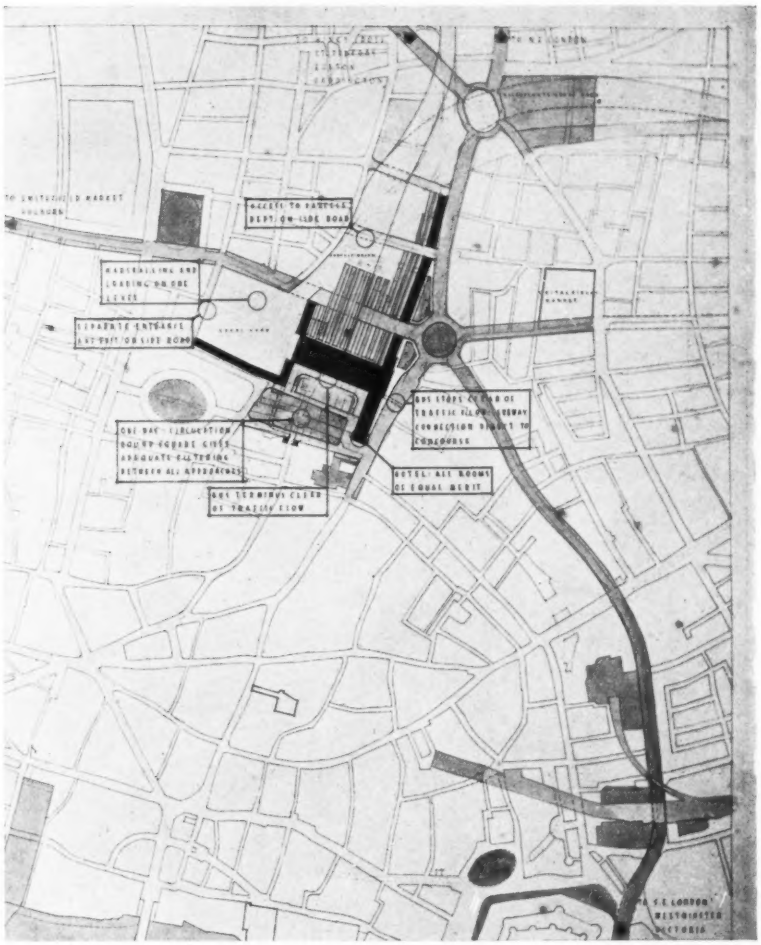
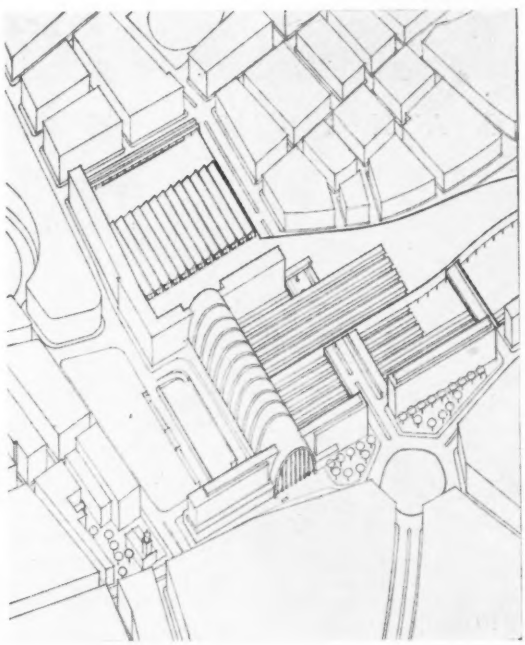
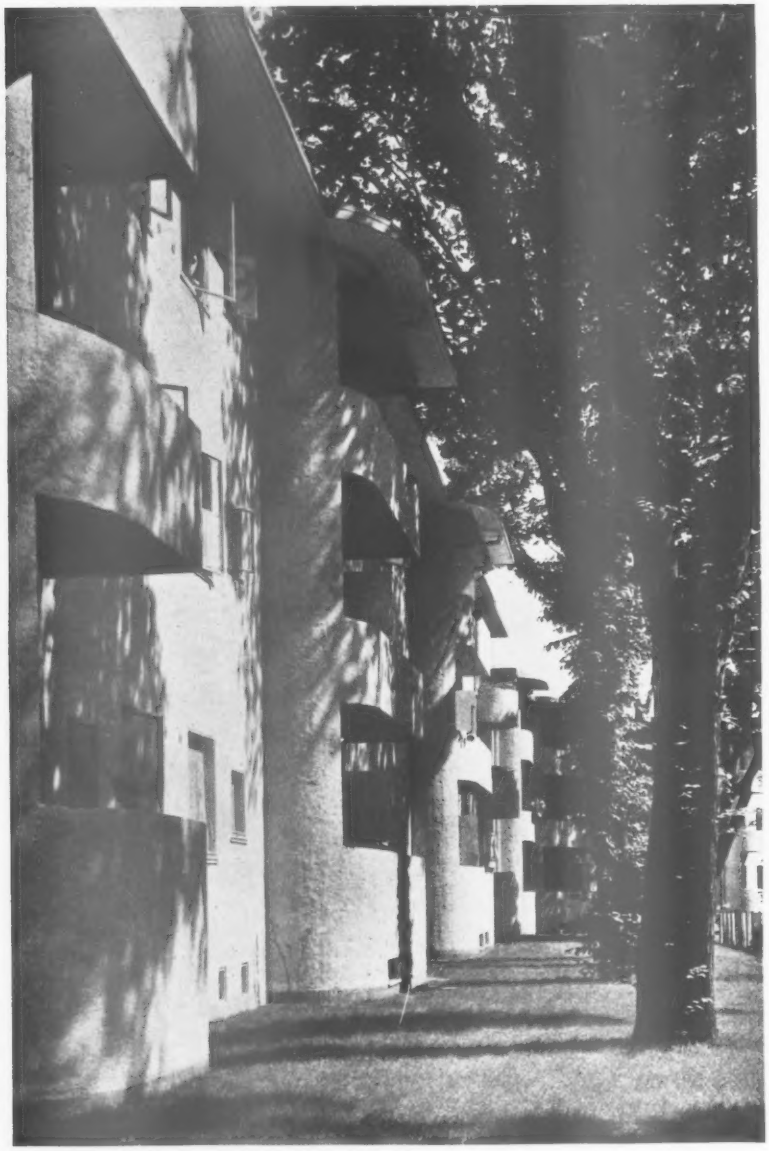
STUDENTS' WORK

ARCHITECTURAL ASSOCIATION



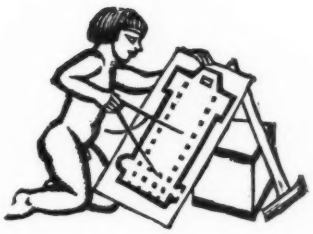


FROM the recent exhibition of students' work, Architectural Association School of Architecture: Scheme for the re-building of Liverpool Street and Broad Street Stations. By William Clarkson and Mordecai Pearlman



DANISH HOUSING

One of a series of new blocks of flats in the Ringparken, a suburb of Copenhagen. Architect: A. Skjot-Pedersen.



