The effects of the present housing conditions, their causes and the solution to the problem form separate sections of the exhibition. Among other interest-

ing subjects illustrated are the Leeds differential renting scheme, the Vienna housing scheme, a careful criticism of the 1935 Housing Act and the possibility of private enterprise and local authorities respectively catering for working-class housing needs.

The members of the A.T.O. are carrying out all the work required voluntarily and in their free time. The organization is very much in need of funds to provide the necessary materials and premises and to ensure that the exhibition reaches as wide a public as possible. We venture to appeal for the support of all those interested in the provision of proper housing accommodation for the working classes. £100 is the minimum amount required. Contributions should be sent to the Exhibition Treasurer of the A.T.O., H. B. Robinson, 32 Bedford Row, W.C.2, from whom a more detailed synopsis of the exhibition may be obtained on application.

C. R. ASHBEE
S. CHERMAYEFF
ELIZABETH DENBY
E. MAXWELL FRY
SOMERVILLE HASTINGS
H. J. LASKI
ELEANOR RATHBONE
CLOUGH WILLIAMS-ELLIS
BARBARA WOOTTEN

Registration

SIR,—The Architects' (Registration) Act has now been in force for four years. During its passage through Parliament it was stated that the principle of registration had been urged for more than half a century. It is interesting to note, however, that *the principle is at least as old as Christianity, possibly centuries older.*

Marcus Vitruvius Pollio, known to fame as Vitruvius, who was military engineer under Julius Caesar in his African War (46 B.C.) and inspector of military machines under Augustus, writes in his *De Architectura*—the "Ten Books of Architecture" dedicated to Augustus—which was completed about 16–13 B.C. :—

"In the famous and important City of Ephesus there is said to be an ancestral law, the terms of which are severe, but its injustice is not inequitable. When the architect accepts the job of an important public work, he has to promise what the cost of it will be. His estimate is handed to the magistrate, and his property is pledged as security until the work is done. When it is finished, if the outlay agrees with his statement, he is complimented with decrees and marks of honour. If no more than a fourth has to be added to his estimate, it is furnished by the Treasury and no penalty is inflicted. But, when more than a fourth has to

be spent in addition to the work, the money required to finish is taken from his property.

"Would to God that this were also a rule of the Roman people, not merely for public but also for private buildings. For the ignorant would no longer run riot with impunity, but men who are well qualified by an exact scientific training would unquestionably adopt the profession of architecture. Gentlemen would not be led into limitless and prodigal expenditure, even to ejections from their estates, and *the architects themselves could be forced by fear of the penalty to be more careful in calculating and stating the limit of expense*, so that gentlemen would procure their buildings for that which they had expected or by adding only a little more. It is true that men who can afford to devote four hundred thousand to a work may hold on, if they have to add another hundred thousand, from the pleasure which the hope of finishing it gives them, but, if they are loaded with a 50 per cent. increase, or with an even greater expense, they lose hope, sacrifice what they have already spent and are compelled to leave off broken in fortune and spirit.

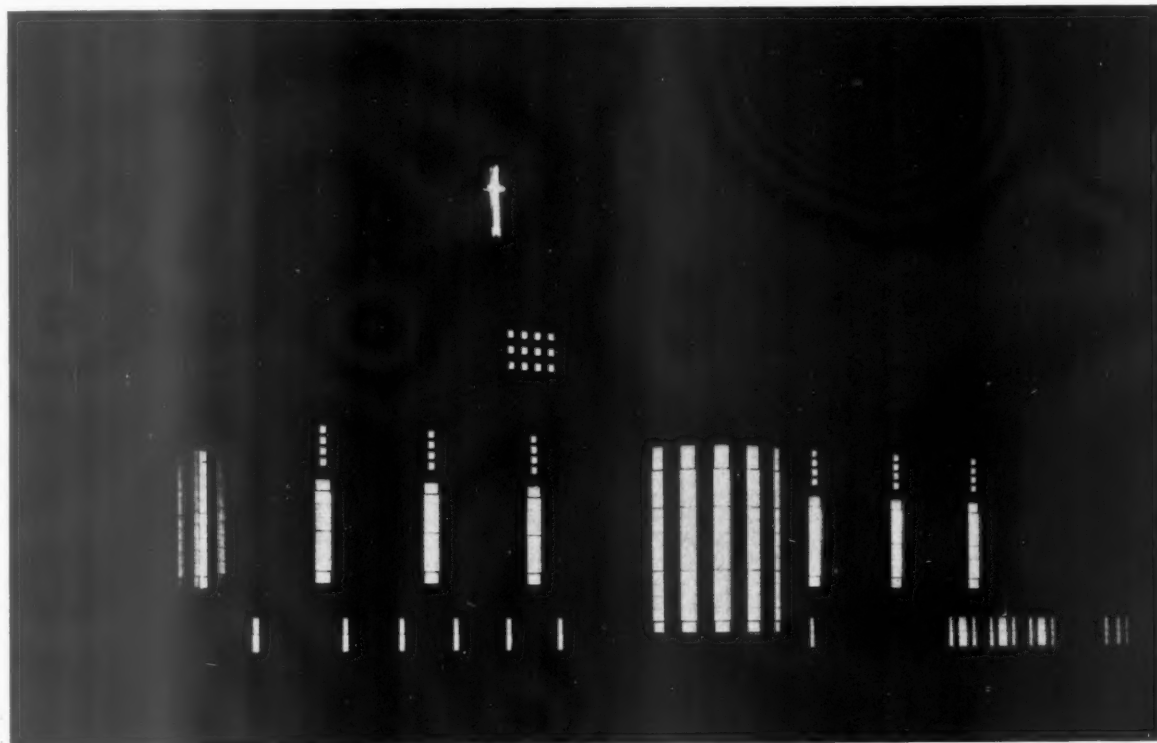
"This fault appears not only in the matter of buildings but also in the shows given by magistrates, whether of gladiators in the forum or of plays on the stage. Here neither delay nor postponement is permissible, but the necessities of the case require that everything should be ready at a fixed time—the seats of the audience, the awning drawn over them, and whatever, in accordance with the customs of the stage, is provided by machinery to please the eyes of the people. These matters require careful thought and planning by a well-trained intellect; for none of them can be accomplished without machinery, and without hard study skilfully applied in various ways.

"Therefore, since such are our traditions and established practices, it is obviously fitting that the plans should be worked out carefully, and with the greatest attention before the structures are begun. Consequently, as we have no law or customary practice to compel this, and as every year both prætors and ædiles have to provide machinery for the festival, I have thought it not out of place, Emperor, since I have treated of buildings in the earlier books, to set forth and teach in this, which forms the conclusion of my treatise, the principles which govern machines."

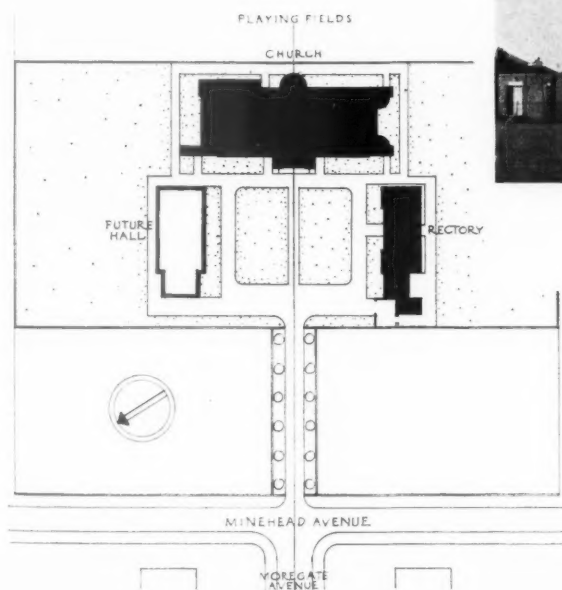
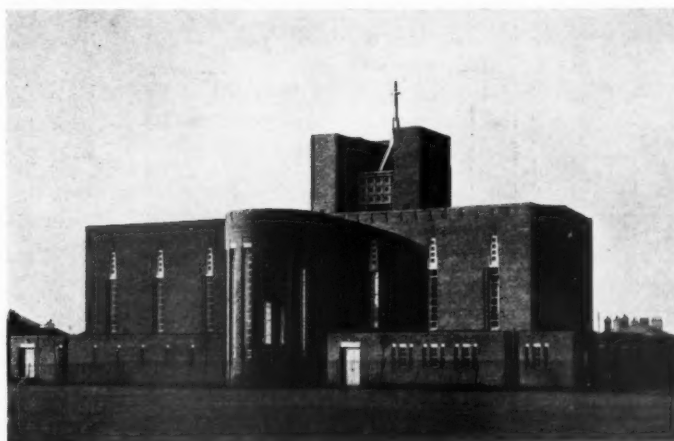
Anyone can call himself an architect—registered or not; but no one must call himself a registered architect who is not on the register. *Vitruvius's plan was an even more stringent method to prevent quacks from imposing on the public.*

G. B. J. ATHOE

CHURCH AT WITHINGTON, MANCHESTER



DESIGNED BY
BERNARD
A. MILLER

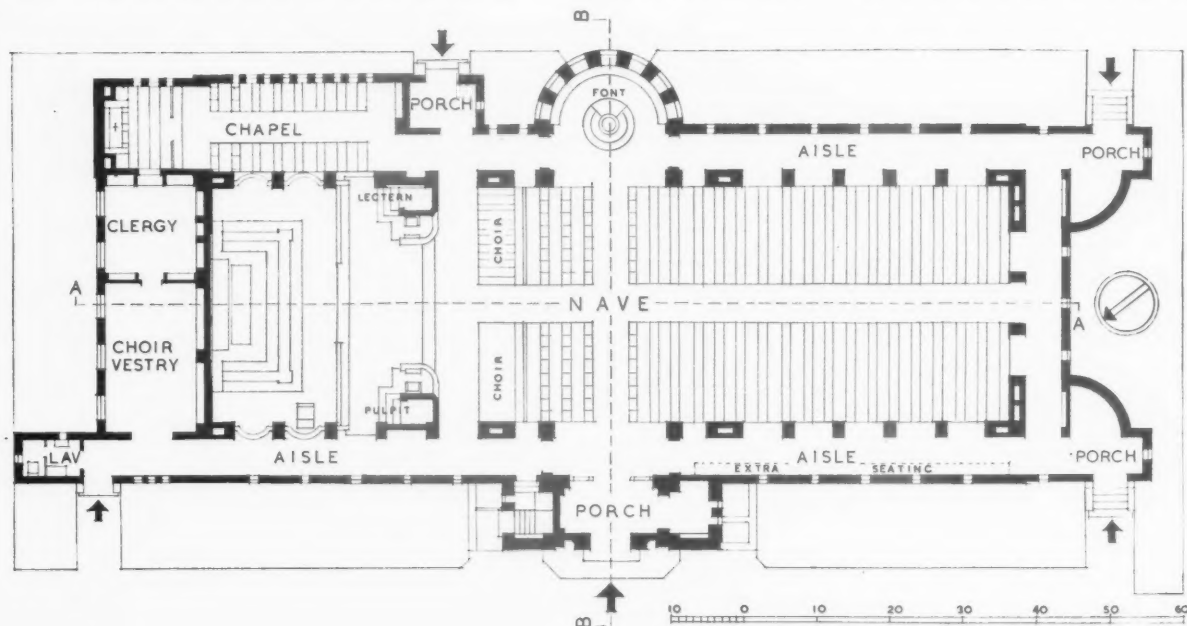


GENERAL PROBLEM.—To form religious and social centre consisting of church, parish hall, Sunday school, clubrooms and rectory. Church and rectory have been built. The church accommodates 500.

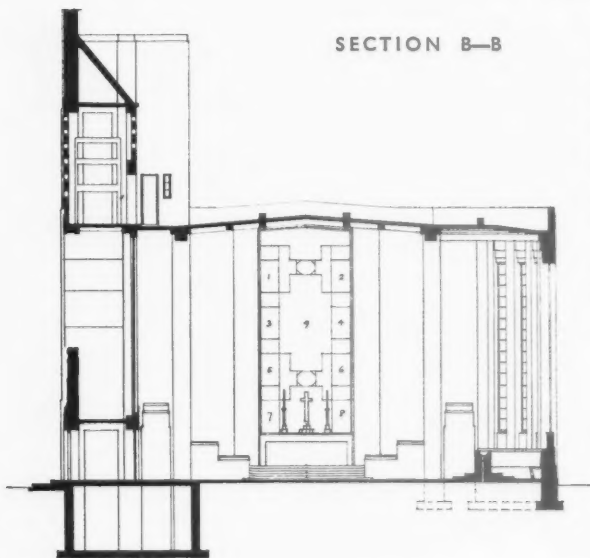
SITE.—The parish hall, rectory and church are planned on three sides of a quadrangle. The tower of the church terminates the axis of the minor road (Moorgate Avenue) which leads out of Princess Road, the main arterial road.

The illustrations show: top, view from the east, looking across the playing fields; bottom, the same elevation, taken from the south. On the left is a lay-out plan.

ST. CHRISTOPHER'S CHURCH. WITHINGTON,

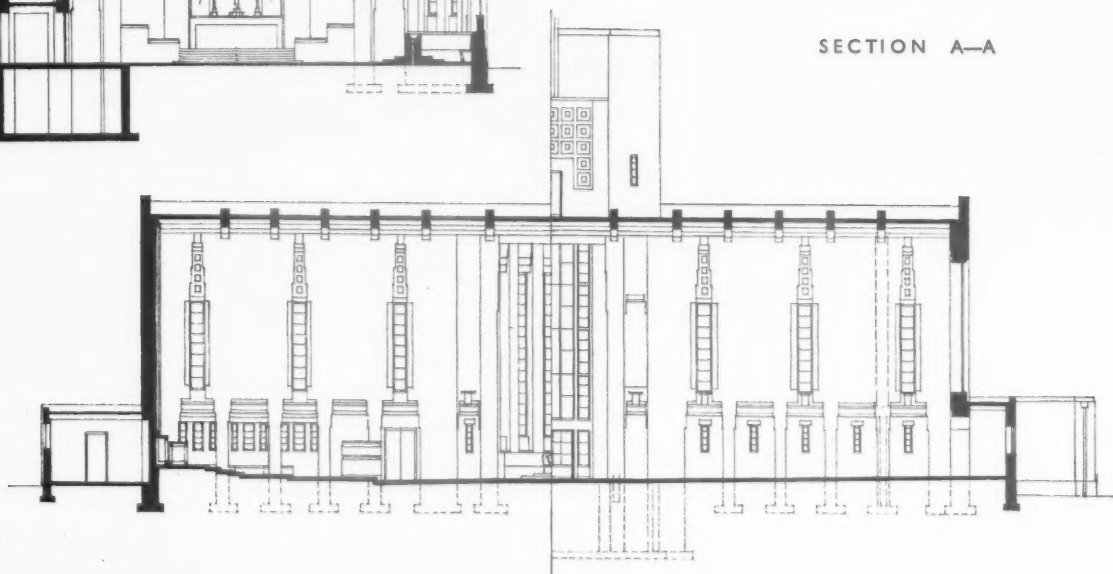


SECTION B-B



PLAN.—The nature of the site had some bearing upon the form of plan. The site is waterlogged, with water stationary at 9 ft. below surface. In consequence shallow spreading foundations and a plan form with uniformly distributed loads were adopted. The foundations beneath the tower were taken down to form a heating chamber. The planning for a robed choir of men and women is a new departure. The choir is brought into the nave into close relationship with the congregation seating. Broad open spaces are thus secured in the sanctuary and round the altar. The space from the first step to the altar rails is planned as a Confirmation platform.

SECTION A-A



MANCHESTER: BY BERNARD A. MILLER



CONSTRUCTION.—Reinforced concrete frame from foundations up to, and including, beams over aisle openings; above, brick pier and panel construction. The interior is faced throughout with 2 in. common bricks distempered ivory-cream. The roofs and ceilings are of reinforced concrete beam and slab construction; the main ceiling is insulated with wallboard, and the aisle, chapel and vestry ceilings with plaster board.

The photographs show: two views of the main entrance front; and the tower, as seen from the roof.

ST. CHRISTOPHER'S CHURCH, WITHINGTON,



Top, left, the altar and reredos; top, a candle standard at the altar; bottom, a general view of the nave.

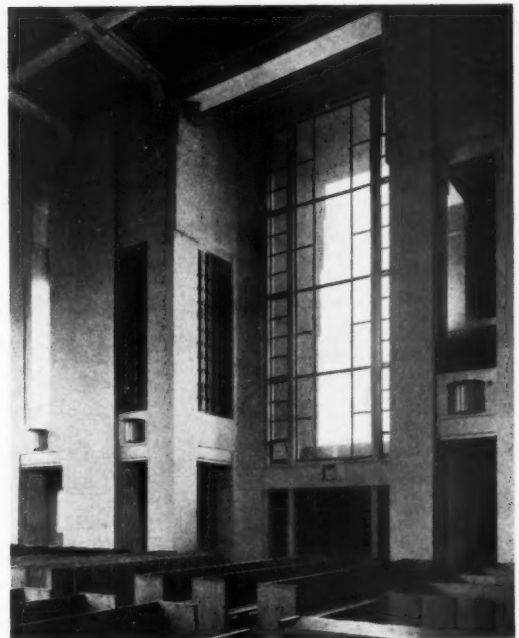
MANCHESTER: BY BERNARD A. MILLER

INTERNAL FINISHES.—Walls: ivory cream on 2 in. common brick. Main ceiling: blue, graded deep from the walls to light in centre. Beams, ivory cream decorative panels and symbols in blue, grey black and white. Aisles, chapel and vestries: borders of blue on field of soft primrose yellow. The floor of the nave is of concrete grano and precast concrete; with chevrons and bands in coloured concrete of black, white and green in nave aisles, baptistry and porches; riven-sawn Columbian pine wood blocks, stained and polished, below seating and to side chapel and vestries. **SANCTUARY.**—Step treads, cappings to dwarf walls and broad bands to central pattern in travertine; main floor, black vitreous glass mosaic with threads of white ceramic mosaic; central pattern, strips of travertine, golden travertine and black, white, yellow and green vitreous glass mosaic. Chapel floor: travertine with triangle patterns in golden travertine. **FURNITURE.**—Pews and stalls: laminated oak. Reredos: built up of canvas panels painted by Miss Mary Adshead, secured to a back frame and finished with flat and rounded mouldings in colour and gold leaf. Prevailing colours, slate blues and deep blues, browns, soft yellows and rich red with white and gold. Font: consists of two blocks of Ancaster stone carved by Alan L. Durst. The steps Ancaster stone. Organ: electrically controlled, two manual instrument, designed on the extension principle and screened behind decorative grilles.