OVERCROWDING: THE NEXT STAGE

IN the leading article last week we summarized the results of the overcrowding survey in England and Wales, carried out according to the standard laid down in the Housing Act, 1935. 1,472 local authorities, out of a total of 1,536, submitted reports on the results of their surveys, and approximately 8,924,500 dwellings were inspected. Of these, 341,550—3·8 per cent.—were found to be overcrowded. The latest results of the survey carried out in Scotland, under the Housing (Scotland) Act, 1935, show that approximately 1,047,770 dwellings have been examined and, of these, 244,500 houses—or approximately 23 per cent.—were found to be overcrowded. In England and Wales the term "dwelling" is defined as "any premises used as a separate dwelling by members of the working-classes or of a type suitable for such use," and, in Scotland, as "any premises intended to be used as a separate dwelling, the rateable value of which does not exceed £45."

Within a year, therefore, of the passing of the two Acts, the first stage in the Government's plan to abolish overcrowding has been reached. Local authorities are now fully aware of the extent of overcrowding in their areas; and they are now endeavouring to ascertain the number of new houses required. August 1 was the date fixed by the Minister of Health for the submission, by local authorities in England and Wales, of the number of new houses required, and the number and sizes of those which they would probably find it necessary to provide themselves. This is obviously a much harder task than the survey itself, and it is probable that the majority of major local authorities will require more time to complete their returns, although some bodies have already submitted their reports. The size of this problem can be judged from the following extract from the report:

> In making this estimate the authorities will have regard not only to the requirements of the families actually overcrowded at the time of the survey, but also to those families likely to become overcrowded, through children growing up, within the next two years. Their estimates will also take into account the fact that overcrowding can be abated in a variety of ways—e.g. in their own houses by a redistribution of families—and will have regard to accommodation rendered vacant by the removal of overcrowded families and to any vacant houses in their area in so far as they are in excess of the normal proportion necessary to ensure mobility.

It may be thought curious that the statistical returns received from the local authorities do not give any accurate figures as to the additional number of houses which would have been necessary at the time of the survey to relieve the cases of overcrowding. But, on careful consideration, it will be seen that this figure can only be obtained from information supplied by each local authority after it has carefully considered the problem of its own area. Nevertheless, the Minister is firmly convinced that the total number of new houses necessary will obviously be substantially less than the actual number of families found to be overcrowded:

> Reports of housing needs already received from some authorities suggest that the total estimate of new houses required is likely to be well under 50 per cent. of the total number of overcrowded families as found by the survey. Assuming, however, that it might be as much as 60 per cent., then the number of new houses required would be about 200,000. This figure is not put forward as any sort of reliable estimate, but solely to obtain an idea of the extent of the building problem involved in abating overcrowding.

Thus, we need roughly 200,000 new houses in England and Wales and 150,000 in Scotland—otherwise, some 350,000 for the three countries. Not, it will be agreed, a great number, considering the nature of the problem. And this figure may well be reduced when the complete returns are available. Nevertheless, it must be remembered that the overcrowding standard laid down in the Act does not represent any ideal standard of housing, but the minimum which is, in the view of Parliament, tolerable, while at the same time capable of immediate or early enforcement. One cannot help but agree with the report when it states that the standard was fixed at about the right level to achieve its object. Once the present standard has been reached throughout the country, it would not be unreasonable to assume that the task of achieving a new standard could be completed within a comparatively short number of years.

When the time comes for local authorities to get to grips with the problem of abating overcrowding, it is to be hoped that the Minister will carry out his promise to secure that the work be executed under architectural control. In this respect the lead was taken by the London County Council in July, 1935, when it appointed architects in private practice to assist its own housing department. That the architectural profession is aware of the large amount of work which will result from the overcrowding campaign was manifest in May last, when a deputation from the R.I.B.A. called upon the Minister of Health and asked him to encourage the employment of qualified architects in connection with the work. It was to this deputation that the Minister promised that he would use his best offices to secure within the limits of local government good design and good planning, and that he recognized the desirability of employing professional architects over as wide a field as possible—particularly in housing work.

The Architects' Journal
Westminster, S.W.1
Telephones: Whitehall
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NOTES & TOPICS

NEW BYELAWS

FOLLOWING quickly on the publication of the Ministry's comments on the new Public Health Bill, the L.C.C. publishes this week its new Building Byelaws.

*

This is a most important document: it concentrates almost entirely on revised rules for the determination of the minimum strength in buildings—in brick and stone, in steelwork, and in reinforced concrete.

*

For the first time these Byelaws make full reference to the more important British Standard Specifications (most of them schedules or definitions rather than specifications); indeed, several B.S.S. become an integral part of the new regulations.

*

In the near future these Byelaws will supersede large portions of the older Acts—the Metropolis Management Acts, and even a large section of the London Building Act of 1930.

*

The new Byelaws are at present only proposals. The L.C.C. is open to receive objections in detail or in principle, within six weeks from tomorrow, Friday, August 14.

*

With the best will in the world, Byelaws are difficult things to draft—it is up to the profession to check these new ones through carefully in relation to practical modern building, and so assist the L.C.C. to adopt finally new Byelaws which will not quickly be out of date.

TIMBER

Curiously enough, the new Byelaws make no mention of timber in construction, and on enquiry I find that this is due to incomplete research into the grading and strengths of timber, on which regulations can be based.

*

Investigation is proceeding, and before long sufficient data should be forthcoming. But it is rather curious that, when it comes to the point, our oldest building material has only comparatively recently been the subject of really scientific research into its strengths and possibilities.

*

The Forests Products Research Laboratories at Princes Risborough are doing excellent work to overcome the deficiency, and it is interesting to note that on Thursday afternoon, September 24, a visit to the Laboratories is being arranged for members of the R.I.B.A., the Architectural Association and the Timber Development Association.

T. E. LAWRENCE AS A DESIGNER

The interest of T. E. Lawrence in architecture was one of the many by-ways of his ubiquitous mind, and the latest published biography by Vyvyan Richards, *Portrait of T. E. Lawrence*, discloses the growth of his taste in architectural design. This book shows Lawrence as an undergraduate, shows his bewildering riches of erudition, which he occasionally displayed with an impish appropriateness for the confounding of elderly experts.

*

His architectural roots were deep sunk in archæology; his spiritual apprehension of design was conditioned by an affection for the ideology of William Morris that was real and vivid and sincere. Incidentally, one learns from this most understanding of books that Lawrence had a passion for carving, and that a Nonconformist church somewhere on the outskirts of Oxford is embellished with his carvings, for he persuaded the foreman when the church was being built to let him try his hand at some ornamental work.

*

That church ought to be identified, for the author unfortunately gives no clue to its whereabouts. Lawrence's creation of a luxurious bath in his quarters during one of his Syrian research expeditions is described; he melted soft Roman glass, and constructed a bathroom with continuous walls, floor and ceiling from this ductile material.

*

He was a craftsman, and proud of it: a born master of materials, and a true interpreter of what William Morris meant—though, of course, what anybody meant was apt to take on a unique complexion when Lawrence was handling an idea, a doctrine, a craft, or a profession.

*

He had a profound admiration for mediæval architecture: an emotional regard for its lucent glories, but almost a mechanic's eye for its engineering achievements.

ACOUSTIC PROBLEMS

Sheffield is disturbed about the acoustics of its City Hall. The Hall, with the details of the platform and seating, was, we are told, decided after much expert advice had been taken and approved by the building committee.

*

Yet the building has not worked out in practice as an ideal hall. There is an echo, it has little or no resonance and at the same time sound is over-absorbed—there is too little reverberation.

*

The defects, if they may so be called, seem to bear little relation with the curved shape of the hall—they can mainly

A "still" from the Gaumont-British film of the R.I.B.A. which has been prepared under the auspices of the Film Sub-Committee of the R.I.B.A. Public Relations Committee. It shows the President, Percy E. Thomas, seated in the Gaumont-British sound-recording studio, about to start his running commentary on the pictures which follow of the Portland Place building. The photograph is reproduced by the courtesy of the "R.I.B.A. Journal."

be traced to the finish of the structure. B.B.C. experts have decided, after weeks of investigation, that nothing practical can be done.

*

Another hall, the dining hall at Haileybury, has similar architectural grandeur to the city hall at Sheffield, and it too suffers acoustically. But at Haileybury a curved shape—a saucer dome with a centre at about floor level—adds to the interest of the acoustic problem.

*

We appear to have still far to go before a fine art and a fine science can combine to form a fine architecture.

HANS POELZIG

The death of Professor Hans Poelzig will be regretted widely by his colleagues throughout the world. His work was always charming, fresh, vigorous and new—yet it always showed matureness.

*

As a great teacher as well as a great architect, Poelzig combined in one man a remarkable balancing influence between extremes—between stark structure and sheer decorative form. Not timidly or defensively—the newness of his own work shows that.

*

Recently he won the international competition for the Academy of Music and Theatre at Istanbul and had the courage to start practice in Turkey to give his best for the job. He was asked to do all the public works of the new Turkey, but, alas, died before much more than the working drawings for the new Theatre had been completed.

WHITBY

The excellent example of the Whitby Council in asking professional advice on the possibility of combining slum clearance with the retention of its famous picturesque harbour front is bearing fruit.

*

Mr. Ernest C. Bewlay in his report shows that some 89 of the 450 houses originally condemned can be reconditioned and brought up to date. The extraordinary pride and cleanliness of the Whitby fishermen's wives will see to it that this concession to amenity is not in vain.

HOLIDAY CRUISE

The Dalmatian coast, where the King is at present taking a holiday, is well known at least to a small group of architects who visit it enthusiastically.

*

For the architect it makes a particularly happy region for holiday rambling, or, better still, for holiday coastal sailing.

*

Numerous picturesque islands abound in the blue-green water—from the larger ones like Curzola and Longa down to the small fry such as Comato, Cazza, Lagosta and the rest.

*

The mainland holds the architectural treasures of Ragusa, Spalato, Zara, and many smaller places. Their buildings have taken the best of Rimini, Venice and Vienna, have added something essentially Dalmatian and produced a charm to be found in very few places in this world.

THE NEW COINAGE

I am told on competent authority that the new coinage to be issued next year will be heraldic in character, following the long tradition of English coins.

*

Many people had hoped that, with several of the smaller countries doing heraldic coins, we might have had something a little nearer the hearts of the great British Public.

*

I wonder if it is too late to hope for an inspired and scholarly break away in the design of one of our lesser-used coins—say, the five-shilling piece; the public would welcome such an innovation.

A NEW KIND OF THRILLER

The average detective story never seems to me to be wildly exciting, but I couldn't resist buying Dennis Wheatley's *Murder off Miami*, not because I knew anything about the story, but solely on the grounds of its amusing make-up and general presentation, which is done in police dossier form. And as far as I can see quite accurately too, with bits of bloodstained curtain pasted in, matches, photographs of cigarette-ends, fascimile letters and all the usual trappings.

*

My bookseller told me it had been done largely so that it could be *sold* by the booksellers and not, like most detective novels, just be circulated by the libraries; considering the trouble that must have been taken to produce it I think 3s. 6d. is pretty cheap. The idea is brilliant; *think* what fun the seaside issue of the *Architectural Review* would have been with samples of real sand in cellophane envelopes and bits of seaweed pasted in . . .

ASTRAGAL

NEWS

POINTS FROM THIS ISSUE

"*We need, roughly, 200,000 houses in England and Wales and 150,000 in Scotland to abate overcrowding*" 199

"*A Nonconformist church somewhere on the outskirts of Oxford is embellished with the carvings of T. E. Lawrence, for he persuaded the foreman when the church was being built to let him try his hand at some ornamental work.*" .. 200

"*The crypt of the new Liverpool Metropolitan Cathedral will cover nearly the same area as the whole of Westminster Cathedral.*" .. 202

"*No one today buys a car with twiddly bits on it or roses all over it. But the man who buys a modern car goes home to a house with Tudor beams painted all over it, with bogus candles inside it, and drinks tea from a cup which has roses all over it.*" 202

APPOINTMENT

The Sheffield Corporation recommends the appointment of Professor Patrick Abercrombie as consultant, at a fee of £1,000 for the first year and £500 per annum for subsequent years, for the town planning and civic centre schemes.

BUILDING EXHIBITION

Earl Stanhope, K.G., First Commissioner of Works, will formally open the Twentieth (biennial) Building Exhibition at Olympia on Wednesday, September 16.

OLYMPIA IMPROVEMENTS

It is expected to complete by the autumn the £250,000 scheme of Mr. Joseph Emberton, F.R.I.B.A., for the improvement of Olympia.

The Addison Road entrance and the adjoining offices have entirely disappeared, and in their place a vestibule, four times the size of the old one, is being constructed, reaching from the pavement to the hall and having a covered way to the railway station. Another enclosed walk, 160 yards long by 20 feet wide, will give shelter from Hammersmith Road direct into Olympia. At the entrance to the National Hall in Hammersmith Road a canopy is being erected over the footpath.

The Empire Hall is being remodelled in order to provide the fullest space for all types of exhibitions. The important internal changes here involve the removal of the central stairways, their place being taken by up and down escalators to convey 4,000 people an hour to all the floors, while six large lifts will also be available for the public. The alterations in the Empire Hall provide a light well three times the present size.

The reconstruction of Olympia provides over 500,000 sq. ft. for exhibition purposes, enabling every variety of manufacture, from heavy machinery in motion to the lightest of fancy goods, to be shown to the best advantage. Immediately adjoining the halls and reached under cover will be a six-storeyed service garage to hold 650 motor cars.

THE ARCHITECTS' DIARY

Thursday, August 13

ROYAL SCOTTISH ACADEMY. *At Edinburgh. Until September 5.*

R.I.B.A., 66 *Portland Place, W.1. Exhibition of the designs submitted in the recent competition for a new Parliament House, Salisbury, Southern Rhodesia. Until August 20 inclusive. (Monday to Friday between the hours of 10 a.m. and 5 p.m., and Saturday 10 a.m. to 1 p.m.)*

BUILDING CENTRE, 158, *New Bond Street, W.1. Exhibition of photographs of timber (see note on this page.*

Saturday, August 15

LONDON SOCIETY. *Visit to Kensington Palace. 2.30 p.m.*

Tuesday, August 18

LONDON SOCIETY. *Visit to His Master's Voice Factory at Hayes, Middlesex. 2.30 p.m.*

Thursday, August 27

TOWN AND COUNTRY PLANNING SUMMER SCHOOL. *At the Salisbury Diocesan Training College, Salisbury. Until September 2. (See page 203).*

WHITBY HOUSES' FATE

Mr. E. C. Bewlay, the architect appointed to advise the Whitby U.D.C. on the saving of the old houses which had been included in a slum-clearance scheme, has prepared his report. Some 450 houses were condemned under the original scheme. They are in the most picturesque part of the old town, and it is hoped that means may be found of saving many of them.

HOUSES FOR THE PUBLIC

A scheme for saving mansions of architectural and historic interest from destruction is outlined by Sir Charles Trevelyan in announcing that he is to bequeath Wallington, Northumberland, to the National Trust.