The photographs show: right, baptistry and font; below, left, the font; right, the main entrance.



For list of general and sub-contractors see page 392.



CHURCH AT WITHINGTON, MANCHESTER

DESIGNED

BY

BERNARD

A. MILLER



The photographs show : above, left, the metal gates to the Lady Chapel ; above, right, the Lady Chapel sanctuary ; bottom, the Lady Chapel.

Local Administration

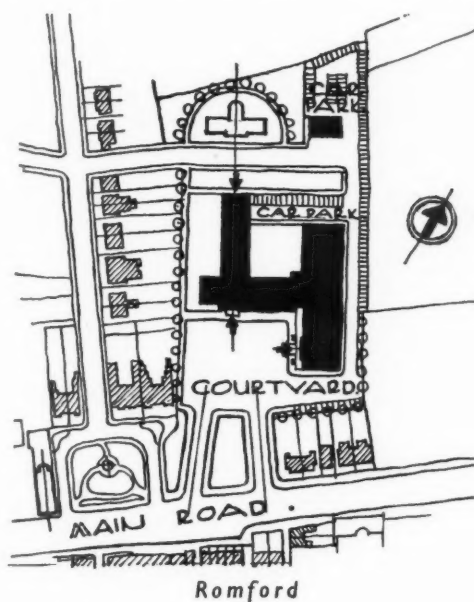
THE RECEPTION SUITE AND ASSEMBLY HALL

The Change in the "Town Hall"

MODERN economic conditions have changed the nature of the town hall. Town halls that were built twenty or thirty years ago usually had a "Mansion House" type of plan; certain rooms were reserved for the reception of guests and distinguished strangers, and there was a suite of rooms in which the mayor could entertain. Attached to this ceremonial block were the offices of the municipal departments. The assembly hall was one of the mayor's entertaining rooms and could not be hired privately. The law courts were rarely planned as part of the scheme.

Today the municipal offices have grown to be the largest unit of a civic centre and, with the assembly hall, seem to have entirely dominated the mayor's reception and private rooms, which have lost their former significance and, in the majority of cases, have dwindled down to one room.

This revision in the plan has come about



partly through lack of money and space, and partly because in post-war days the mayors and aldermen have never recovered the practice of entertaining on a lavish scale, so that the mayor's rooms have been placed to one side, the committee rooms have become the reception rooms; and, when it was found that the council chamber, if placed at the head of the plan on the first floor, allowed the borough treasurer's department to be planned beneath it, the whole arrangement of municipal offices and ceremonial rooms became interwoven.

To understand the relationship of the four

units of a civic centre—the mayor's reception room, municipal offices, assembly hall and law courts, the original functions of these departments must be considered.

The Divisions of a Civic Centre

A civic centre may be roughly divided into the entertaining and ceremonial sides, and the business side. The entertaining side includes the mayor's reception and entertaining rooms and assembly hall; and the business side contains the municipal offices, council chamber, and the law courts.

In the old schemes the ceremonial and reception rooms were designed to create an atmosphere of dignity and to impress any visitors to the town hall with the greatness of the city or town—the business side of the town hall being a thing to be kept in the background.

Liverpool Town Hall is a magnificent example of this traditionally graceful and easy arrangement, and is a good example of "Mansion House" plan. This town hall is about half a mile away from the municipal buildings and used to be a corn exchange, but was converted to its present use by Wood of Bath in the late eighteenth century. On the ground floor there is a large entrance hall, and on the right and left are the mayor's and mayoress's parlours. Attached to the mayoress's parlour is a luncheon room where small parties can be entertained, and attached to the mayor's parlour is a mayor's secretary's office and typists' room. There are cloak-rooms and toilets for visitors in the basement behind the main stair.

Distinguished visitors are received by the mayor in the entrance hall and usually go into the mayor's parlour for a short conversation; guests who have been asked to the reception take off their coats and wait in the entrance hall for the visitors and the mayor to walk up the grand staircases to the reception rooms, after which the guests follow and are received. The reception rooms stretch the whole length of the building, and are connected to the banqueting hall by a small ballroom on one side and a luncheon room on the other. This is an excellent arrangement for the easy circulation of large crowds of people. The Lord Mayor of Liverpool gives four receptions annually, each for 1,500 guests, and he frequently dines 250 people.

The Modern Assembly Hall

Such hospitality is not the general rule with civic authorities, rather the reverse holding good. But if this procedure were kept in mind when planning even small town halls, the entertaining arrangements would be made much easier to control than they are in the majority of cases.

The modern assembly hall has no counterpart

in the pre-war town halls. In those days, when an assembly hall was provided, it was used exclusively by the civic authorities and was rarely, if ever, hired out to private persons. Liverpool and Birkenhead town halls, which were built in the Regency and Edwardian periods, have large rooms attached to the ceremonial suite. The Liverpool room is simply a banqueting room or large ballroom, and Birkenhead has a small hall with a stage and balcony. Neither of these rooms could be easily used for private purposes.

The assembly hall, as we know it, is usually the only big hall in the town which is not used for a specific purpose, and is constructed so that a variety of entertainment can be held in it. It has therefore become essential to plan the assembly hall so that it can be used independently by private people, or by the municipal authorities, for dances, meetings, lectures, theatrical performances and concerts, and so to place it that when it is being used for private functions the routine and administration of the municipal offices and the mayor's rooms is not disturbed in any way.

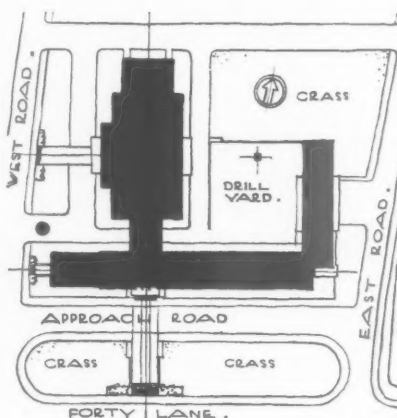
A Lord Mayor's Duties

To understand the relationship between the mayor's reception and ceremonial rooms and the assembly hall and the municipal offices, it is necessary to consider the actual duties of a lord mayor.

Although he is chairman of the council his days are not spent in dealing with municipal politics and administration, but more in entertaining and being entertained, and he has a great deal to learn about the kind of procedure and etiquette which is expected of him. In a big town or city his position may be regarded as that of a cabinet minister joining a new ministry and being advised on matters of procedure by the civil servants and permanent officials of his department. The permanent aide-de-camp of the mayor is not the town clerk, but the mayor's secretary, who is a permanent official and the mayor's guide and friend. The town clerk is, of course, consulted by the mayor on administrative matters; but these are few and far between compared with the amount of help which the secretary gives to the mayor. All the arranging and managing of ceremonial work which takes up the majority of the mayor's time is done by this secretary. In fact, in large cities the mayor may be regarded as having a small department to himself.

Usually it is correct to say that the mayor only enters the municipal offices for council meetings or possibly to consult the town clerk about council meetings; and as the council only meets once a month it can be taken that there is very little real necessity for the mayor's rooms to be connected either with the council chamber, committee rooms or the municipal offices. It is far more important for him to be connected very closely to the assembly hall; from a mayor's secretary's point of view the main thing is to keep reception arrangements as simple as

possible. In a town where the mayor must do a great deal of entertaining, it is very difficult to get such arrangements when the reception rooms and committee rooms are one and the same thing, and where the grand staircase proceeds straight to the member's lobby outside the council chamber. Nor is it easy when guests, having been received by the mayor, have to walk down a long corridor before they reach their seats at the table. Again, where the mayor is separated



Wembley

from the assembly hall it is frequently necessary to duplicate kitchen arrangements or to have separate refreshment rooms and luncheon room.

It is maintained that it is not enough to have what competition conditions call a "dignified access" between the reception rooms and the assembly hall. Ceremonial arrangements could be made much easier and more economical if the mayor's reception and ceremonial rooms were planned in conjunction with the assembly hall. Such an arrangement would overcome the majority of the problems of a mayor's secretary, and the entertaining and ceremonial sides would be united and not split up. The car park, kitchen and refreshment rooms and cloak-rooms need not be duplicated, nor would the architect be confronted with the problem of attempting to make the main entrance to a block of business offices look hospitable.

The Procedure of the Council

Before considering the relationship between the council chamber and the municipal offices, it is necessary to understand how the administrative work is carried out by the various departments.

All the work of the departments is governed by the decisions which the council make at monthly meetings. The spade work of preparing the necessary minutes and data to be discussed by the council is done by committees appointed from the council to each department, and these committees again nominate further smaller sub-committees to deal with details. So, in practice the head of each department refers any point,

TOWN HALLS

which requires a decision to his committee and so to the council, and the council recommends that a certain committee shall investigate some details. These points are generally discussed by sub-committees before they are brought to the notice of the main committee, which, after further discussion, gives a decision on the point in question.

This summary is written down in the minute book of the particular committee by the town clerk, or his representative who usually acts as clerk to the committee.

The town clerk when he enters the council chamber for council meetings carries with him

only the minute books of these committees; and so there is no need for papers and references to be in the council chamber. The minutes are then read through, and either passed or discussed as the case may be.

The Committee Rooms

The position of the committee rooms need not, therefore, be anywhere near the council chamber. The work which is done in these committee rooms is not done from the council chamber, but from the various departments. It is thus essential that the *committee rooms* must adjoin the municipal offices. To illustrate this point a town of about 170,000 inhabitants had a main Committee for the Education Department of 25 members. This was split up into four smaller Sub-Committees of about 18 councillors each, which in turn formed further smaller Sub-Committees to attend to school attendance and such matters. All these Committees were held in two rooms, and, on rare occasions, the main Committee actually sat in the Council Chamber of the Town Hall. The town had its Education Offices outside the Town Hall, and had its own committee rooms attached to the department. The Director of Education said that the system worked admirably, since there was never any necessity for him to go to the Town Hall at all, except to see the Town Clerk or Treasurer about once a month.

After his Committee had approved the minutes and the Town Clerk's representative had taken them away, he never had to worry, but simply started to work on the instructions that his Committee had given him. He confessed, however, that he had occasionally to write letters to the Town Hall, and it was gathered that the messenger boys had to go backwards and forwards fairly frequently.

This illustration does show the importance of keeping the committee rooms near to departments and not in the middle of ceremonial suites, and the necessity for providing any department which is isolated from the municipal buildings with its own committee rooms. When a committee is sitting, there is a constant need for reference to its particular department's books and papers, and committee rooms must be conveniently placed for such reference.

When it is necessary for committee rooms to be used also as reception rooms care should always be taken that there are at least two or three committee rooms that will not be interrupted by receptions given by the mayor, as it now is the custom to hold most committee meetings and the majority of council meetings at night because councillors are frequently unable to attend meetings during the day.

The Council Chamber

Conversely, the council chamber need not be near the committee rooms or even near the various departments it controls. The council usually meets once a month to discuss the findings of the various committees. These findings have, of course, all been thrashed out in



Welwyn: Ground and First Floor Plans

KEY TO PLANS

Ground Floor Plan		First Floor Plan	
MAIN BUILDING		FIRE STATION	
S.R.	Staff Room	I-4	Garages
M.O.	Medical Officer	P.M.	Post Mortem Room
H.M.	Housing Manager	B.S.	Body Store
G.O.	General Office	E.H.	Engine House
C.A.	Chief Accountant	C.R.	Changing Room
R.O.	Rates Office	L.	Lavatory
P.S.	Public Space	W.R.	Watch Room
F.L.	Females' Lavatory		
C.	Cleaner		
P.	Porter		
S.	Store		
A.	Area		
M.L.	Men's Lavatory		
OUTBUILDINGS			
W.S.	Workshop and Store		

detail beforehand, and whether there is further discussion is really a question of party politics. One official has said that so good was a particular committee system that the councillors only debated in the council chamber to give the reporters something to write about; this remark, while it is extravagant, does graphically explain the way things are done; and the fact that the town clerk carries with him only the minute books of the various committees, and that there is no need at so late a stage to refer to data or files from the various departments, is extremely important in its showing that the council chamber can be placed quite independently of the municipal offices, the committee rooms or the mayor's rooms. One big city has its council chamber and reception rooms at least half a mile away from the municipal offices, and, strangely enough, the only complaint was that the town clerk and heads of departments had rather a long walk to meetings. That such an arrangement is tolerated, is proof of the way the committee system can make the council chamber independent of the municipal offices.

The council chamber, therefore, can be placed in one of two positions: it can be planned as part of the mayor's suite, or as a board room to the municipal offices.

The disadvantages of the first position are that there is a possibility of the ceremonial and business sides of the administration mixing, and the council chamber would be difficult to plan among the ceremonial rooms, unless it were kept right in the background.

The Best Position

The best arrangement would seem to plan the council chamber as a board room to the municipal offices in order that the business side should be kept distinct from the ceremonial side. The modern competition plan has given a false impression of the function of a council chamber—it is a business room first and last, and I believe the only ceremonial that takes place in it is the robing of the mayor, which is an annual event. It is exceptional for aldermen and councillors even to robe.

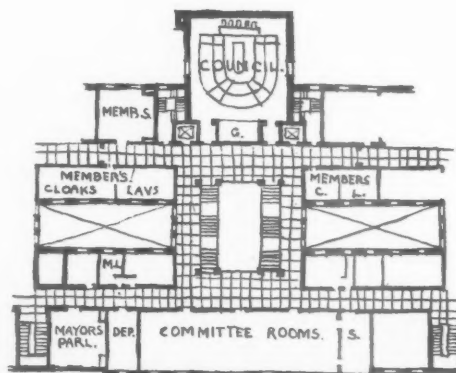
There can be little more disappointing than seeing a council meeting "in action" for the first time after being brought up to believe that the old-fashioned type of competition plan was correct, and after imagining the magnificence which must be the ceremonial of the council chamber.

A certain dignity must be given to this important room, but it should not be the head of the plan, and it should be placed right away from parts of the building used by the public, and should only be given emphasis as far as any "big business" room is given emphasis. It seems wrong to place the council chamber on the head of a grand staircase, giving directly on to a main corridor, and to counteract this effect by "peninsular planning" and a complicated arrangement of lobbies. Only the few cities which do indulge in pageantry at the installation of a new lord mayor really benefit by having a council chamber at the head of a grand staircase.

The ideal position for the chamber would probably be at the top of the building and at the back, which would keep it away from street and internal noises. The room is usually large and has to be top-lighted, which would prevent any building over it, but if this is not considered an objection, the top of the building is undoubtedly the best position. New York City Stock Exchange was put at the top of a tall office building, with excellent results.

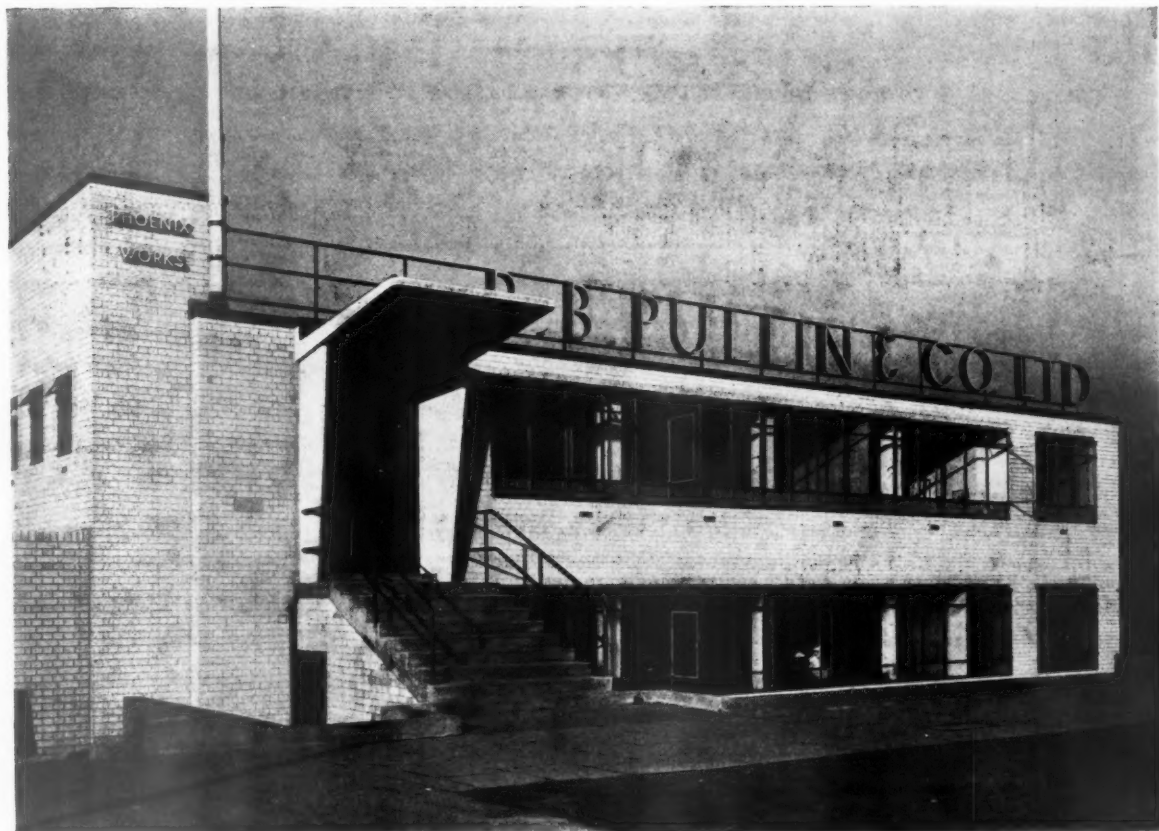
The council chamber might be kept reasonably near the town clerk's department, because of his bringing the minute books to the meetings. Some councils like all the heads of departments to attend council meetings, and in these cases the council chamber should certainly be part of the municipal buildings.

The usual solution for this problem is, of course, to put the council chamber at the back of the plan on the first floor, and to put the rates department on the ground floor, underneath. This solution is quite a good one where economy must be exercised, but the council chamber should not generally be placed on the main circulation of the building, for the reasons already given.



Worthing

FACTORY, G.T. WEST ROAD, CHISWICK

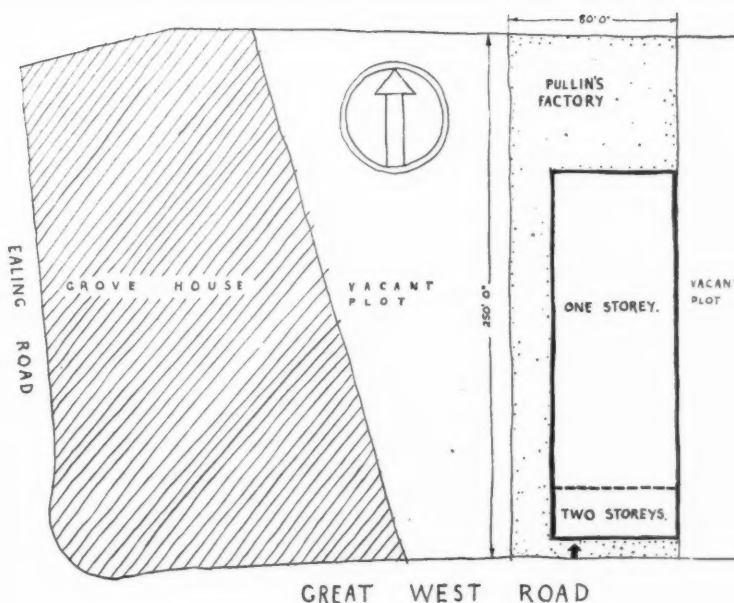


PURPOSE.—Engineering works for the manufacture of gyro-compasses and similar apparatus.

SITE.—About 5 ft. below road level, and having a main frontage of about 80 ft. to the Great West Road and a depth of 250 ft.

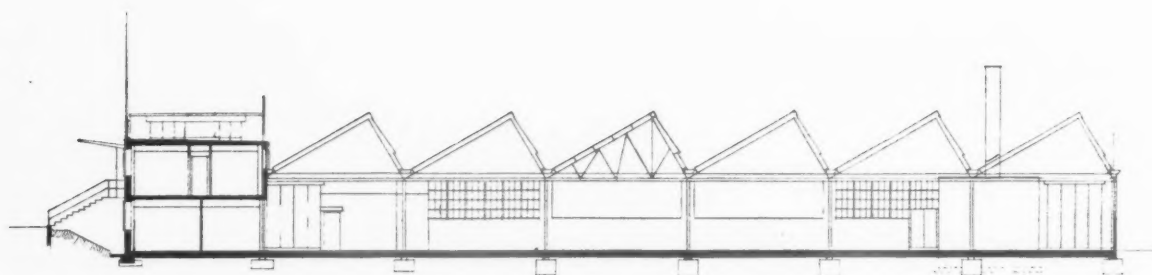
CONSTRUCTION.—Steel frame structure, with infilling of sand lime bricks. The elevations are faced with white bricks. A special feature has been made of the name sign at roof level. The letters are of steel, painted red and cream and fixed to a steel balustrade, painted black. All the windows are steel, painted red, and are projected forward externally on steel bearings. The hood over the main entrance is of reinforced concrete, with soffit painted light buff; the door is of plywood, painted red; the steps are of reinforced concrete, with a granolithic finish, and the railings are of steel, painted black.

The illustrations show: above, a view of the main front to the Great West Road; below, site plan.

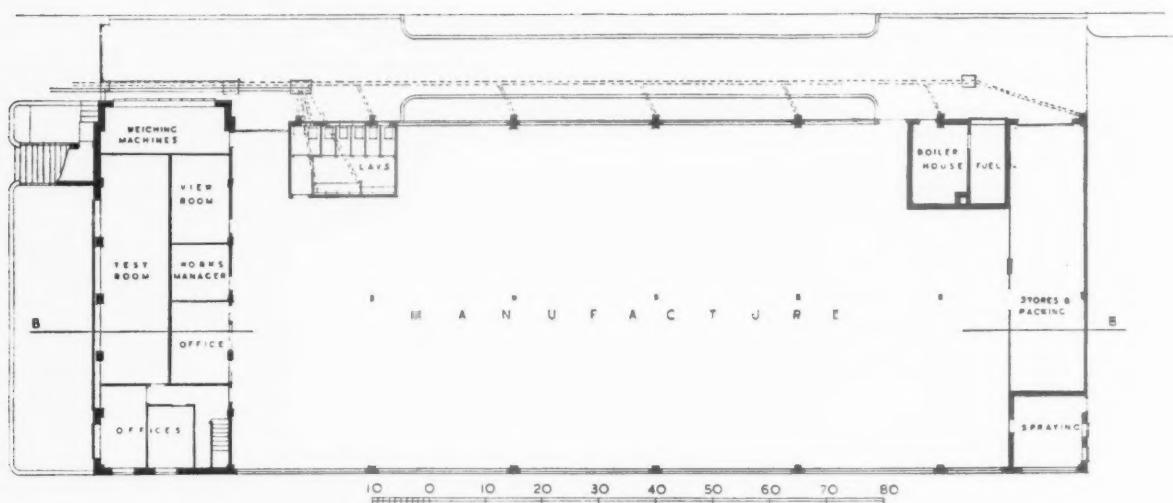


DESIGNED BY PERCY TUBBS,
SON AND DUNCAN
AND W. J. A. OSBURN

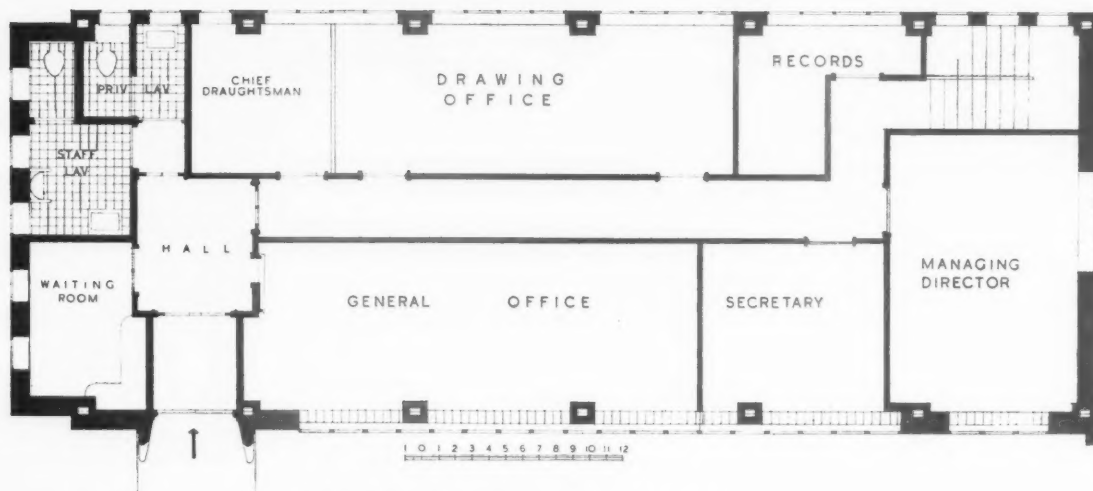
FACTORY AT CHISWICK: BY PERCY TUBBS,



SECTION B-B



GROUND FLOOR PLAN



OFFICE BLOCK: FIRST FLOOR PLAN

SON AND DUNCAN AND W. J. A. OSBURN



PLAN.—The office block, facing the Great West Road, is two floors high, and the workshops behind it are one storey high. Access to the first floor, containing the managing director's, drawing and other offices, is direct from the main entrance. The offices on the ground floor, which are concerned with the manufacture and

testing of the firm's apparatus, are approached from a cartway on the west side of the building, as also are the workshops. The various departments are also connected internally by a staircase.

Above is the main entrance to the offices on the first floor.

For list of general and sub-contractors see page 392.



IN PARLIAMENT

WHEN the London Rating (Unoccupied Hereditaments) Bill came up for second reading in the House of Commons last week, Mr. Croom-Johnson moved the rejection. He said that there were grave objections to private legislation of a purely local character which made amendments in the general law. A large number of people, particularly people of humble means, had conducted their affairs relying upon the system as it existed, on the basis that houses which were lying empty were not liable for rates. A very large percentage of the houses in the County of London were owned by people who had managed to secure them through thrift. It had been suggested that as many as 95 per cent. of the houses in the County of London owned by people of moderate means were subject to mortgage.

People who were forced for financial reasons to give up living in a house would find themselves liable for ground rent, mortgage interest, and, in addition, for the extra rate. It was true that under the Bill they might make an application for relief, but it was very circumscribed and gave little security to the individual. The House ought to consider the effect of this Bill upon building societies and similar organizations which advanced money to people on the security of the houses they bought. This matter should be dealt with in a Government Bill.

Mr. G. Harvey, in seconding the rejection, said that it had always been the principle in London rating and in rating generally that the rate was a charge upon the occupier, whether tenant or beneficial owner, and not on the property itself. The Bill was something approaching a capital levy, was a curb on enterprise, and a means of upsetting mortgage values.

On behalf of Labour Mr. G. R. Strauss strongly supported the Bill which, he said, proposed a measure of social justice in the rating of London. Owners of unoccupied property should make contributions to local rates in respect of the public services they enjoyed.

Mr. Keeling opposed the Bill on behalf of the Westminster City Council and a number of the borough councils. He said the burden on owners of unoccupied property would be severe, and the relief to occupied property would be negligible. There was no practical injustice in the present system of making occupiers pay all the rates. The Bill would discourage new building and the closing of redundant factories. The rating of empty premises in the City dated from the Great Fire, when there was little else to rate. In the

City such premises paid only one-ninth. Why was the City favoured by being left out of the Bill? Property owners had no municipal vote, and the Bill therefore violated the principle of no taxation without representation.

Sir K. Wood, Minister of Health, said that he did not propose to discuss the merits of the Bill but briefly to state the intentions of the Government towards it. The Bill proposed a fundamental change in the settled system of rating and to deal with it by way of local legislation. The view of the Government was that if a change of such magnitude was to be made it should be applied to the country as a whole. It was not appropriate to deal with such a matter by a private Bill. The Government at present had no intention of introducing legislation on the subject and in all those circumstances he could not advise the House to vote for the Bill.

Mr. Holmes said that the Bill would shake the confidence that had been gradually built up in regard to investing in house property. The result would be a slowing up in the building of houses and a reduction of employment in the building industry.

Mr. Herbert Morrison, for the L.C.C., said that not a penny of the additional revenue would go to the London County Council. It would all go to the Metropolitan Borough Councils. A clear majority of the Metropolitan Borough Councils, not all of them associated with the Labour Party, was in favour of the Bill. The Minister of Health based his objections to the measure on the ground that it was not appropriate to deal with a great national matter by local legislation, but the right hon. gentleman forgot that rating legislation was full of different practices in different parts of the country. The Statute Book was full of special legislation applying to London.

The motion for rejection was carried by 254 votes to 125—majority, 129.

Buildings on Parliament Square

Sir William Davison asked the Prime Minister whether the Government would avail itself of the opportunity which had arisen for removing the block of buildings standing in Parliament Square known as Westminster House, immediately behind the statue of Canning; and, seeing that this was a national and not merely a civic improvement, would he get into touch with the Middlesex County Council and the London County Council on the matter, as these two public bodies were prepared to assist in providing the necessary expenditure which would enable the site to be cleared thereby adding to the amenities both of the Houses of Parliament and of Westminster Abbey.

Mr. Baldwin replied that this question had been carefully considered by the Government, which had reached the conclusion that the proposed improvement was not one which would justify a departure from the ordinary practice that the cost of improvements to cities should be paid for by local authorities. Consequently, they could not approve the application of the taxpayer's money to this purpose.

Sir W. Davison asked whether the Prime Minister did not consider that Parliament Square, which was bounded on two sides

by the Houses of Parliament and Westminster Abbey, and on a third by Government offices, was a matter of very special trust to the Imperial Government, and especially to a National Government—(loud cheers)—and whether he was aware that a grant of a little over £100,000 from the Treasury would secure this improvement, and that the land would be handed over to the Office of Works for permanent occupation?

Mr. Baldwin: "If that sum really be the limit, I cannot think that it is beyond the possibility of London itself to provide it."

Sir W. Davison asked whether the Prime Minister would confer with the London County Council and the Middlesex County Council on the matter?

Mr. Baldwin: "I cannot give any undertaking at the moment."

Mr. Messer: "Is it not a fact that it was the manipulation of the finance barons that prevented the Middlesex County Council from taking this over some time ago?"

Stonework of Houses of Parliament

Mr. Cary asked the First Commissioner of Works what arrangements were made for the disposal of stone removed from the Houses of Parliament in connection with the restoration work now in progress.

Mr. Ormsby-Gore said that large stone suitable for rock gardens was being disposed of in large or small quantities at ten shillings a ton, and smaller stone at five shillings a ton, purchasers to pay, or provide for, cartage. Ornamental pieces suitable for sundials, garden ornaments, etc., were available at various fixed prices. The stone available might be seen on application to the Superintendent of Works (Mr. Holman) at the Houses of Parliament.

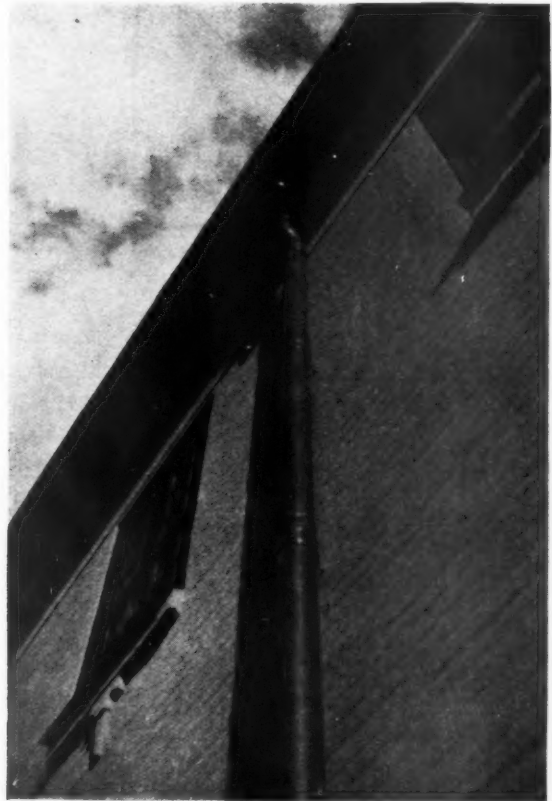
An illustrated booklet devoted to the trend of taste and style of interior decoration from the late sixteenth to mid-eighteenth century has just been issued by Messrs. Pilchers, Ltd. This is the first of three folders giving an outline of interior decoration during the last four centuries.

Messrs. Pilchers, in their foreword, point out that "these years embrace an interesting period in architecture and interior decoration. From the Late Tudor and Jacobean Period (1558-1625), they include the Early and Late Stuart Periods (1625-1660 and 1660-1688 respectively), the William and Mary and Queen Anne Periods (1688-1714), and the Early Georgian (1714-1760)."

"Colour has been employed to enrich and add to the beauty and attraction of the home from the earliest times. During the years reviewed in illustration in this booklet, colour was confined to two main uses—the covering of the ceiling and walls with compositions or plain colours in fresco or on canvas, and the production of pictures of purely decorative interest. Colour alone was not sufficient for the architects of the time, and was supplemented by panelling, finely moulded ceilings, intricate carvings in wood, and ornament in relief, usually done in plaster." Examples of all these forms and methods of decoration are shown in the illustrations.