His plan is that Wallington should be accessible to the public without the severance of the family connection. The Trevelyan family will live there as tenants of the Trust.

WOOD THROUGH THE CAMERA

Photographs collected from Great Britain, Germany, Austria, Denmark and Switzerland, showing old and modern uses of wood, ranging from ancient house construction to the timber mast at the Radio Research Station at Datchett, are shown in an exhibition which was opened recently at the Building Centre, 158 New Bond Street, W.1.

The use of timber in the construction of aeroplanes and cars is well illustrated, and unusual exhibits are microscopic photographs showing the cellular construction of various types of timber from which it is possible to identify species with scientific exactitude.

About 100 photographs in all are shown. The exhibition, which has been organized by the Timber Development Association, is open from 10 a.m. to 6 p.m. daily until Saturday next, August 15.

BUILDING EXHIBITION IN NEWCASTLE

The Northern Building Exhibition is to be held at St. George's Drill Hall, Newcastle, from August 26 to September 5.

LIVERPOOL METROPOLITAN CATHEDRAL

Archbishop Downey stated last week that nearly half of the crypt of the new £3,000,000 Liverpool Metropolitan Cathedral has been completed. He added that the crypt alone would cover nearly the same area as the whole of Westminster Cathedral.

MODERN DESIGN

Mr. Anthony Bertram, at the conference at Balliol College, Oxford, last week, in connection with the Adult Education Advisory Committee of the B.B.C., discussed the importance of modern design. He said: "Design is an enormously complicated matter. There is no design in the modern age, because there is no style in the modern age. No one today buys a car with twiddly bits on it or roses all over it. But the man who buys a modern car goes home to a house with Tudor beams painted all over it, with bogus candles inside it, and drinks tea from a cup which has roses all over it. What we want to do is to bring the whole of modern life into line with modern production, to see that everything is done in the same spirit and character.

"If we are to have design in our life today there will have to be an enormous propaganda for it, and here I think the B.B.C. can play a great part. I don't want to get rid of the machine; I want to use the machine, to exploit it for our own ends. I want to see Woolworth's full of well-designed things and not a few teashops stocked with things which it is imagined are well designed."

GENERAL POSITION IN THE BUILDING INDUSTRY

"The position of the building industries continues to be satisfactory, a further improvement as compared with last year having occurred during the month," states the current issue of *The Building Industries Survey*, published by the Building Industries National Council. "The rate of unemployment continues to be below that of any year since 1929. The building plan figures for dwelling-houses continue to oscillate about the level of a year ago, showing no definite downward trend. The total for the first five months of the year, however, is somewhat below the corresponding total of a year ago. The number of houses completed for slum-clearance replacement under the

1930 Housing Act continues to increase. The number of houses under construction increases steadily and, as explained in the last issue, activity under the Act should show considerable increases in the near future. Operations under the 1935 Housing Act for the abatement of overcrowding were responsible for six houses completed during April, and 1,364 are under construction.

"While housing has been maintained, the total activity of the industry has continued to advance, owing largely to increased industrial and commercial construction. This movement may be expected to continue for some time, and recent building plan figures show large increases. The other non-residential categories also continue to increase, and the outlook, especially for the larger structures, is very favourable.

"The position of public works contracting is still disappointing, the unemployment being only some 7,000 below last year, in spite of recent large and consistent increases in loans sanctioned. It was to be expected that works commenced during the earlier months of the year would by now have begun to have an appreciable effect on the unemployment figures, but this desirable development is not yet apparent. The outlook for the materials industries is favourable, and demand in the coming months should show further increases on last year. Prospects are particularly bright for those types of material used in connection with both small and large structures. The active prosecution of defence work will also give rise to an important demand for materials."

HOUSING PROGRESS IN SCOTLAND

According to the Department of Health for Scotland, 6,498 houses of a working-class type were completed in Scotland during the quarter ended June 30 last. Of these, 4,347—or 778 more than in the previous quarter—were built by local authorities, whose total output for the half-year is 7,916 houses. In the same period private enterprise completed 3,321 working-class houses, being 441 more than the number in the first half of 1935. The total number of working-class houses built in Scotland since the Armistice is 246,854, of which 207,453 were built with assistance—164,425 by local authorities and 43,028 by private enterprise.

ROYAL ACADEMY EXHIBITION

The Summer Exhibition of the Royal Academy closed on Saturday last. It attracted approximately 150,000 visitors —some 35,000 more than last year.

NEW GOLD MEDAL FOR INVENTORS

A new gold medal called the Yorkshire Medal for the most valuable invention of the year is to be awarded annually by the Institute of Patentees under a bequest by Mr. Hoffman Wood, an architect, of Addingham, Yorkshire, who died three years ago (states *The Times*). There is one condition attaching to the award—the invention must not in any way relate to an article of warfare. Captain Drury Coleman, the secretary of the Institute of Patentees, stated on August 9 that Mr. Hoffman Wood directed that a fund of £1,000 should be set aside, and that out of the income a gold medal was to be bought and presented to the person who produced in each year the most valuable invention not in any way connected with warfare.

FILM OF THE R.I.B.A. BUILDING

A short film of the R.I.B.A. building has been made by Gaumont-British Distributors, Ltd., and will be included in an edition of the Gaumont-British Magazine, entitled "Why the Oak Beams." The release dates of the film are as follows: September 7, Tivoli, Strand, W.C., pre-release; September 14, Tatler, Charing Cross Road, W.C., pre-release; September 21, general release.

ABERDEEN INFIRMARY

The Duke of York is to open Aberdeen's new £500,000 Royal Infirmary on September 23. The new Royal Infirmary forms part of the Aberdeen joint hospitals scheme at Forester Hill, Aberdeen. The foundation stone was laid by King Edward, then Prince of Wales, on August 25, 1928.

TOWN PLANNING INSTITUTE

The eighteenth annual country meeting of the Town Planning Institute will be held at Norwich from October 2 to 4, inclusive, under the chairmanship of Mr. Ernest G. Allen, F.R.I.B.A., President of the Institute.

TOWN AND COUNTRY PLANNING SUMMER SCHOOL

The Town and Country Planning Summer School is to be held at the Salisbury Diocesan Training College, Salisbury, from August 27 to September 2, inclusive, under the presidency of Sir Raymond Unwin. The opening meeting will be held in the Guildhall at 10 a.m., on August 28, and the papers to be read include the following:—

Friday, August 28: "Town Planning and Restriction of Ribbon Development: A Review of the Present Position." By Dr. Thomas Adams, F.R.I.B.A. "Education in Planning." By Professor R. A. Cordingly, M.A., F.R.I.B.A.

Saturday, August 29: "Planning for the Region: Dorset." By W. Harding Thompson, M.C., F.R.I.B.A. "Planning for the Region: Wiltshire." By W. R. Davidge, F.R.I.B.A. "National Survey." By W. A. Eden, M.A., A.R.I.B.A. "National Planning." By Dr. W. H. McLean.

Sunday, August 30: "Road Planning and Ribbon Development." By G. T. Bennett, B.SC., A.M.INST.C.E. "Landscape Design and Open Spaces." By E. Prentice Mawson, F.R.I.B.A. "A Factual Basis for Territorial Planning." By Max Nicholson.

Monday, August 31: "Planning for Industrial Sites." By F. J. Osborn, A.T.P.I., and A. W. Kenyon, F.R.I.B.A. "New Estate Development." By Professor S. D. Adshead, M.A., F.R.I.B.A. "The Practical Application of the Garden City Idea." By Alderman A. T. Pike, F.C.C.S. "The Lineal City." By Georges Benoit-Levy.