WORKING DETAILS : 411

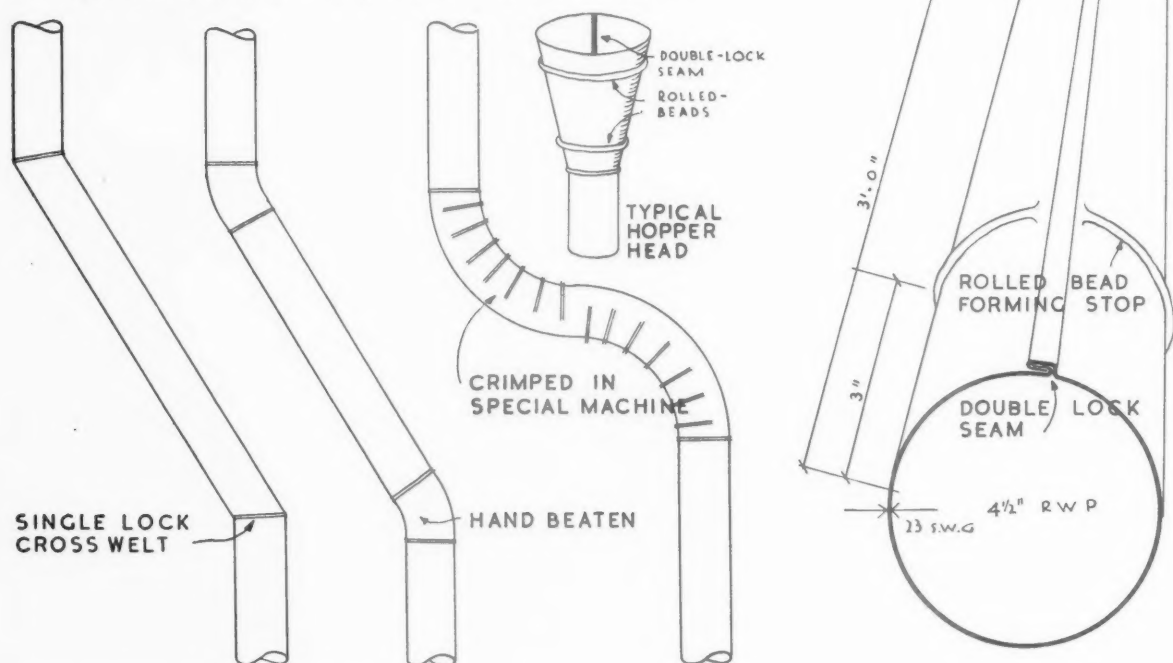
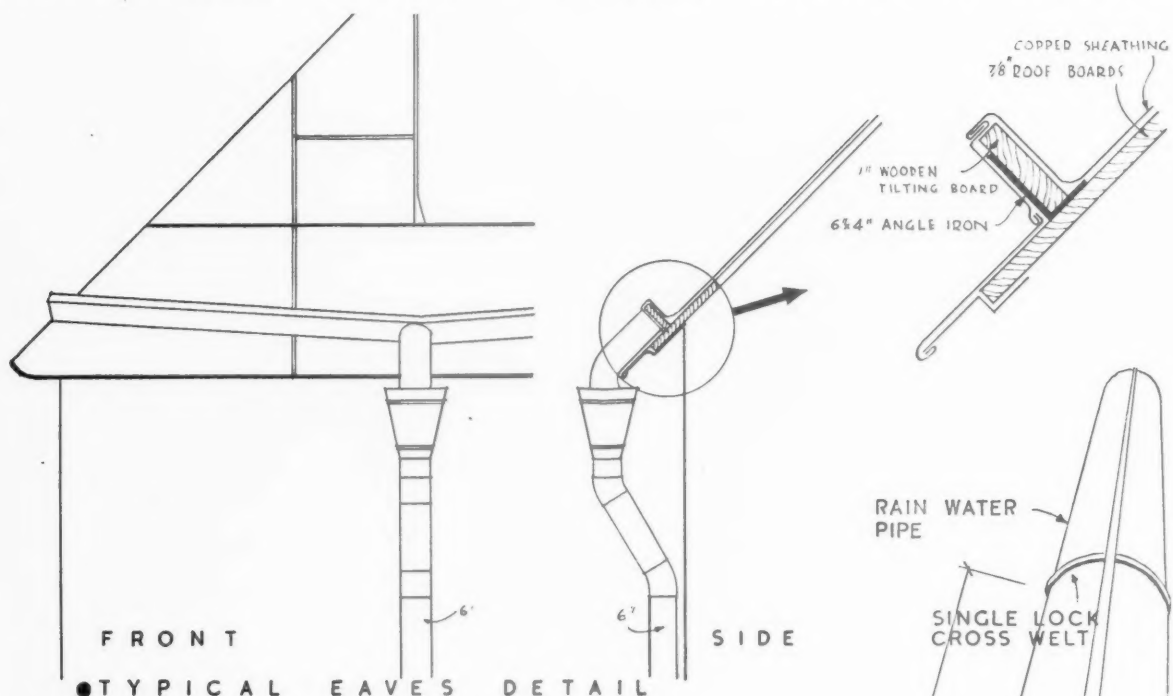
TYPICAL COPPER DETAILS • CURRENT PRACTICE IN STOCKHOLM



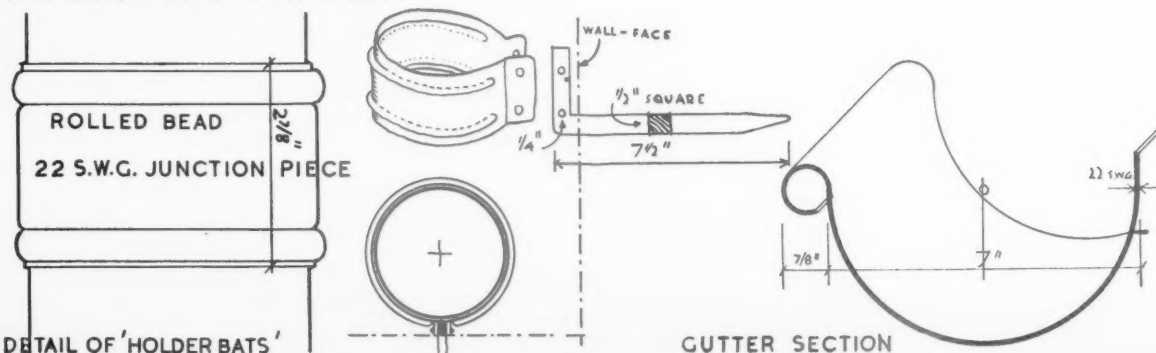
The photographs on this page show typical Swedish practice for copper rainwater pipes and roofing. The standard down-pipe is $4\frac{1}{2}$ inches diameter and is made by seaming up copper strip, three 3 ft. strips being cut from the standard 3 ft. by 4 ft. sheet. The lengths are seamed up with a double lock welt and then single-welted together to make a length of about 12 ft., the bottom end of which is slightly smaller than the top, so that successive lengths can be assembled with a simple 3 in. overlap. (See details overleaf.) The lower photograph shows the fixing of a typical gutter-edge, detail drawings of which are shown overleaf. The photographs are reproduced by courtesy of the Copper Development Association (see also note on Copper in Architecture, page 391).

WORKING DETAILS : 412

TYPICAL COPPER DETAILS • CURRENT PRACTICE IN STOCKHOLM



RAIN WATER PIPE 'SWAN-NECKS'



Details of the rainwater pipe and gutter illustrated overleaf.

WORKING DETAILS : 413

LOGGIA • HOUSE AT WIMBLEDON • KAUFMANN AND BENJAMIN

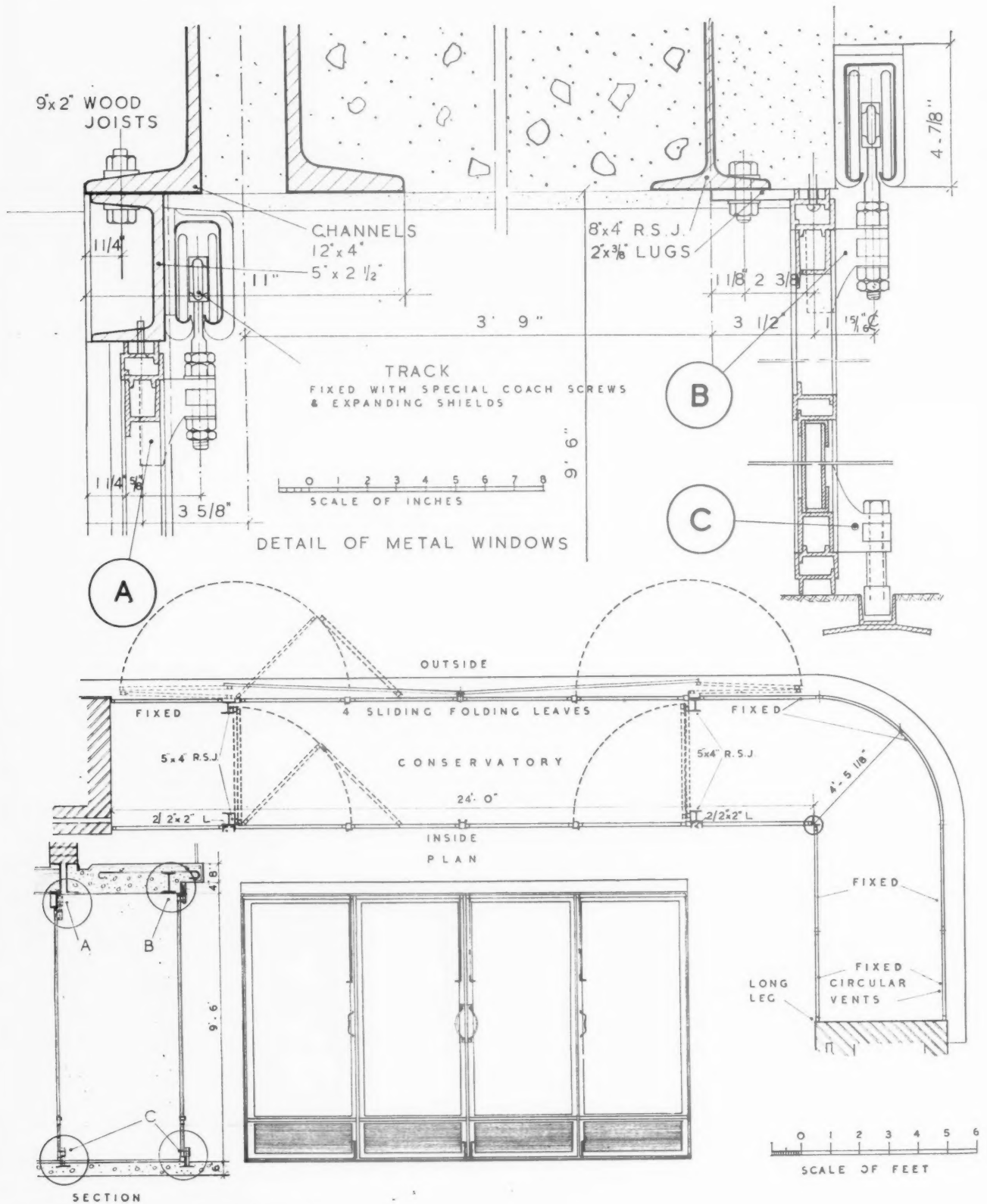


The photographs on this page show the interior and exterior of a living room, the south side of which has been formed entirely of glass: double windows are used, 4 ft. 6 ins. apart, the centre section being arranged to fold back and provide a 16-foot clear opening to the garden. Heating is arranged in the floor between the windows to reduce heat losses from the room, and, in conjunction with ventilators at each end of the enclosed space, to prevent condensation. Detail drawings are shown overleaf.



WORKING DETAILS : 414

LOGGIA • HOUSE AT WIMBLEDON • KAUFMANN AND BENJAMIN



Details of the loggia illustrated overleaf.



Sea travel of today. The French liner "Normandie". From "The Good New Days."

L I T E R A T U R E

REVIEW OF PROGRESS

[BY HERBERT B. GRIMSDITCH]

The Good New Days. By Marjorie and C. H. B. Quennell. London: Batsford. Price 6s. net.

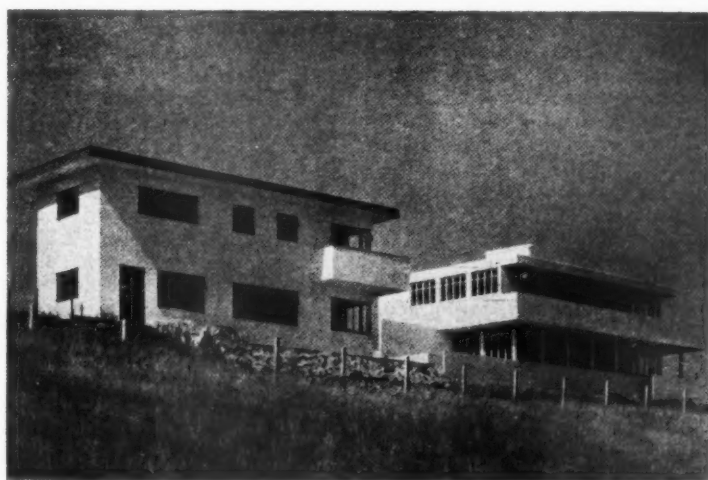
IT may not be altogether fanciful to take literary collaboration between husband and wife as a sign of those Good New Days that so painfully and persistently struggle to come into being, despite the stupidity and cruelty of mankind. We have monumental volumes of economics from the Webbs and the Hammonds; the Pauls and the Muirs are among our notable translators; the Coles throw off detective fiction at lightning speed. The Quennells, as everyone knows, have for years been engaged in answering in a very capable and interesting way all those questions about ordinary life in the past which have occurred to reflective minds but which have been ignored by the professional historians. The present volume, sad to say, must be the last from this pair, for Mr. Quennell died in December.

Such collaborations were rare in the days when all women were supposed to concern themselves with *Kinder und Küche*. This book does, indeed, treat of those two things (among others) not as a manual of housewifery and education, but under the broad aspect of their relationship to a wider and fuller life. It rapidly poses the chief

contemporary problems in the spheres of education, agriculture, town-planning, business, social life and government, and provides data on which intelligent and far-sighted views of these matters may be founded. No special theory is upheld. It must have been hard indeed to steer clear of politics, but the authors have done so. The language is simple (but not childish) and the book may be profitably used either by adults or by pupils in upper forms.

In a world racked and tormented by unemployment, distracted with political

hatreds, dominated by a vulgar and shoddy Press, it might almost seem ironical to write of the "Good New Days." Yet the spirit of progress does not die, and here and there it manifests itself—in a Dalton scheme, in a garden city, in a new social service, in a reconstituted public house: things great and small that show the urge at work. The service done by a book like this is that it gives a selection of the good new things and promising new schemes, and in a very practical way makes evident just *why* they are better than the old. It is a selection based not only on good taste, but on a remarkable equipment in out-of-the-way knowledge. The hundred illustrations are most varied, striking and apposite; and



Twentieth-century functionalism. From "The Good New Days."

the authors have done a thing that few dare to do, but which is very useful—they have illustrated the bad alongside the good. Of particular interest to readers of this JOURNAL is the chapter on "Towns and Suburbs," with its discussion of the disease of ugliness and some hints on prognosis and treatment. The Quennells come down heavily in favour of the flat in the old "House versus Flat" controversy—perhaps too heavily—without stating such disadvantages as noise and that dreadful feeling one has in restaurants attached to flats, that one is dining in church. Still, such a fair and judicial book contains little to provoke controversy and much to foster clear thought.

SERVICES

[BY J. R. KELL]

Modern Heating and Ventilating. Edited by Alwyn A. Jones, assisted by ten experts. In 3 Volumes. London: The Caxton Publishing Co. Price £1 1s. per volume.

THIS book sets out with the ambitious scheme of covering the whole range of present-day heating and ventilating practice in one comprehensive treatise and the achievement of this ideal has been very largely fulfilled.

There is little of the subject that is not touched on in some way, and coming from the group of experts in question, under the experienced editorship of Mr. Alwyn A. Jones, it is not to be wondered at that the material and data are presented on a well-devised plan. It caters, perhaps, more for the student of heating and ventilating than for the architect, telling the "how" rather than the "why." There is, for instance, little to help the layman to choose the right system for his particular case, though once having selected the method there is ample to show him how it may be designed.

The first volume is entirely devoted to heating. Chapters 1 and 2 deal with first principles, chapter 3 with draught and chimneys. So far there is little that is new, but being presented in a concise form it is a necessary preliminary to what follows.

Under "chimney construction" one would like to have seen reference made to the various forms of insulating linings now becoming almost standard practice where heating boilers are concerned.

In Chapter 4, Mr. W. W. Nobbs discusses various methods of heating with particular attention to the relative costs of different fuels, and this will be found one of the most interesting, as well as one of the most controversial, in the book. A great deal has been written on this aspect of the subject

in recent years, but generally under the ægis of some association for promoting the sale of one particular fuel. This, coming from an entirely unbiased source is worthy of the closest study, giving the real key to the problem in a very clear manner.

The difficulties in deciding on the proper arrangement for a technical treatise are always considerable, but we feel that Chapter 4 has come a little early, before, in fact, the reader has been introduced to many of the terms.

Chapter 5 by Mr. Overton on heat losses is a useful guide to what is undoubtedly the basis of all heating calculations. The examples at the end should be particularly helpful in showing how the various factors are applied in practice. No mention is made of building insulation and its value, a subject which is coming increasingly to the front; nor does the vital question of air change appear to have received adequate attention.

Chapter 6 on radiator emission is evidently drawn largely from manufacturers' publications, but is none the less useful here for easy reference.

We could find no mention of convectors, surely a modern development worthy of inclusion.

The next chapter on boilers gives one the impression of devoting too much space and too many illustrations to the older and less efficient types, at the expense of the newer and more efficient forms. In these days of intensive competition by gas and electricity, solid (and liquid) fuel boilers are on trial and if the industry does not take advantage of modern developments it will only have itself to blame for the results. We feel it is a pity that a definite lead away from the old conceptions of boilers has not been given.

Warm air heating is carefully handled in Chapter 8, though a word of warning as to its limitations and imperfections might have been given.

Two chapters follow on the technique of hot water heating.

Mr. Fretwell's lucid and authoritative style has made this difficult and complicated section perfectly straightforward and easy of comprehension.

Mr. Bruce, in Chapter 11, handles the vexed question of radiant heating with the confidence born of considerable study and experience. He shows how the problem is treated from first principles, and proceeds to deduce much valuable data which we have not seen before. So little has been written on radiant systems in general and on the embedded panel system in particular, that a great deal of what appears in the general discussion will come as entirely new to many readers.

A further chapter by Mr. Fretwell follows on hot water heating by steam. We are sorry that he baulks the question

of transmission coefficients for steam to water surfaces.

One paragraph only is devoted to the utilization of exhaust steam for heating, yet surely this is a subject of vast possibilities.

Volume I concludes with a chapter on high pressure hot water heating by Mr. Overton, necessary for completeness, but useful only in special applications.

Volume II begins with hot water supply, again by Mr. Fretwell and again clear and concise. It is mainly confined to smaller-sized installations giving the reader a good insight into the principles of design.

Steam heating, by Mr. Overton, is ably covered in Chapter 2. Here we have the different systems explained, data or pipe sizing, etc., with a few useful examples.

We now come to a section on the practical side of heating: tools, pipes, valves, fittings, and so on. All too little has been written on this subject, and it is refreshing to see this summary so carefully set out for the benefit of those who are starting as students, or those who wish to have some knowledge of the many details which go to make up a successful system. Welding of pipes might perhaps have been discussed in greater detail, bearing in mind its increasing field of application.

Two sections follow: one on gas heating by Mr. Oughton, and one on electric heating by Mr. Stanley.

These two well-known experts have produced what almost amounts to a treatise in itself. Fortunately, or perhaps unfortunately, they have not been allowed to get at one another's throats.

The most up-to-date practice alone is described, which is quite as it should be, since these fuels are hopeless economically if fullest advantage is not taken of modern controls and appliances.

Hot water supply by each method is fully covered, and, as one would expect, electric thermal storage is dealt with at some length.

Volume II is completed by the first part of a long contribution by Mr. Henly on ventilation. This continues well into the third volume and embraces natural and fan systems, plenum heating, theatre and cinema plants, air conditioning, drying of materials, and automatic controls, in each case accompanied by examples and details of equipment. All praise to Mr. Henly for having dealt so ably with what is really the "lion's share" of the book. We have not seen this vast subject more comprehensively tackled. He has been at great pains to give just that amount of data which is necessary, without overloading or undue complication. His short section on refrigeration is the only one we feel to be somewhat incomplete. He mentions only carbon

dioxide and ammonia, without even the barest reference to the many other refrigerants. He correctly states, however, that this is a subject in itself. His study of drying gives much that one does not readily come by in textbooks.

The remainder of the book is devoted again to the more practical side of the science: drawing, specifications and estimating. So far as we know, this kind of information, as applying specifically to the heating and ventilating industry, has not been published before in book form and should prove most valuable to budding engineers, contractors and others who are seeking training in these matters.

Altogether the whole work is admirably produced in large clear type, with ample line block diagrams and half-tone photographs of plant. Misprints appear to be almost non-existent (we have found only one, on page 66, Volume II—2,412 should read 3,412).

It will no doubt be used as a handbook of reference by many and it can be commended to all in search of information and instruction, as the most complete treatise on the subject yet produced in this country.

BUILDING RESEARCH

Les Laboratoires du Batiment et des Travaux Publics. A special issue of *L'Entreprise Française*, 9 Avenue Victoria, Paris. Price 59 fr., including postage.

THE official opening of a Paris laboratory for the testing of building materials has been commemorated in a special issue of *L'Entreprise Française*, which contains a full description of the building and a large amount of general data on methods of testing.

In one of the introductory articles M. F. Anstett, a director of the laboratory, deals with early testing methods, and gives added point to the methods now in use, a full schedule of which is given, including methods of testing and the fee charged for each test. There are also some useful notes on the most suitable tests to apply to different materials and information on the interpretation of the results obtained.

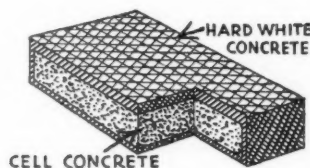
Publications Received

The English at Home. 63 photographs by B. Brandt. London: B. T. Batsford. Price 5s. net.

Parish Churches of Norfolk and Norwich. By C. J. W. Messent. Norwich: H. W. Hunt. Price 7s. 6d. net.

Installation of Heating Appliances. By E. Blake. London: Technical Press. Price 2s. 6d. net.

Gardens and Gardening. London: The Studio. Price 10s. 6d.



TRADE NOTES

[EDITED BY PHILIP SCHOLBERG]

Cellolit Tile for Roof Insulation

WITH frame buildings having flat roofs it is desirable to provide roof insulation, not only from the point of view of comfort for the top floor, but also to prevent cracking due to expansion and contraction of the roof beams and slabs. There are various ways of providing this insulation, but the majority of them involve placing a layer of insulating material between the waterproofing of the roof and the ceiling of the room.

coated with a film of cement mortar, and, setting in this state, produces a cellular concrete.

The tiles are fixed by bedding to the waterproof surface with asphalt or cement, leaving about $\frac{1}{4}$ in. space at the joints for final sealing with bituminous cement. The tiles can be made to shape for odd places or can, if necessary, be cut on the job. Their weight per square foot is approximately 12 $\frac{1}{2}$ lb., and the cost is approximately 8s. per square yard fixed complete.

W. E. J. B.

The most obvious and the most logical place for the insulation is naturally outside the waterproofing, a position which introduces difficulties, particularly when the roof is needed for traffic.

Christiani and Nielsen, Ltd., claim to have solved these difficulties with their Cellolit tiles. These tiles are made in two stock sizes, 18 ins. by 18 ins. by 2 $\frac{1}{4}$ ins. and 18 ins. by 9 ins. by 2 $\frac{1}{4}$ ins. The 2 $\frac{1}{4}$ in. thickness consists of cell concrete encased in thin layers of concrete, the top of which is a non-slip, hard-wearing white concrete, so as to provide a solar reflecting face suitable for traffic. (See headpiece to these notes.)

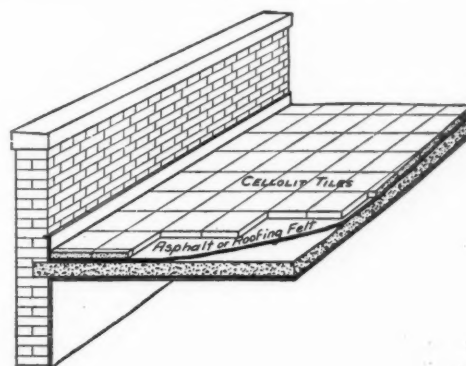
Cell concrete has, of course, been manufactured by Christiansi and Nielsen for insulating purposes for many years. It is made by mixing foam with cement, sand and water in a specially designed machine, so that during mixing each bubble is

Copper in Architecture

Copper, not only as a roof covering, but as a facing for external walls, is far more widely used in Sweden and Denmark than it is in this country, particularly on buildings of any size and permanence. A memorandum recently issued by the Copper Development Association touches lightly on the reasons for the recent "classic revival" in Sweden, and gives a good deal of interesting information, sketches and photographs on current Swedish practice in copper work.

Working detail No. 411, on page 385 of this issue, has been prepared from information contained in this memorandum, and gives some idea of current Swedish technique.

This type of publication, well arranged and containing no aggressive salesmanship,



Cellolit tiles laid on asphalt or roofing felt (see note on this page).

ought to be produced by far more manufacturers. The information contained in it is not immediately useful, in that it does not provide details to be lifted "cold," but it does show how a particular problem has been solved after years of experience and craftsmanship. The conditions are admittedly different in this country, but it is still possible to learn a good deal, even if the London atmosphere has got more sulphuric acid than it should.

Jointless Flooring

A new group of jointless flooring manufacturers has been formed under the title of the Jointless Flooring (Oxychloride) Association, and the first general meeting was held a fortnight ago.

Membership is open to "individuals, firms or companies employed in the laying of magnesite flooring and individual firms, companies or agents who supply any of the materials used in the composition of such flooring," and all members pledge themselves to work to B.S.I. specifications and to the recommendations of the D.S.I.R.

Further experiments with jointless floors are to be carried out by the Building Research Station, and the whole scheme seems to be another good example of the right type of collective research.

A Film at the Building Centre

I am informed that a film illustrating the Mopin system of construction and prefabrication at Drancy, Paris, will be shown at the Building Centre on the evenings of March 10, 11, 12 and 13, at 6.30.

The film, which lasts about 45 minutes, is to be followed by a demonstration of precast vibrated concrete as used in Paris. The particular system demonstrated allows for the concrete unit to be removed from its mould within one and a half minutes of the completion of the vibrating process. Admission is by ticket, free on application.



LAW REPORT

QUESTION OF A CONTRACT—LEGAL CONSTRUCTION

C. V. Buchan & Co., Ltd. v. The Feltham U.D.C.—King's Bench Division. Before Mr. Justice MacKinnon.

THIS was an action by C. V. Buchan & Co., Ltd., engineering contractors, of Brighton and Stonyland Road, Egham, against the Feltham Urban District Council to recover the sum of £1,455 alleged

to be due under a contract of November, 1929, the terms of which were comprised in a document entitled Hanworth Main Drainage, 1929. The amount in question, it was said, was the balance of the engineer's final certificate given in December, 1934, under the general conditions of the contract. The amount of the certificate was £3,006 odd, of which £1,551 had been paid to the company.

Mr. Tucker, K.C. (for the company), explained that the contract, which concerned drainage in the Hanworth district, was made between the company and the Staines Rural District Council, the predecessors of the Feltham Council. About the same time as the Feltham Council took over the rights under the contract main roads in part of the area were taken over by the Middlesex County Council.

The trouble had arisen in connection with the requirements of the County Council. The contract required that the roads should be reinstated to the satisfaction of the local authority and of other persons in whom the roads might be vested. The company's case was that the Middlesex County Council required the roads to be reinstated according to specifications which were more exacting than those provided for under the contract. The company was told to proceed with the work in accordance with the County Council's requirements, and subsequently the engineer satisfied himself that the work had been more exacting and included it in his final certificate. Later the Feltham Council seemed to have had doubts as to whether the work was additional to the requirements of the original specification. The Council seemed to have been placed in somewhat of a difficulty, and as the local authority, said counsel, he understood its attitude was that it was perfectly prepared to make the payment if it was a proper one. But the Council appeared to have been somewhat ready to accept the view of the Middlesex County Council as against that of its own engineer.

In its defence the Feltham Council contended that it was expressly provided in the contract that no additional payments would be made for any extra work unless it had been specially ordered. It was provided in the conditions of the contract that extra charges in respect of extra work should not be allowed unless it was clearly outside or beyond the spirit and meaning of the specification. It was also submitted that the sum claimed was an additional payment for road reinstatement and was not due because no extra work was done by the company in regard to road reinstatement, all the work done being covered by the "inclusive sum" in the contract. The Council added that the certificate of the engineer was not conclusive and was erroneous in including any additional payment for road reinstatement.

His Lordship, in giving judgment, said it seemed plain that the requirements of the Middlesex County Council were greater than provided for in the contract and included extra work. But the added requirements appeared desirable. The Feltham Council maintained that the work in respect of which the claim was made came within the terms of the contract and

as the company had no order in writing it could not succeed.

He did not know, added His Lordship, whether it was possible for a corporation to behave like a gentleman, but, of course, it owed a duty to the ratepayers to stick to the letter of a contract. On the merits of the case it seemed that the company should recover something. But from the legal point of view the claim failed.

Judgment was accordingly entered for the Feltham Urban District Council with costs.

THE BUILDINGS ILLUSTRATED

ST. CHRISTOPHER'S CHURCH, WITHINGTON, MANCHESTER (pages 371-376). The general contractors were William Thorpe and Son, Ltd. The principal sub-contractors and suppliers included:—

Blockleys, Ltd., external facing bricks; William Higgins and Son, internal facing bricks; Trussed Concrete Steel Co., Ltd., reinforced concrete; Limmer and Trinidad Lake Asphalt Co., Ltd., asphalt; Concrete Unit Co., Ltd., reconstructed stone and coloured concrete; J. and H. Patteson, Ltd., marble and mosaic; W. J. Roberts and Son, Ltd., and Walpamur Co., Ltd., plaster and decorations; Henry Hope and Sons, Ltd., metal casements; John Grundy, Ltd., and the J. P. Tubular Heater Co., heating; W. A. Callow, Ltd., lighting; A. Longworth and Sons, glazing and plumbing; Campbell and Mabbs, Ltd., ironmongery; John Faulkner and Sons, Ltd., lightning conductor; Mather and Ellis, Ltd., masons; F. Conacher & Co., organ; William Thorpe and Son, pews, choir stalls, woodblock floors, cross and candlesticks; Gillett and Johnston, Ltd., bell; Heal and Sons, Ltd., altar frontal; Guild of St. Nicholas, fabrics; The Forge Ltd., processional cross.

FACTORY FOR R. B. PULLIN & CO., LTD., GREAT WEST ROAD (pages 381-383). The general contractors were E. H. Burgess, Ltd. The principal sub-contractors and suppliers included:—

T. W. Palmer & Co., Ltd., steelwork; Haywards, Ltd., patent glazing; Williams and Williams, Ltd., windows; British Reinforced Concrete Engineering Co., Ltd., reinforcement for concrete; James Gray (1925), Ltd., heating; Fred L. McGhee & Co., electrical work; Fraser and Ellis, sanitary fittings.

To the list of sub-contractors for the Girls' Hostel at Nottingham, illustrated in our issue for February 13, should be added the name of the Trussed Concrete Steel Co., Ltd., who were responsible for all the precast roofs, and all floors other than those of timber.

To the list of sub-contractors for Dorset House, Marylebone Road, N.W., illustrated in our issue for February 27, should be added the name of J. W. Gray and Son, who were responsible for the lightning conductors.

THE WEEK'S BUILDING NEWS

LONDON & DISTRICTS (15-MILES RADIUS)

ADDINGTON. Houses. The Croydon Corporation has approved plans submitted by Gower Builders, Ltd., for the proposed erection of 40 houses at The Lees and Bennetts Way.

BERMONDSEY. Schools. The L.C.C. is to modernize the central girls' school, the Monnow Road infants' school and the boys' central school, Bermondsey, at a cost of £64,000.

CROYDON. Shops, etc. The First National Housing Trust, Ltd., 10 The Boltons, S.W.10, have submitted plans for the proposed erection of 40 shops with rooms over, on the Lodge Farm Estate, Addington.

CROYDON. Houses and Flats. The Corporation has decided to erect 20 houses and 16 flats in new road off Crown Hill, Upper Norwood; and 24 flats at Bridge Place, off Gloucester Road. Plans have been approved.

DENHAM. Theatre, etc. The London Film Studios, Ltd. are to erect a cutters' review theatre, a model store, and a main gate lodge at the Studios at Denham.

DENHAM. Garage, etc. A motor service and petrol station is to be erected, in the North Orbital Road, by Mr. R. T. Goodhew.

EAST DULWICH. School. The L.C.C. is to erect an elementary school on the East Dulwich housing estate, at a cost of £31,385.

HAMMERSMITH. Nurses' Home, etc. Plans passed by the B.C.: Nurses' home at the Royal Masonic Hospital, Ravenscourt Park, for Messrs. Burnett, Tait and Lorne; extensions, 84-90, King Street, for Messrs. F. W. Woolworth & Co., Ltd.; reconstruction, Hofland Creamery, Hofland Road, for Messrs. Leslie, Marsh & Co.; alterations, 47, Maclise Road, for Mr. Lionel O. Woodward.

HAMMERSMITH. Tenements. The B.C. has approved plans for the erection of 269 tenements on the Emlyn Road site.

HAMPTON. Flats. The U.D.C. has consented to the erection of 24 flats on a site in Aldfield Road by Mr. W. Clark.

HOUNSLOW. Licensed Premises. Messrs. Nowell Parr and Sons, 42, Cranley Gardens, S.W.7, have prepared plans for the proposed rebuilding of the "Sun" public house, Hanworth Road, Hounslow.

IVER HEATH. Houses. Messrs. Henry Boot, Ltd. are to erect 140 two-storeyed semi-detached houses on a site off Church Road.

LAMBETH. Reconstruction. The L.C.C. is to reconstruct the Waterloo Road School, Lambeth, at a cost of £48,670.

NORWOOD. Reconstruction. The L.C.C. is to reconstruct the Jessop Road School, Norwood, at a cost of £21,775.

PADDINGTON. Maternity Centre. The B.C. has approved revised plans for the erection of a maternity centre at Harrow Road, at a cost of £17,675.

RAYNER'S LANE. Hotel. New premises are to be erected for Messrs. Truman, Hanbury and Buxton at Village Way, Rayner's Lane, at an estimated cost of £22,000.

SHEPPERTON. Houses. Plans have been approved by the U.D.C. for the erection of 60 houses at Picture Palace Field, Gaston Road, by Mr. H. C. Warman. The plans were submitted by Mr. E. R. Woodford, 72 Lewin Road, Streatham.

SOUTHGATE. Development. Plans passed by the Corporation: Estate development, Whitehouse Farm Estate, Waterfall Road, for Davis Estates, Ltd.; eight flats, Avenue Road, for Messrs. Baillie, Scott and Beresford; 26 flats, Bowes Road, and Palmers Road, for Mr. H. A. Nash; flats, Green Dragon Lane, for Mr. A. W. Amos; 16 houses, Stonehall Road, for Mr. C. E. Ward; 16 houses, Morton Way, for Mr. H. C. Keene; 12 shops and flats, Cockfosters Road, and six shops and flats, Chase Side, for Messrs. Marshall and Tweedy; 16 flats, Crown Lane, for Messrs. Brown and Warman; development, Websleigh estate, Arnos Grove,

for Mr. B. Hobbs; two houses, Trent Gardens, for Mr. G. W. Newman; rebuilding Wagon and Horses P.H., Chase Side, for Messrs. Watney Combe Reid & Co., Ltd.; six houses, Prince George Avenue, for Mr. G. Turner; three shops and flats, Chase Side, for Mr. Geo. P. Bath; 18 flats, Hoppers Road, for Harpers Houses.