Tuesday, September 1: "Rural Development." By the Rt. Hon. Viscount Gage. "Regulation of External Design and Appearance of Buildings." By A. L. Roberts, F.R.I.B.A. "Relation of the Public Health Act to Town Planning." By J. J. Clarke, M.A., F.S.S. "The Third Dimensional Aspect of Planning." By T. F. Thomson, A.M.T.P.I., A.I.L.A. "Slum Clearance and Rehousing." By Elizabeth Denby.

Wednesday, September 2: "Town Planning in Hampshire and Southampton." By Arthur H. Schofield, M.T.P.I., and others.

Full particulars of the School are obtainable from the Joint Hon. Secretaries, Messrs. W. Loftus Hare and T. F. Thomson, 13 Suffolk Street, Pall Mall, S.W.1.

ANNOUNCEMENT

Mr. Paul Phipps, F.R.I.B.A., has moved his offices to 14 Pont Street, Belgrave Square, S.W.1. Telephone No.: Sloane 6721.

CORRIGENDA

We regret that in last week's issue we inadvertently stated that Mr. Bentley had been appointed architect to the Southampton Corporation. We are informed by Mr. S. G. Stanton, M.INST.C.E., Southampton Borough Engineer and Surveyor, that Mr. Bentley has been appointed chief architectural assistant in his department.

R.I.B.A.

COUNCIL MEETING

Following are some notes from a recent meeting of the Council of the R.I.B.A.:

The Employment of Architects in the Scheme for Co-ordinating Means of National Defence.—Mr. E. Stanley Hall (Vice-President), Mr. H. S. Goodhart-Rendel (F.) and Mr. John Dower (A.) were appointed as members of a deputation to meet Sir Thomas Inskip, Minister for the Co-ordination of Defence, to discuss the employment of architects in the scheme for co-ordinating means of national defence.

The Council of the British School at Rome.—Mr. W. H. Ansell (F.) was reappointed as one of the two R.I.B.A. representatives on the Council of the British School at Rome for the three years ending June, 1939.

R.I.B.A. Architecture Bronze Medals. (A) *The Royal Incorporation of Architects in Scotland.*—Mr. W. B. Edwards (F.) (Newcastle-on-Tyne) was appointed as the R.I.B.A. representative on the jury for the award of the R.I.B.A. Architecture Bronze Medal in the area of the Royal Incorporation of Architects in Scotland. (B) *The Wessex Society of Architects.*—Mr. W. S. Purchon (F.) (Cardiff) was appointed as the R.I.B.A. representative on the jury for the award of the R.I.B.A. Architecture Bronze Medal in the area of the Wessex Society of Architects.

The Formal Admission of Students at General Meetings.—It was decided to discontinue the practice of formally admitting students at general meetings.

Reinstatements.—The following ex-members were reinstated: As Fellow, D. A. McCubbin (retired F.); as Associate, H. Beaverstock; as Licentiate, J. L. Northam.

Transfer to the Retired Members Class.—The following members were transferred to the Retired Members Class: As Retired Fellow, W. H. Greene; as Retired Licentiate, G. P. Powis.

Resignations.—The following resignations were accepted with regret: E. C. Frere (F.),

C. A. C. Greene (F.), B. R. Hebblethwaite (F.), J. C. M. Keith (F.), J. Barr (A.), W. B. Riddell (A.), T. Ridge (A.), B. J. Wailes (A.), J. Anderson (L.), W. Beeston (L.), A. F. Cutler (L.), A. Wheat (L.), G. G. Woodward (L.), and G. P. Smedley (retired L.). The resignation of Mr. R. D. Elliott (L.) was also accepted.

EXAMINATIONS

The questions set at the Intermediate Final and Special Final Examinations held in May and July, 1936, have been published, and are on sale at the R.I.B.A., price 1s. (exclusive of postage).

OBITUARY

The following appreciation of Professor Hans Poelzig, Hon.A.R.I.B.A., appeared in the current issue of the R.I.B.A. Journal:

The death has occurred in Berlin of Professor Hans Poelzig, of the Academy for Arts and the Technical High School in Berlin, and one of the most outstanding German architects. Since last year, when he was placed first in the international competition for an academy of music and a theatre in Istanbul, he decided to transfer all his activities from Germany to Turkey. The Turkish Government commissioned him with all the public works directed by the Ministry for Public Instruction and offered him a professorship at the new School of Architecture at Ancara. At the age of 65, Poelzig left his country for this new and arduous task in a land that was new to him and whose climate may have been one of the reasons for the untimely end of his vigorous and productive life. But there was no scope for his genius in the new Traditionalism of the German Dictatorship, and he preferred the hardship of a new beginning to an enforced idleness in Germany. Only a fortnight before he died he signed the working drawings for the new theatre in Istanbul, his first and last work in the new country.

Poelzig was born in 1869, he studied in Berlin, and after some years of private practice and teaching was called to be the head of the Breslau School of Architecture in 1903. From 1916 to 1920 he was architect to the city of Dresden, and in 1920 he was given a master studio in the Prussian Academy of Arts, an honour only accorded to the best of each art. Since his death this place has not yet been filled. Since 1924 he was Professor in Berlin.

Hans Poelzig was both a great architect and a great teacher, but for all those who had the privilege of knowing him more intimately he was an inspiring and lovable personality for whom they felt admiration and loyalty. His assistants and students used to call him "der Meister" and he certainly was like one of the great mediæval master builders, simple, vigorous, heavy rather than clever of mind, sometimes of fantastic invention, but never coarse, never easy-going either, nor ever affected even when he seemed most pathetic. He was hostile both to any romanticism and to constructionalism for its own sake. In his later years construction and material were so self-evidently treated by him that they did not form a problem for him at all. He used bricks, stone, steel and concrete, each by itself or combined, and made them serve rather than master his ends. Honesty was essential in every one of the designs he asked his students to do, and nothing would pass that worked well, even looked well, but lacked that sort of musicality that was the mark of his own work, whether it was a clever piece of constructional acrobatic or a theatrical invention without simplicity.

His own buildings had great influence on the formation of the "continental style." All books on modern architecture will contain his factory for chemical products in Libau (1910), the office building in Breslau, a reinforced concrete building (1912), the theatres Grosses Schauspielhaus (Berlin, 1919), Capitol (Berlin, 1925), Cinema Breslau, and the Berlin Broadcasting building (1930). These are just a few of the great number of buildings, industrial, public, domestic, for which he has been responsible. Professor Poelzig has done pioneering work with almost every one of his designs because he was never easily satisfied with his work. Looking back on his life, he might well have said of himself, like Goethe did, "dass er es sich habe sauer werden lassen"—that he had not spared himself but laboured hard.

COMPETITION

NEWS

LIBRARY, SOUTH SHIELDS

The South Shields Corporation is to erect a library at the rear of the town hall. It is intended to incorporate the library scheme in the competition being promoted for the assembly hall.

Competitions Open

AUGUST 21.—Sending-in Day. Municipal offices and assembly hall, Dartford, for the Dartford T.C. (Open to architects practising in the United Kingdom.) Assessor: P. D. Hepworth, F.R.I.B.A. Premiums: 200, 100 and 50 guineas. The last day for questions was June 29. Conditions of the competition may be obtained on application to J. James Hurtley, Town Clerk, Town Clerk's Office, Dartford. (Deposit £1 1s.)

OCTOBER 26.—Sending-in Day. Layout and individual design of a group of camp buildings for a holiday camp, in timber, for the Timber Development Association. Assessors: E. Guy Dawber, R.A., F.S.A., F.R.I.B.A., G. A. Jellicoe, F.R.I.B.A., G. Langley Taylor, F.R.I.B.A., and John Gloag. Premiums: £150, £50, £25 and three special mention awards of £10 each. Conditions may be obtained on application to The Timber Development Association, 69-73 Cannon Street, London, E.C.4.

OCTOBER 29.—Sending-in Day. Central Baths, Leeds. (Open to architects of British nationality.) Assessor: Kenneth M. B. Cross, F.R.I.B.A. Premiums: £350, £200 and £100. Conditions of the competition and instructions with a plan of the site can be obtained on application to Mr. Thos. Thornton, Town Clerk, at Room 57, Civic Hall, Leeds, 1. (Deposit £1 1s.)

OCTOBER 31.—Sending-in Day. Shops and offices, Newcastle-under-Lyme, for the Newcastle-under-Lyme Borough Council. (Open to architects of British nationality.) Assessor: Harry S. Fairhurst, F.R.I.B.A. Premiums: £300, £200 and £100. Conditions of the competition may be obtained from the Town Clerk, Town Clerk's Office, Newcastle-under-Lyme. (Deposit £2 2s.) The latest date for submission of designs is October 31.

OCTOBER 31.—Sending-in Day. Council offices, Farnham, for the Farnham U.D.C. (Open to architects practising in the United Kingdom.) Assessor: E. Vincent Harris, A.R.A., F.R.I.B.A. Premiums: £250, £150 and £100. The last day for questions is August 31. Conditions of the competition may be obtained on application to A. A. Minns, Clerk of the Council, Council Offices, Farnham, Surrey. (Deposit £1 1s.)

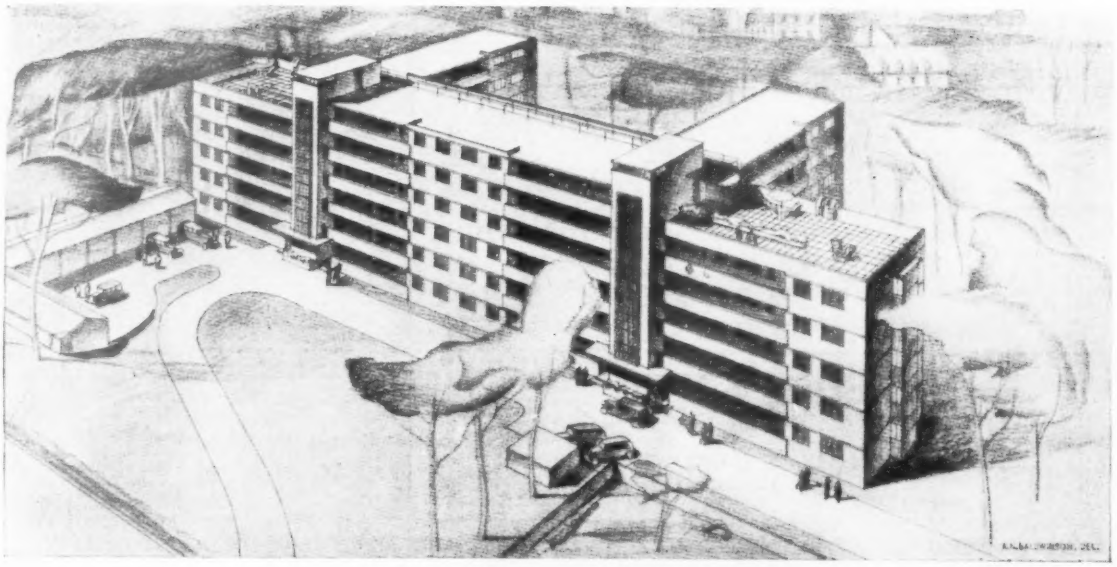
OCTOBER 31.—Sending-in Day. New hospital at Llandudno, for the Committee of the Llandudno and District Hospital. (Open to registered architects of British nationality.) Assessor: R. Norman Mackellar, F.R.I.B.A. Premiums: £250, £150 and £75. The last day for questions is August 28. Conditions of the competition may be obtained on application to the Jonorary Secretary, New Hospital Scheme, Town Hall, Llandudno. (Deposit £1 1s.)

SEPTEMBER 14.—Sending-in Day. Town hall and municipal buildings, Barking, for the Barking Corporation. (Open to architects practising in the United Kingdom.) Assessor: H. V. Lanchester, F.R.I.B.A. Premiums: £500, £250 and a further £200 to be awarded as recommended by the Assessor. The last day for questions was May 1. Conditions of the competition may be obtained on application to S. A. Jewers, Town Clerk, Town Hall, Barking. (Deposit £2 2s.)

NOVEMBER 30.—Sending-in Day. New civic buildings, which include a town hall, municipal offices, law courts and police station, Newport (Mon.), for the Newport Corporation. (Open to architects of British nationality.) Assessors: E. Berry Webber, A.R.I.B.A., and C. F. Ward, F.R.I.B.A. Premiums: £750, £500, £300 and £200. The last day for questions is September 1. The conditions are obtainable from O. Treharne Morgan, Town Clerk, Town Hall, Newport (Mon.). (Deposit £2 2s.)

FEBRUARY 28, 1937. — Sending-in Day. Extension of St. Andrew's Cathedral, George Street, Sydney, for the Authority in the Diocese of Sydney of the Church of England. (Open to architects who are British subjects, and members of the Royal Australian Institute of Architects, the R.I.B.A., or the Allied and Associated Societies.) Assessors: His Grace the Archbishop of Sydney, Sir Giles Gilbert Scott, R.A., F.R.I.B.A., and Bertrand J. Waterhouse, F.R.I.B.A. Premiums: £500, £300 and £200. The last day for submitting designs (which must be forwarded direct to Sydney) is February 28, 1937. The last day for questions is August 11.

BRAE COURT, KINGSTON-ON-THAMES



DESIGNED BY ARMSTRONG AND BAYNE

GENERAL PROBLEM—*A block of 68 flats of three types: A, four-room; B, three-room; and C, three-room. Type B is similar to type C, except that the arrangement of the rooms is slightly different. There are 34 type A flats, 22 type B, and 12 type C. The scheme includes lock-up garages and roof gardens.*