SOUTHGATE. Extensions. The Corporation has instructed the borough engineer to prepare plans for extensions at the isolation hospital.

SUNBURY. Estate Development. The U.D.C. has approved lay-out plans submitted by Messrs. Freehold Building and Land Development Co., Westminster, S.W.1, for the proposed development of the Sunbury Estate, Vicarage Road, where it is proposed to erect 380 houses.

SUNBURY. Showrooms. New showrooms are to be erected in connection with Prince Albert Garage, Staines Road, to plans submitted by Mr. F. C. Hawkins.

SUNBURY. Shops. A block of ten shops is to be erected at Feltham Hill Road, by Messrs. Feltham Hill Estates, Ltd.

TWICKENHAM. Flats. Messrs. Nowell Parr and Son have prepared plans for the proposed erection of 32 flats and eight garages in Clifden Road.

TWICKENHAM. Estate Development. Messrs. Wates (Malden), Ltd., are to develop the Meadow Park Estate by the erection of 292 houses, plans for which have now been approved by the B.C.

WEMBLEY. Hotel. The Licensing Authorities have approved an application by Mr. Flowers in connection with the proposed erection of an hotel between Flamstead Avenue and Bovington Avenue, for Messrs. Mann Crossman and Paulin, at an estimated cost of £23,000.

WIMBLEDON. Flats. Mr. R. M. F. Huddart is preparing a scheme for the erection of flats on the site of 4, Grosvenor Hill, Wimbledon.

WIMBLEDON. School. Mr. A. Tomlinson is to erect a junior school off Queensmere Road, Wimbledon.

SOUTHERN COUNTIES

BRIGHTON. Houses, etc. Plans passed by the Corporation: Four houses, Surrenden Road, for Messrs. Gilbert Hammond & Co.; hotel, Chichester Drive and 33 flats, Marine Drive, for Saltdean Estate Co., Ltd.; six houses, Mayfield Crescent, for Mr. Chas. William Parkes; two houses, Braybon Avenue, for Mr. E. G. Cornish; alterations and additions, Racehorse Inn, Elm Grove, for Messrs. Tamplin and Sons, Ltd.; two houses, Valley Drive, for Atco Homes, Ltd.; 10 houses, Stanmer Park Road, for Messrs. Wallis and Paris; warehouse extensions, Frederick Plave, for Messrs. G. Freeman, Ltd.; reconstruction, 27-31 London Road, for Messrs. Roslings;

shop, Hertford Road, for Mr. James Morley; factory extensions, Arundel Place, for Mr. P. E. Gwyer; two houses, Overhill Drive, for Mr. F. J. Wellman; pavilion extension, Roedean Road, for East Brighton Golf Club, Ltd.; 16 houses, Dale Crescent, for Messrs. Sweeney and Clarke; alterations, Carpenters Arms, West Street, for Messrs. Edlins, Ltd.; 18 houses, Mayfield Crescent, for Mr. Charles William Parkes.

EGHAM. Offices and Showrooms. The U.D.C. has approved plans submitted by Messrs. Lane Yachts, Ltd., for the erection of offices, showrooms and workshop at The Causeway.

FARNHAM. Offices. The Urban District Council are to erect Council offices on the site of Brightwell House, at an estimated cost of £20,000.

GERRARD'S CROSS. Estate Development. The Eton R.D.C. has given provisional consent to lay-out plans submitted by the Watson Investment Trust for the proposed development of Bulstrode Park.

LITTLEHAMPTON. Housing Scheme. The U.D.C. has purchased land in Horsham Road, for a housing scheme.

LITTLEHAMPTON. Hotel. Messrs. H. Parker & Co. propose to erect an hotel on the Rustington Towers site, Sea Road, Littlehampton.

RYE. Estate Development. The Provident Estates, Ltd. propose to develop a large estate at Camber, at an estimated cost of £250,000. The scheme provides for a church, a chapel, and a cinema.

NORTHERN COUNTIES

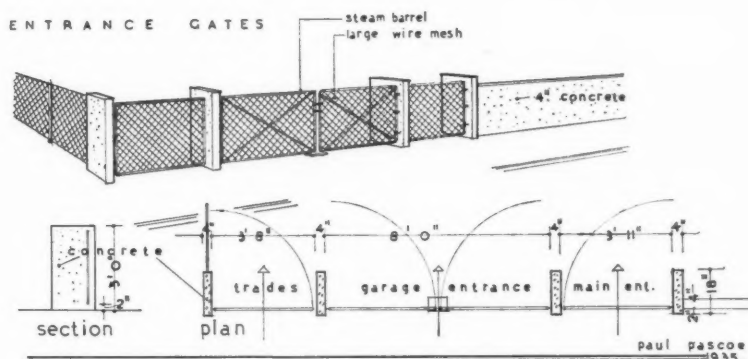
MORECAMBE. Conference Hall. The Corporation has prepared an amended scheme for the erection of a conference hall, at a cost of £25,000.

MORECAMBE. Bus Station. The Corporation has approved plans for the construction, for the Ribbles Motor Services, Ltd., of a bus station in Euston Road.

MORECAMBE. Fire Station. The Corporation has approved an amended scheme for the erection of fire station premises in Clark Street at a cost of £11,905.

MORECAMBE. Houses, etc. Plans passed by the Corporation: 30 houses, Old Golf Links, for Mr. S. Carter; development, Newtown estate, for Messrs. Harrison and Moore; four houses, Walton Avenue, for Messrs. Widdop and Ladell; extensions, Victoria Hospital, Thornton Road, for the Governors; two shops, Oxcliffe Road, for Mr. R. Naylor; two houses, Keswick Drive, for Messrs. Edmondson Bros., Ltd.; two houses, Clifton Drive, for Mr. A. Fielden; two houses, Stanhope Avenue, for

(Continued on page xxxvi.)



From Houses at Ruislip. By Connell and Ward.

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	II			I	II			I	II
		s. d.	s. d.			s. d.	s. d.			s. d.	s. d.
A	ABERDEEN .. S. Wales & M.	1 5 1/2	1 1 1/2	A	EASTBOURNE .. S. Counties	1 5 1/2	1 1 1/2	A	Northampton .. Mid. Counties	1 5 1/2	1 1 1/2
A	Aberdeen .. Scotland	1 5 1/2	1 1 1/2	A	Ebbw Vale .. S. Wales & M.	1 5 1/2	1 1 1/2	A	North Staffs .. Mid. Counties	1 5 1/2	1 1 1/2
A	Aberglenny .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Edinburgh .. Scotland	1 5 1/2	1 1 1/2	A	North Shields .. N.E. Coast	1 5 1/2	1 1 1/2
A	Abingdon .. S. Counties	1 5 1/2	1 1 1/2	A	E. Glamorgan-shire, Rhondda Valley District	1 5 1/2	1 1 1/2	A	Norwich .. E. Counties	1 5 1/2	1 1 1/2
A	Accrington .. N.W. Counties	1 5 1/2	1 1 1/2	A	Exeter .. S.W. Counties	1 5 1/2	1 1 1/2	A	Nottingham .. Mid. Counties	1 5 1/2	1 1 1/2
A	Addlestone .. S. Counties	1 5 1/2	1 1 1/2	B	Exmouth .. S.W. Counties	1 4 1/2	1 0 1/2	A	Nuneaton .. Mid. Counties	1 5 1/2	1 1 1/2
A	Adlington .. N.W. Counties	1 5 1/2	1 1 1/2	A	FELIXSTOWE .. E. Counties	1 5 1/2	1 1 1/2	A	Oldham .. N.W. Counties	1 5 1/2	1 1 1/2
A	Airdrie .. Scotland	1 5 1/2	1 1 1/2	A	Filley .. Yorkshire	1 5 1/2	1 1 1/2	A	Oswestry .. N.W. Counties	1 5 1/2	1 1 1/2
C	Aldeburgh .. E. Counties	1 5 1/2	1 1 1/2	A	Fleetwood .. N.W. Counties	1 5 1/2	1 1 1/2	A	Oxford .. S. Counties	1 5 1/2	1 1 1/2
A	Altrincham .. N.W. Counties	1 5 1/2	1 1 1/2	B	Folkestone .. S. Counties	1 4 1/2	1 0 1/2	A	P		
B	Appleby .. N.W. Counties	1 5 1/2	1 1 1/2	A	Frome .. S.W. Counties	1 5 1/2	1 1 1/2	A	PAISLEY .. Scotland	1 5 1/2	1 1 1/2
A	Ashton-under-Lyne .. N.W. Counties	1 5 1/2	1 1 1/2	B				B	Pembroke .. S. Wales & M.	1 5 1/2	1 1 1/2
B	Aylesbury .. S. Counties	1 4 1/2	1 0 1/2	A	GATESHEAD .. N.E. Coast	1 5 1/2	1 1 1/2	A	Perth .. Scotland	1 5 1/2	1 1 1/2
B	BANBURY .. S. Counties	1 4 1/2	1 0 1/2	A	Gillingham .. S. Counties	1 5 1/2	1 1 1/2	A	Peterborough .. E. Counties	1 5 1/2	1 1 1/2
B	Bangor .. N.W. Counties	1 5 1/2	1 1 1/2	A	Glasgow .. Scotland	1 5 1/2	1 1 1/2	A	Plymouth .. S.W. Counties	1 5 1/2	1 1 1/2
A	Barnard Castle .. N.E. Coast	1 5 1/2	1 1 1/2	A	Gloucester .. S.W. Counties	1 5 1/2	1 1 1/2	A	Pontefract .. Yorkshire	1 5 1/2	1 1 1/2
A	Barnsley .. Yorkshire	1 5 1/2	1 1 1/2	A	Goole .. S. Counties	1 5 1/2	1 1 1/2	A	Pontypridd .. S. Wales & M.	1 5 1/2	1 1 1/2
A	Barnstaple .. S.W. Counties	1 5 1/2	1 1 1/2	A	Gosport .. S. Counties	1 5 1/2	1 1 1/2	A	Portsmouth .. S. Counties	1 5 1/2	1 1 1/2
A	Barrow .. N.W. Counties	1 5 1/2	1 1 1/2	A	Grantham .. Mid. Counties	1 5 1/2	1 1 1/2	A	Preston .. N.W. Counties	1 5 1/2	1 1 1/2
A	Barry .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Gravesend .. S. Counties	1 5 1/2	1 1 1/2	A	QUEENSFERRY .. N.W. Counties	1 5 1/2	1 1 1/2
B	Basinstoke .. S.W. Counties	1 5 1/2	1 1 1/2	A	Greenock .. Scotland	1 5 1/2	1 1 1/2	A	R		
A	Bath .. S.W. Counties	1 5 1/2	1 1 1/2	A	Grimby .. Yorkshire	1 5 1/2	1 1 1/2	A	READING .. S. Counties	1 5 1/2	1 1 1/2
A	Batley .. Yorkshire	1 5 1/2	1 1 1/2	B	Guildford .. S. Counties	1 5 1/2	1 1 1/2	B	Reigate .. S. Counties	1 5 1/2	1 1 1/2
A	Bedford .. E. Counties	1 5 1/2	1 1 1/2	A	HALIFAX .. Yorkshire	1 5 1/2	1 1 1/2	A	Retford .. Mid. Counties	1 5 1/2	1 1 1/2
A	Berwick-on-Tweed .. N.E. Coast	1 5 1/2	1 1 1/2	A	Hanley .. Mid. Counties	1 5 1/2	1 1 1/2	A	Rhondda Valley .. S. Wales & M.	1 5 1/2	1 1 1/2
A	Bewdley .. Mid. Counties	1 5 1/2	1 1 1/2	A	Harrogate .. Yorkshire	1 5 1/2	1 1 1/2	A	Ripon .. Yorkshire	1 5 1/2	1 1 1/2
B	Bicester .. S. Counties	1 5 1/2	1 1 1/2	A	Hartlepool .. N.E. Coast	1 5 1/2	1 1 1/2	A	Rochdale .. N.W. Counties	1 5 1/2	1 1 1/2
A	Birkenhead .. N.W. Counties	1 5 1/2	1 1 1/2	A	Haslingfield .. S. Counties	1 5 1/2	1 1 1/2	A	Rochester .. S. Counties	1 5 1/2	1 1 1/2
A	Birmingham .. Mid. Counties	1 5 1/2	1 1 1/2	A	Hatfield .. S. Counties	1 5 1/2	1 1 1/2	A	Rugby .. N.W. Counties	1 5 1/2	1 1 1/2
A	Bishop Auckland .. N.E. Coast	1 5 1/2	1 1 1/2	B	Havant .. S.W. Counties	1 5 1/2	1 1 1/2	A	Rugley .. Mid. Counties	1 5 1/2	1 1 1/2
A	Blackburn .. N.W. Counties	1 5 1/2	1 1 1/2	A	Hereford .. E. Counties	1 5 1/2	1 1 1/2	A	Runeorn .. N.W. Counties	1 5 1/2	1 1 1/2
A	Blackpool .. N.E. Coast	1 5 1/2	1 1 1/2	A	Hertford .. E. Counties	1 5 1/2	1 1 1/2	A	S		
A	Blyth .. S. Counties	1 5 1/2	1 1 1/2	A	Heysham .. N.W. Counties	1 5 1/2	1 1 1/2	A	St. Albans .. E. Counties	1 5 1/2	1 1 1/2
B	Bognor .. S. Counties	1 5 1/2	1 1 1/2	A	Howden .. N.E. Coast	1 5 1/2	1 1 1/2	A	St. Helens .. N.W. Counties	1 5 1/2	1 1 1/2
A	Bolton .. N.W. Counties	1 5 1/2	1 1 1/2	A	Huddersfield .. Yorkshire	1 5 1/2	1 1 1/2	A	Salisbury .. S.W. Counties	1 5 1/2	1 1 1/2
A	Boston .. Mid. Counties	1 5 1/2	1 1 1/2	A	Hull .. Yorkshire	1 5 1/2	1 1 1/2	A	Scarborough .. Yorkshire	1 5 1/2	1 1 1/2
A	Bournemouth .. S. Counties	1 5 1/2	1 1 1/2	A	ILKLEY .. Yorkshire	1 5 1/2	1 1 1/2	A	Sheffield .. Mid. Counties	1 5 1/2	1 1 1/2
B	Bovey Tracey .. S.W. Counties	1 5 1/2	1 1 1/2	A	Immingham .. Mid. Counties	1 5 1/2	1 1 1/2	A	Shrewsbury .. Mid. Counties	1 5 1/2	1 1 1/2
A	Bradford .. Yorkshire	1 5 1/2	1 1 1/2	A	Ipswich .. E. Counties	1 5 1/2	1 1 1/2	A	Skipton .. Yorkshire	1 5 1/2	1 1 1/2
A	Bridgend .. E. Counties	1 5 1/2	1 1 1/2	B	Ise of Wight .. S. Counties	1 5 1/2	1 1 1/2	A	Slough .. S. Counties	1 5 1/2	1 1 1/2
A	Bridlington .. Yorkshire	1 5 1/2	1 1 1/2	A	JARROW .. N.E. Coast	1 5 1/2	1 1 1/2	A	Solihull .. Mid. Counties	1 5 1/2	1 1 1/2
A	Brighouse .. Yorkshire	1 5 1/2	1 1 1/2	A	KEIGHLEY .. Yorkshire	1 5 1/2	1 1 1/2	A	Southampton .. S. Counties	1 5 1/2	1 1 1/2
A	Brighton .. S. Counties	1 5 1/2	1 1 1/2	A	Kendal .. N.W. Counties	1 5 1/2	1 1 1/2	A	Southend-on-Sea .. E. Counties	1 5 1/2	1 1 1/2
A	Bristol .. S.W. Counties	1 5 1/2	1 1 1/2	A	Keswick .. N.W. Counties	1 5 1/2	1 1 1/2	A	Southport .. N.W. Counties	1 5 1/2	1 1 1/2
B	Brixham .. S.W. Counties	1 5 1/2	1 1 1/2	A	Kettering .. Mid. Counties	1 5 1/2	1 1 1/2	A	Stafford .. N.E. Coast	1 5 1/2	1 1 1/2
A	Bromsgrove .. Mid. Counties	1 5 1/2	1 1 1/2	A	Kidderminster .. Mid. Counties	1 5 1/2	1 1 1/2	A	Stirling .. Scotland	1 5 1/2	1 1 1/2
B	Bromyard .. Mid. Counties	1 5 1/2	1 1 1/2	B	King's Lynn .. E. Counties	1 4 1/2	1 0 1/2	A	Stockport .. N.W. Counties	1 5 1/2	1 1 1/2
A	Burnley .. N.W. Counties	1 5 1/2	1 1 1/2	A	LANCASTER .. N.W. Counties	1 5 1/2	1 1 1/2	A	Stockton-on-Tees .. E. Counties	1 5 1/2	1 1 1/2
A	Burslem .. Mid. Counties	1 5 1/2	1 1 1/2	A	Leamington .. Mid. Counties	1 5 1/2	1 1 1/2	A	Stoke-on-Trent .. Mid. Counties	1 5 1/2	1 1 1/2
A	Burton-on-Trent .. Mid. Counties	1 5 1/2	1 1 1/2	A	Leeds .. Mid. Counties	1 5 1/2	1 1 1/2	A	Sunderland .. N.E. Coast	1 5 1/2	1 1 1/2
A	Bury .. N.W. Counties	1 5 1/2	1 1 1/2	A	Leicester .. Mid. Counties	1 5 1/2	1 1 1/2	A	Swansea .. S. Wales & M.	1 5 1/2	1 1 1/2
A	Buxton .. N.W. Counties	1 5 1/2	1 1 1/2	A	Leigh .. N.W. Counties	1 5 1/2	1 1 1/2	A	Swindon .. S.W. Counties	1 5 1/2	1 1 1/2
A	C			A	Lewes .. S. Counties	1 5 1/2	1 1 1/2	A	T		
A	CAMBRIDGE .. E. Counties	1 5 1/2	1 1 1/2	A	Lichfield .. Mid. Counties	1 5 1/2	1 1 1/2	B	TAMWORTH .. N.W. Counties	1 5 1/2	1 1 1/2
B	Canterbury .. S. Counties	1 5 1/2	1 1 1/2	A	Lincoln .. Mid. Counties	1 5 1/2	1 1 1/2	A	Taunton .. S.W. Counties	1 5 1/2	1 1 1/2
A	Cardiff .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Liverpool .. N.W. Counties	1 5 1/2	1 1 1/2	A	Teesdale Dist. .. N.E. Counties	1 5 1/2	1 1 1/2
A	Carlisle .. N.W. Counties	1 5 1/2	1 1 1/2	A	Llandudno .. N.W. Counties	1 5 1/2	1 1 1/2	A	Teignmouth .. S.W. Coast	1 5 1/2	1 1 1/2
B	Carmarthen .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Llanelli .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Todmorden .. Yorkshire	1 5 1/2	1 1 1/2
B	Carnarvon .. N.W. Counties	1 5 1/2	1 1 1/2	A	London (12-miles radius)	1 5 1/2	1 1 1/2	A	Torquay .. S.W. Counties	1 5 1/2	1 1 1/2
B	Carnforth .. N.W. Counties	1 5 1/2	1 1 1/2	A	Do. (12-15 miles radius)	1 5 1/2	1 1 1/2	B	Truro .. S.W. Counties	1 5 1/2	1 1 1/2
A	Castleford .. Yorkshire	1 5 1/2	1 1 1/2	A	Long Eaton .. Mid. Counties	1 5 1/2	1 1 1/2	A	Tunbridge Wells .. S. Counties	1 5 1/2	1 1 1/2
A	Chatham .. E. Counties	1 5 1/2	1 1 1/2	A	Loughborough .. Mid. Counties	1 5 1/2	1 1 1/2	A	Tunstall .. Mid. Counties	1 5 1/2	1 1 1/2
A	Chelmsford .. E. Counties	1 5 1/2	1 1 1/2	A	Luton .. E. Counties	1 5 1/2	1 1 1/2	A	Tyne District .. N.E. Coast	1 5 1/2	1 1 1/2
A	Cheltenham .. S.W. Counties	1 5 1/2	1 1 1/2	A	Lytham .. N.W. Counties	1 5 1/2	1 1 1/2	A	W		
A	Chester .. N.W. Counties	1 5 1/2	1 1 1/2	A	Macclesfield .. N.W. Counties	1 5 1/2	1 1 1/2	A	WALSLEY .. Yorkshire	1 5 1/2	1 1 1/2
A	Chesterfield .. Mid. Counties	1 5 1/2	1 1 1/2	A	Maidstone .. S. Counties	1 5 1/2	1 1 1/2	A	Walsall .. Mid. Counties	1 5 1/2	1 1 1/2
B	Chichester .. S. Counties	1 5 1/2	1 1 1/2	A	Malvern .. S. Counties	1 5 1/2	1 1 1/2	A	Warrington .. N.W. Counties	1 5 1/2	1 1 1/2
A	Chorley .. N.W. Counties	1 5 1/2	1 1 1/2	A	Manchester .. N.W. Counties	1 5 1/2	1 1 1/2	A	Warwick .. Mid. Counties	1 5 1/2	1 1 1/2
B	Cirencester .. S. Counties	1 5 1/2	1 1 1/2	A	Mansfield .. Mid. Counties	1 5 1/2	1 1 1/2	A	Wellington .. Mid. Counties	1 5 1/2	1 1 1/2
A	Clitheroe .. N.W. Counties	1 5 1/2	1 1 1/2	B	Margate .. Mid. Counties	1 5 1/2	1 1 1/2	A	West Bromwich .. Mid. Counties	1 5 1/2	1 1 1/2
A	Clydebank .. Scotland	1 5 1/2	1 1 1/2	A	Matlock .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Whitby .. Yorkshire	1 5 1/2	1 1 1/2
A	Coalville .. Mid. Counties	1 5 1/2	1 1 1/2	A	Middlesbrough .. N.E. Coast	1 5 1/2	1 1 1/2	A	Whitby .. Yorkshire	1 5 1/2	1 1 1/2
A	Colchester .. E. Counties	1 5 1/2	1 1 1/2	A	Middlewich .. N.W. Counties	1 5 1/2	1 1 1/2	A	Widnes .. N.W. Counties	1 5 1/2	1 1 1/2
A	Colne .. N.W. Counties	1 5 1/2	1 1 1/2	B	Minehead .. S.W. Counties	1 5 1/2	1 1 1/2	A	Wigan .. N.W. Counties	1 5 1/2	1 1 1/2
A	Colwyn Bay .. N.W. Counties	1 5 1/2	1 1 1/2	B	Monmouth .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Winchester .. S. Counties	1 5 1/2	1 1 1/2
A	Consett .. N.E. Coast	1 5 1/2	1 1 1/2	A	Morecambe .. N.W. Counties	1 5 1/2	1 1 1/2	A	Wolverhampton .. Mid. Counties	1 5 1/2	1 1 1/2
A	Conway .. N.W. Counties	1 5 1/2	1 1 1/2	A	MANTWICH .. N.W. Counties	1 5 1/2	1 1 1/2	A	Worcester .. Mid. Counties	1 5 1/2	1 1 1/2
A	Coventry .. Mid. Counties	1 5 1/2	1 1 1/2	A	Neath .. S. Wales & M.	1 5 1/2	1 1 1/2	A	Wrexham .. Yorkshire	1 5 1/2	1 1 1/2</