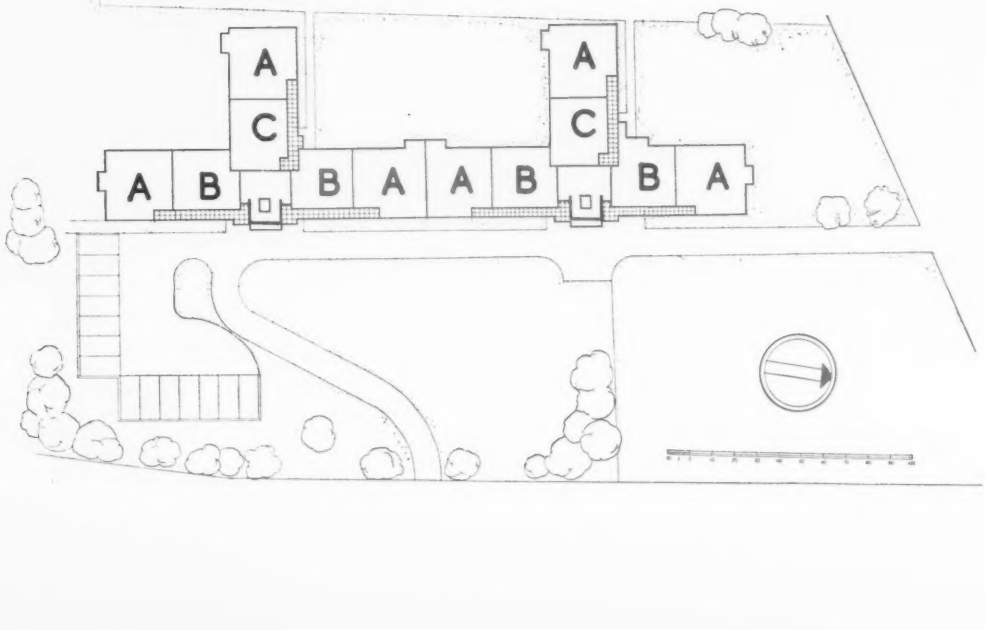
SITE—*A main frontage of over 200 ft. to Wolverton Avenue, facing east. The north end of the building faces London Road. The site is long and narrow and of irregular shape. Difficulties were experienced at the south end where a tennis court had been built on filling thrown into excavations which remained from previously existing brick yards. This area was approximately on the same level as much of the remainder of the site, except on the Wolverton Avenue front, where the rising ground creates steep banks.*

The illustrations show: above, the architects' perspective drawing of the Wolverton Avenue front; right, a photograph of the same front taken in the opposite direction.

BRAE COURT, KINGSTON-ON-THAMES: D

CONSTRUCTION—*The block of flats has been planned and constructed with the utmost economy. It is of concrete frame construction, consisting generally of three-legged cantilevered frames running across the width of the building and joined together longitudinally by the floors and by the external wall beams. As both ends of each frame are cantilevered, no columns occur in the external walls, except in one or two particular instances. External walls are 11 ins. cavity in rustic flettons, and dressings are stone. The internal partitions in the flats are 2 in. breeze blocks, and between the flats, 4½ in. cellular flettons and 2 in. breeze blocks, with a cavity between.*

The photographs show two views of the Wolverton street fronts.



LAYOUT PLAN

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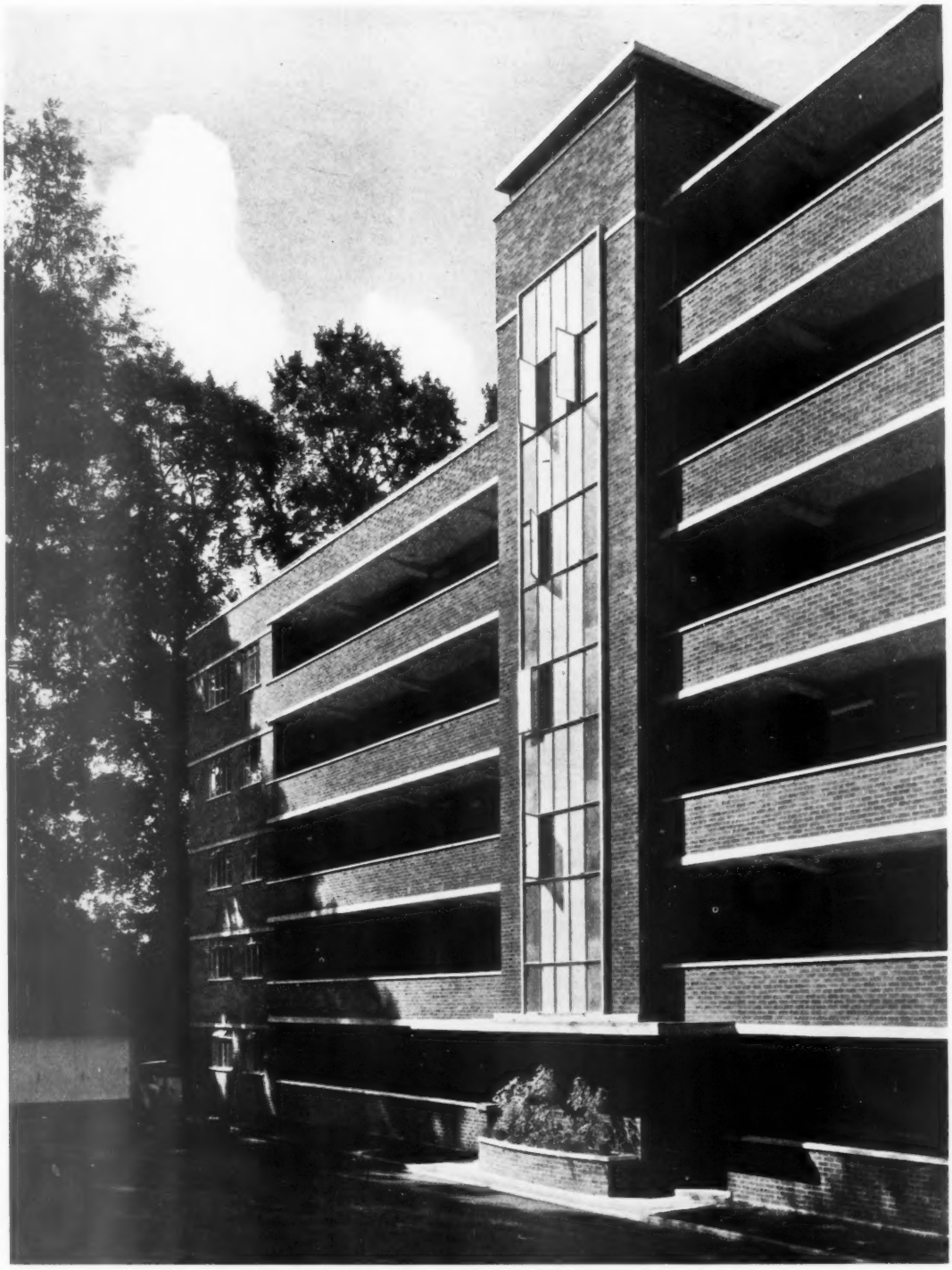
DESIGNED BY ARMSTRONG AND BAYNE