PAINTER		cwt.		gall.		b. s. d.	
White lead in cwt. casks	2	3
Linseed oil	2	9
Boiled oil	2	9
Turpentine	4	1
Patent knotting	2	16
Distemper, washable	cwt.	2	6
" ordinary	2	0
Whitening	4	4
Size, double	frkin	..	3	0
Copal varnish	gall.	..	13	e
Flat varnish	14	0
Outside varnish	1	16
White enamel	1	15
Ready mixed paint
Brandy black	7	0

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	2
" " to trenches	"	5	3
" " extra, only if left in	Y.C.	10	0
Hardcore, filled in and rammed	"	1	0
Portland cement concrete in foundations (6-1)	"	12	6
" " (4-2-1)	"	1	6
Finishing surface of concrete, space face	Y.S.	7	0

DRAINLAYER

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

BRICKLAYER

	£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	26	10
" " in cement	"	27	12
" " Stocks in cement	"	34	0
" " Blues in cement	"	50	0
Extra only for circular on plan	"	2	0
" " backing to masonry	"	1	10
" " raising on old walls	"	2	0
" " underpinning	"	5	10
Fair Face and pointing internally	F.S.	1	1
Extra over fletton brickwork for picked stock facings and pointing	"	11	8
" " " red brick facings and pointing	"	1	4
" " " blue brick facings and pointing	"	3	6
" " " glazed brick facings and pointing	"	7	1
Tuck pointing	"	10	3
Weather pointing in cement	"	10	3
Slate dampcourse	"	1	1
Vertical dampcourse	"	1	1

ASPHALTER

	£	s.	d.
1" Horizontal dampcourse	Y.S.	4	9
1" Vertical dampcourse	"	7	9
1" paving or flat	"	6	3
1" paving or flat	"	7	6
1" x 6" skirting	F.R.	1	0
Angle fillet	"	2	1
Rounded angle	"	2	1
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

SLATER AND TILER

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

CARPENTER AND JOINER

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

CARPENTER AND JOINER—continued

	£	s.	d.
1 1/2" deal moulded sashes of average size	F.S.	1	9
1 1/2" deal cased frames double hung, of 6" x 3" oak sills, 1 1/2" pulley stiles, 1 1/2" heads, 1" inside and outside linings, 8" parting beads, and with brass faced axle pulleys, etc., fixed complete	"	1	17
Extra only for moulded horns	"	3	7
1 1/2" deal four-panel square, both sides, door	Each	3	10
1 1/2" " but moulded both sides	F.S.	2	0
4" x 3" deal, rebated and moulded frames	"	2	8
4 1/2" x 3 1/2" " "	"	2	4
1 1/2" deal tongued and moulded window board, on and including deal bearers	"	3	0
1 1/2" deal treads, 1" risers in staircases, and tongued and grooved together on and including strong fir carriages	F.R.	1	0
1 1/2" deal moulded wall strings	"	1	4
1 1/2" " outer strings	F.S.	1	9
Ends of treads and risers housed to string	"	2	6
3" x 2" deal moulded handrail	"	2	1
1" x 1" deal balusters and housing each end	Each	1	9
1 1/2" x 1 1/2" deal wrought framed newels	F.R.	1	3
Extra only for newel caps	Each	2	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
Do., stanchions with riveted caps and bases and do.	"	19	0
Mild steel bar reinforcement, 1/2" 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	0
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	0

PLUMBER

	£	s.	d.
Milled lead and labour in flats	cwt.	1	18
Do. in flashings	"	2	2
Do. in covering to turrets	"	2	7
Do. in soakers	"	1	13
Labour to welled edge	F.R.	3	1
Open copper nailing	"	3	3
Close	"	4	4
Lead service pipe and fixing with pipe	s. d.	s. d.	s. d.
Do. soil pipe and fixing with cast lead	F.R.	10	1
Do. to stop ends	Each	6	1
Boiler screws and unions	"	3	3
Lead traps	"	3	9
Screw down bib	"	5	0
Valves	"	6	9
Do. stop cocks	"	9	6
4" cast-iron 1/2-rd. gutter and fixing	"	11	0
Extra, only stop ends	"	12	6
Do. angles	"	—	—
Do. outlets	"	—	—
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
1/2" screeding in Portland cement and sand or tiling, wood block floor, etc.	"	1	5
Do. vertical	"	1	7
Rough render on walls	"	1	2
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 for lathing	"	4	6
Keene's cement, angle and arris	F.R.	1	1
Arris	"	1	1
Rounded angle, small	"	3	3
Plain cornices in plaster, including dubbing out, per 1" girth	"	1	1
1" granolithic pavings	Y.S.	3	6
1 1/2" x 6" white glazed wall tiling and fixing on prepared screed	"	4	6
9" x 3" " "	"	17	6
Extra, only for small quadrant angle	F.R.	2	8

GLAZIER

	£	s.	d.
21 oz. sheet glass and glazing with putty	F.S.	6	1
26 oz. do. and do.	"	7	1
Flemish, Arctic Figured (white) and glazing with putty	"	1	1
Cathedral glass and do.	"	1	2
Glazing only, British polished plate	"	7	0
Extra, only if in beds	"	2	0
Washleather	F.R.	4	0

PAINTER

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

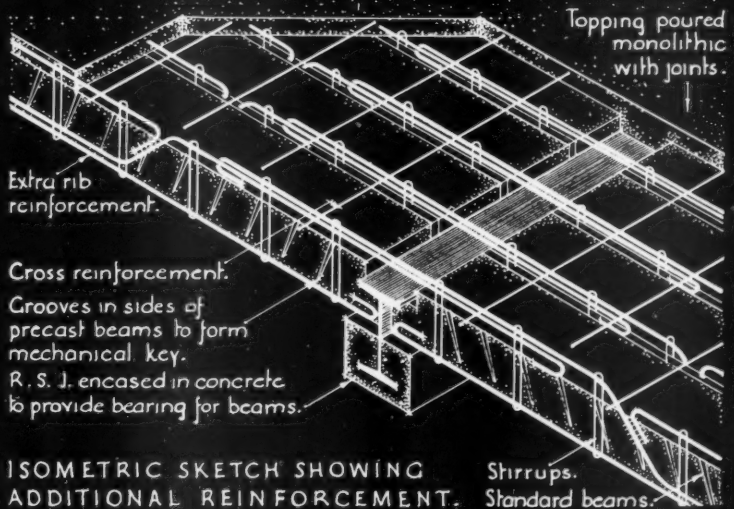
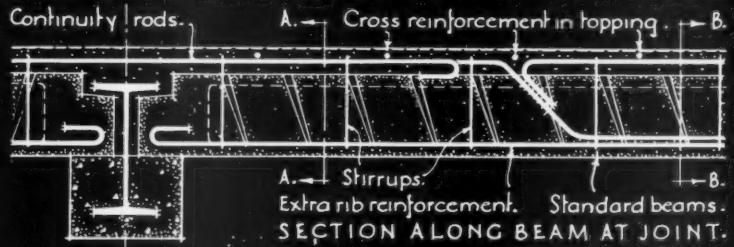
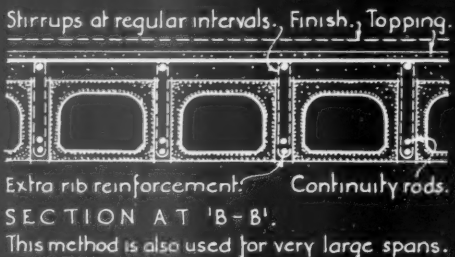
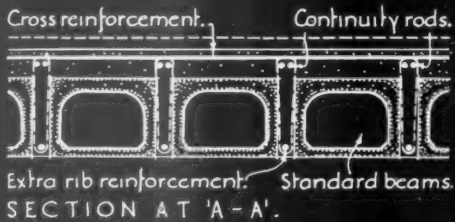
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A SIEGWART PRECAST FLOOR SPECIALLY REINFORCED FOR HEAVY LOADS.
Scale - $\frac{3}{4}$ inch = 1 foot.

FLOORS FOR HEAVY TRAFFIC:

Sieewart floors are specially suitable where heavy traffic is usual.

For this type of work a specially reinforced composite floor is formed of standard precast beams maintaining the non-centre principle. It can be constructed to take the heaviest traffic such as lorries of 10 ton axle loading and more.



CONSTRUCTION OF PITCHED ROOFS WITH SIEGWART PRECAST BEAMS :

MANSARD ROOF.

Scale - $\frac{3}{4}$ inch = 1 foot.

R. S. J. encased in concrete.

Sieewart beams may also be used for dormer heads.

Patent glazing.

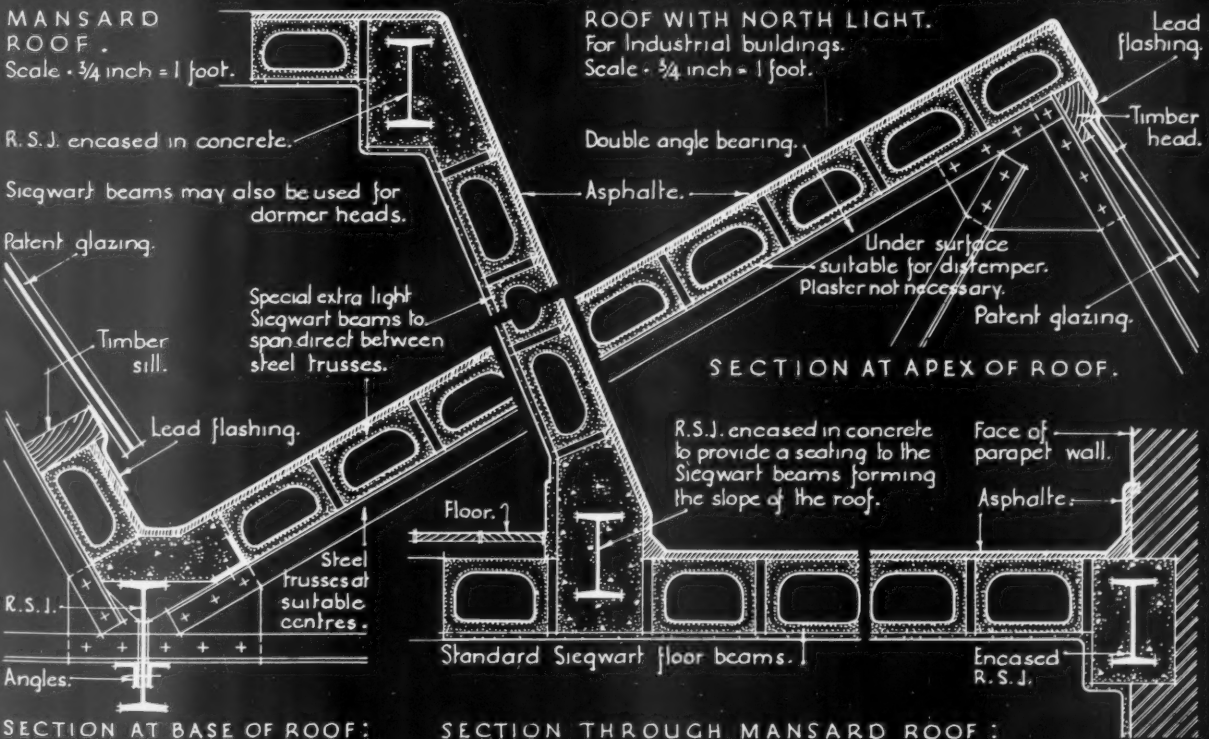
Timber sill.

Lead flashing.

R. S. J.

Angles.

SECTION AT BASE OF ROOF:



Information from Sieewart Fireproof Floor Co. Ltd.

INFORMATION SHEET : SIEGWART PRECAST FLOORS : No 4.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WCI. *Wm. A. Baynes*

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INFORMATION SHEET

• 322 •

FLOOR AND ROOF CONSTRUCTION

Type of Product : Siegwart Precast Floors

This is the fourth of a series of Sheets dealing with the Siegwart system of precast floor construction, and shows the type of floor recommended for heavy duty, and the use of the standard Siegwart beams for pitched roofs and mansards.

Heavy Duty Floors :

As shown in the details, this floor consists of precast beams with longitudinal and cross reinforcement introduced into the joints between beams and over the top of the beams. This forms a composite floor of precast and in situ concrete and of self-centering character. A positive mechanical key is provided between the precast members and the ribs by means of sloping grooves cast in the sides of the former.

Precast Beams :

The precast beams used are of standard type reinforced according to the requirements of the design. The reinforcement in the precast beams is not shown in these details to avoid confusion with the reinforcement in the ribs.

For details of standard beams, see previous Sheets.

Pitched and Mansard Roofs :

Special light beams of standard type are manufactured for use in roof work as shown in these details.

In this work a bearing of concrete or steel is provided at the foot, and the precast beams, which may run either horizontally or ver-

tically, are built up the slope of the roof from this bearing.

The bearing of the ends of the precast beams is usually on a concrete beam or, in the case of steelwork, on a double angle member, giving the necessary bearing width (usually 3 in. for each beam).

Soffits :

The beams manufactured for this work have an undersurface suitable for distemping direct and are not usually plastered.

Dormers and Other Projections :

The formation of dormers and other projections is carried out with the general roofing work. Cheeks of dormers are formed in concrete or framed in steel, and precast beams used for roofing or filling-in as required.

Design and Construction :

The company undertakes the design, manufacture and erection of hollow precast concrete floors and roofs on the Siegwart system of construction and all preparatory work, such as concrete casings to steelwork, etc. For further details see Sheets Nos. 266, 285 and 307.

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

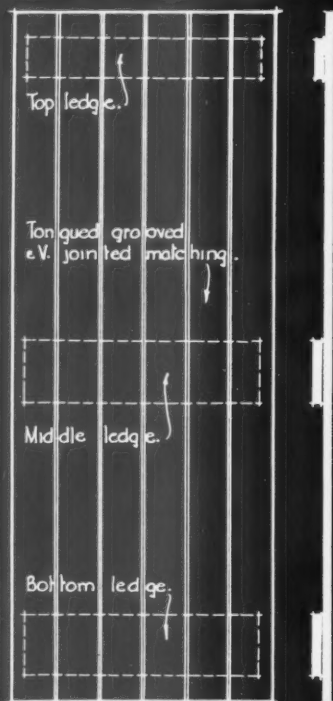
Manchester : Millgate Buildings,
18, Long Millgate
Telephone : Manchester, Blackfriars 3033

Glasgow : 121 St. Vincent Street
Telephone : Central 7277

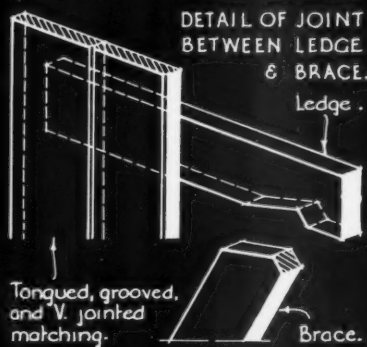
Belfast : c/o Robert Kirk, Ltd.,
Exchange Street
Telephone : Belfast 24681

Leicester : Enderby
Telephone : Narborough, Leicester 67

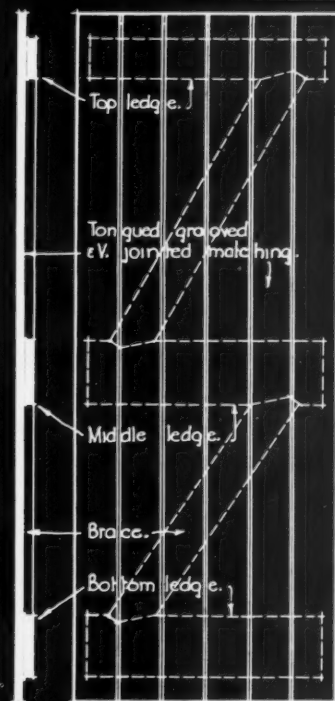
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LEDGED AND MATCHED Section.
DOOR :

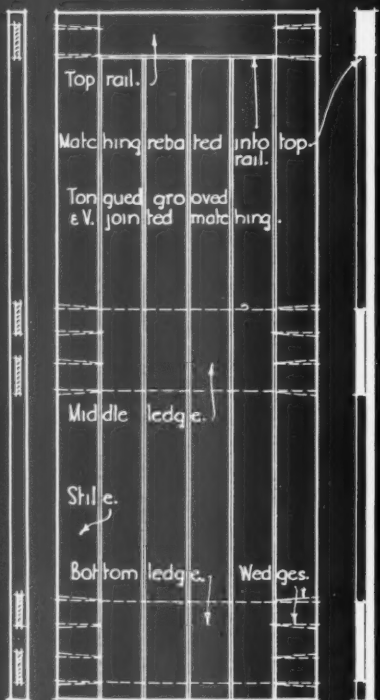


TYPES OF JOINTING TO MATCHING:
Tongued, grooved, & V. jointed matching.

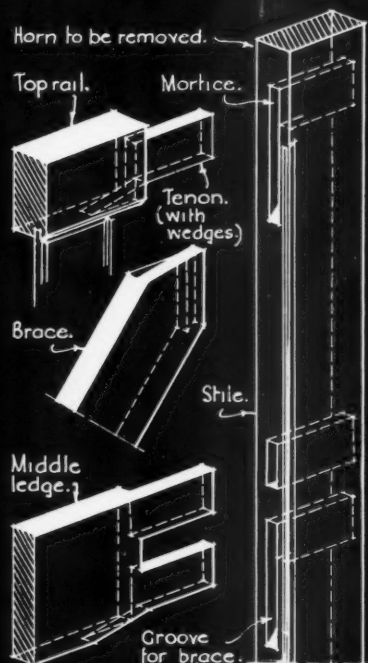


Section. LEDGED, BRACED AND
MATCHED DOOR:

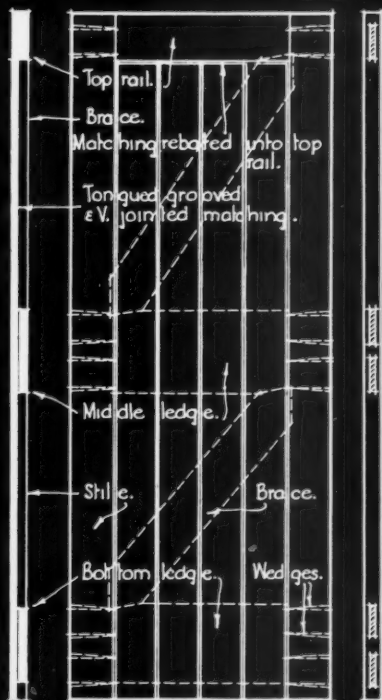
ISOMETRIC DETAILS OF A
FRAMED, LEDGED, BRACED
AND MATCHED DOOR



FRAMED, LEDGED AND Section.
MATCHED DOOR:
Elevation of edge of door.



Details for framed, ledged & matched
door similar but without the brace.



Section. FRAMED, LEDGED, BRACED,
AND MATCHED DOOR:
Elevation of edge of door.

Information from The Timber Development Association.

INFORMATION SHEET: TYPES OF DOOR: LEDGED & MATCHED DOORS-2.
SIR JOHN BURNET TAIT AND LORNE, ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. *Orla. G. Baynes.*

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INFORMATION SHEET

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DOORS

This Sheet sets out several types of framed or ledged doors, and gives details of the jointing of the frame, ledges, braces, etc. It should be noted that the details given are typical only, there being no accepted standard details.

Sizes of Members :

No dimensions of wood members have been given, as the size used will depend on a variety of circumstances such as the size of the door, the quality of the job, the timber used, etc.

The following dimensions, however, laid down as minimum sizes in the British Standard Specification for doors, are :

The minimum finished thickness of covering	$\frac{3}{4}"$
The minimum nominal size of ledges.. ..	$4\frac{1}{2}" \times 1\frac{1}{4}"$
The minimum nominal size of braces	$4\frac{1}{2}" \times 1\frac{1}{4}"$

Ledged and Matched Doors :

This is the simplest form of door and can be readily made quickly and economically, there being no jointing or shaping required. Such lightly made doors show a tendency to twist and droop if subjected to hard treatment.

Twisting should be prevented by using only

well prepared straight grained timber, and the tendency to droop is reduced by nailing every board with two nails to each ledge, the nails being spaced diagonally opposite one another in the intersection of the board and ledge.

The "thickness" of the door is usually taken as the thickness of the matching used.

Ledged, Matched and Braced Doors :

These doors are essentially the same as those described above, but are much strengthened by the addition of braces. Braces should always run diagonally upwards from the hinged side of the door to resist drooping. Braces, in the details given, are shown housed into the ledges ; this is not always done, but it is recommended for all good work as it greatly increases the effectiveness of the braces.

Framed, Ledged and Matched Doors, and Framed, Ledged, Braced and Matched Doors :

In these types of door, all members forming the skeleton are morticed and tenoned together : the styles and top rail being the full thickness of the door as shown, and the middle and bottom rails being equal in thickness to the frame less the covering.

This door is exceptionally strong, especially when braced, and is unlikely to twist or droop. The framed skeleton holds its shape and can be made to fit closely to the rebate of the door frame.

British Standard Specification :

For full details see British Standard Specification for Doors, No. 459—1932.

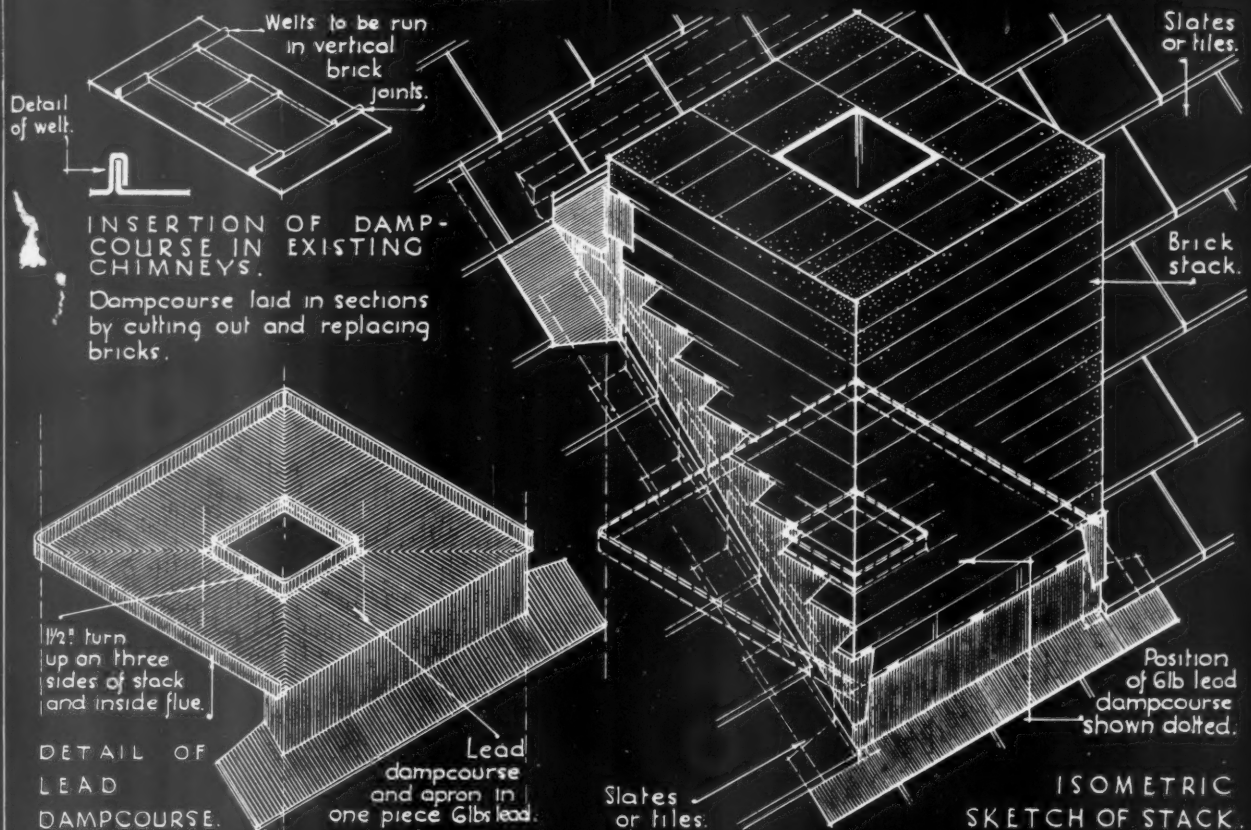
Information from : The Timber Development Association, Ltd.

Address : 69 Cannon Street, E.C.4

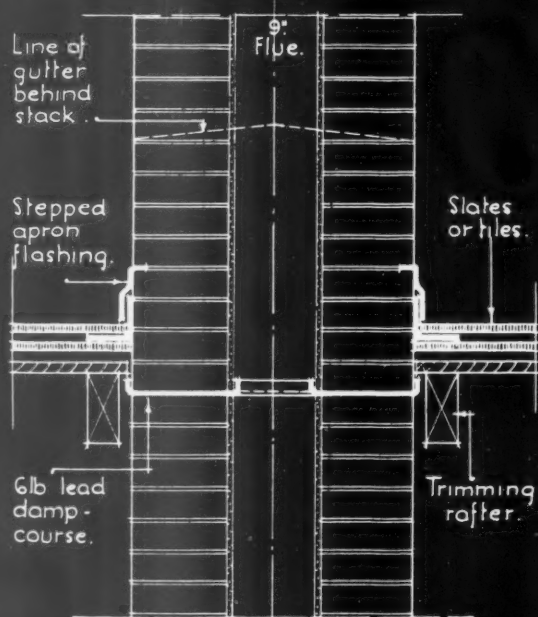
Telephone : City 2714

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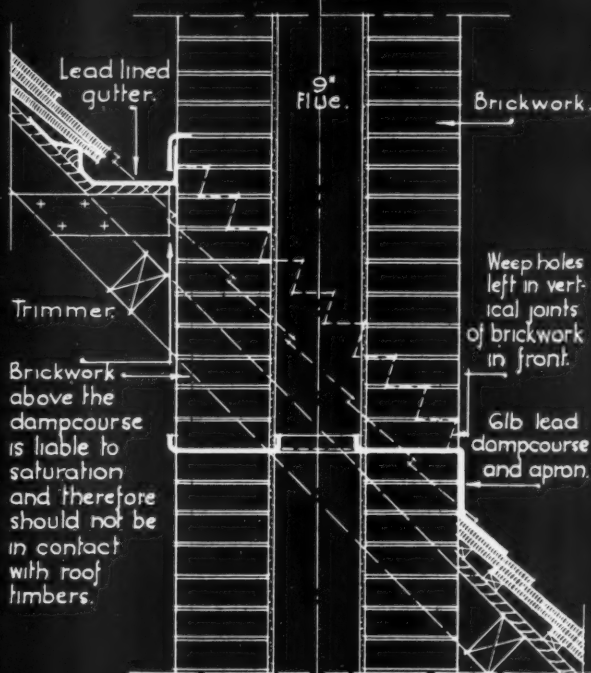
LEAD DAMPCOURSE TO CHIMNEY STACK : for use where roof space is unoccupied.



SECTIONS THRO' CHIMNEY STACK :



Section across slope of roof



Section along slope of roof

Information from the Lead Sheet & Pipe Development Council.

INFORMATION SHEET : THE USES OF LEAD IN BUILDING CONSTRUCTION : 17.

SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • *Alan G. Baynes.*

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INFORMATION SHEET

• 324 •

LEAD

Subject : Lead Dampcourse to Chimney Stacks

This Information Sheet is the third to be devoted to the flashing and waterproofing of chimneys ; it shows a method of providing a dampcourse which has been recommended by Messrs. Jones and Seward, Ltd., of Bournemouth.

Dampcourse :

As shown in the detail, the dampcourse when used in new work is in one piece, the edges being turned up on all four sides in the flue and on three of the outer sides of the stack ; on the fourth side, the lead is carried on down the face of the stack and on to the roofing. The dampcourse, therefore, forms a tray designed to catch water soaking through the brick and also any surface moisture, and to turn it out on to the roof, through weep-holes left in the brickwork.

Position of the Dampcourse :

This dampcourse, as the drawing shows, runs for the greater part below the line of the roof, and is therefore most suitable for use when the roof space is not used. If the roof space is to be used and a wall finish must be applied where the dampcourse occurs, it can

be battened over and covered with lath and plaster, wallboard or other material, but care must be taken that no timber comes into contact with the brickwork above the lead dampcourse.

Damage to Lead Up-turns :

In practice it is found that the up-turn of the lead, both outside and inside the flue, remains permanently in shape, and the inner up-turns are not damaged by the passage of chimney sweeping brushes.

Weight of Lead :

It is recommended that 6 lbs. lead should be used wherever possible, but Messrs. Jones and Seward, Ltd., state that 4 lbs. lead is frequently used with satisfactory results.

Protection of Lead :

This firm also state that it has not been found necessary to protect the lead from the actions of the lime or cement mortar used, but it is generally recommended that a bituminous coating should be applied to the lead as a precautionary measure.

Flashings :

The soakers and step flashings used in this detail are generally the same as those already detailed and described in previous Sheets.

Previous Sheets :

Previous Sheets of this series, which have been devoted to chimney flashings are Nos. 283 and 288.

Issued by :

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