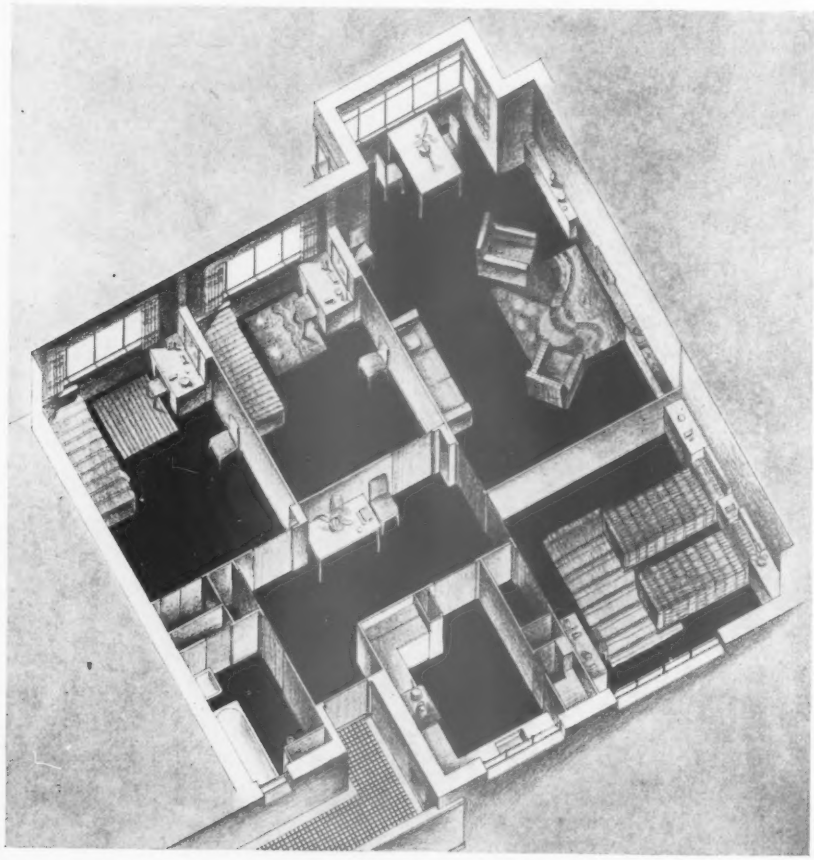
SERVICES—*The one-pipe system of plumbing has been adopted. The vertical stacks are of cast iron and have lead branches, except where they run in brickwork, when they are of galvanized wrought iron. All radiators are arranged with supply pipes in ducts out of sight, and many of them are in recesses under the windows. Each kitchen is equipped with built-in cupboards and has a space for a refrigerator. Each kitchen also has a dust-bin cupboard with an external and an internal door, so that the bin can be collected from outside the flat without disturbing the tenant.*

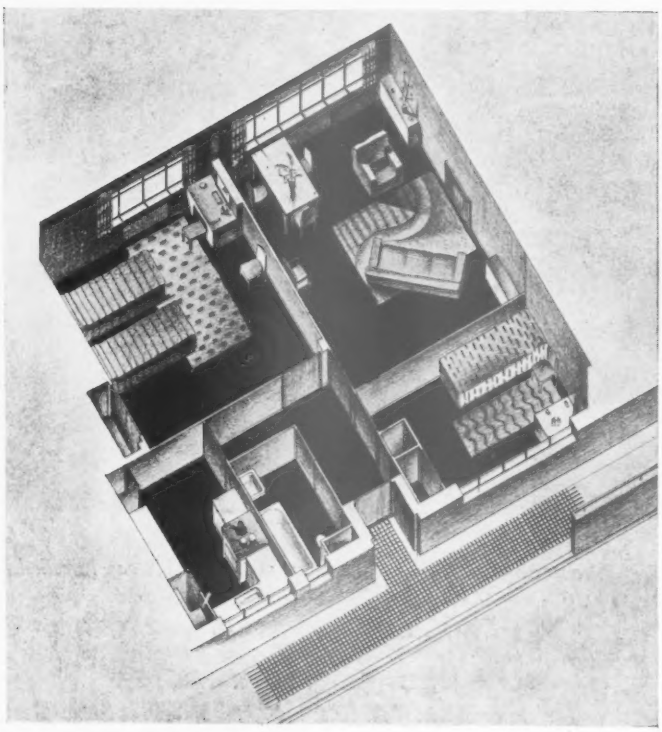
RENTS—*Type A, £140-£170; type B, £120-£140; type C, £130–£150.*

LOCK-UP GARAGES—*£20 per annum, or 8s. per week.*

The photograph is of the south end of the Wolverton Avenue front.

BRAE COURT, KINGSTON-ON-THAMES:

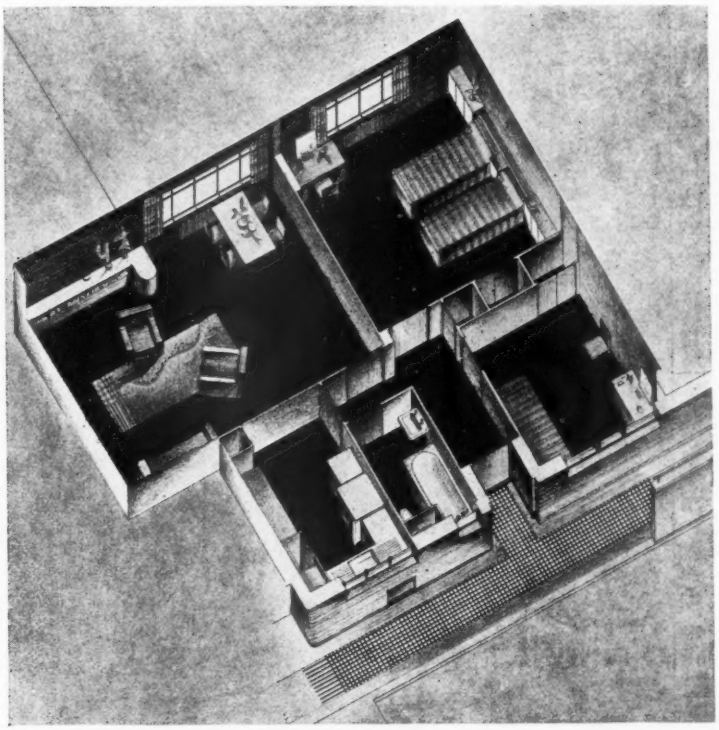




PLAN—*The necessity for economy made it essential that as many flats as possible should be grouped round each lift and staircase tower. It also made it impossible to plan the building with large public corridors or other non-revenue producing areas. This consideration led to the adoption of the dual plan, in which each half has a central staircase and lift with three wings each containing two flats. The larger flat is placed at the end of each wing, so that only one bedroom, in the smaller flat, overlooks the balcony. The access balconies are planned on the east side of the wings which run north and south, and on the north side of those which run east and west. This has been done to give as many rooms as possible an outlook to the south-west. The building is provided with the maximum number of flats permitted by the local authority. The floors are made for close-carpeting. They are of hollow concrete tile with boarded deal floors on battens. Felt is laid over the battens and left hanging loose between them.*

The plan above is of flat type A: hall, 13 ft. 5 ins. by 7 ft. 2 ins.; living room, 16 ft. 6 ins. by 12 ft. 2 ins., plus bay; bedroom No. 1, 12 ft. 6 ins. by 12 ft. 2 ins.; bedroom No. 2, 13 ft. 6 ins. by 9 ft. 1 in.; bedroom No. 3, 12 ft. 3 ins. by 9 ft. 1 in.; kitchen, 9 ft. 6 ins. by 7 ft. 3 ins. The plan on the left is of flat type B: living room, 16 ft. 6 ins. by 12 ft. 2 ins.; bedroom No. 1, 13 ft. 6 ins. by 12 ft. 7 ins.; bedroom No. 2, 10 ft. 4 ins. by 8 ft.; kitchen, 11 ft. by 7 ft.

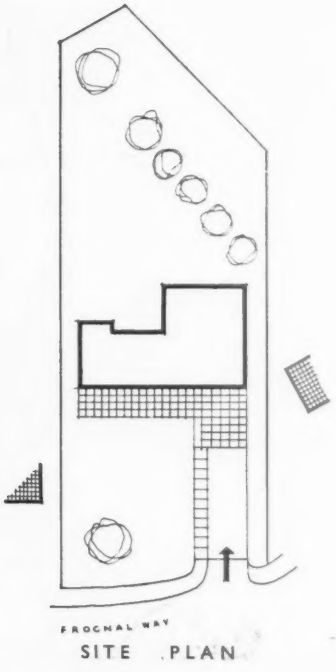
DESIGNED BY ARMSTRONG AND BAYNE



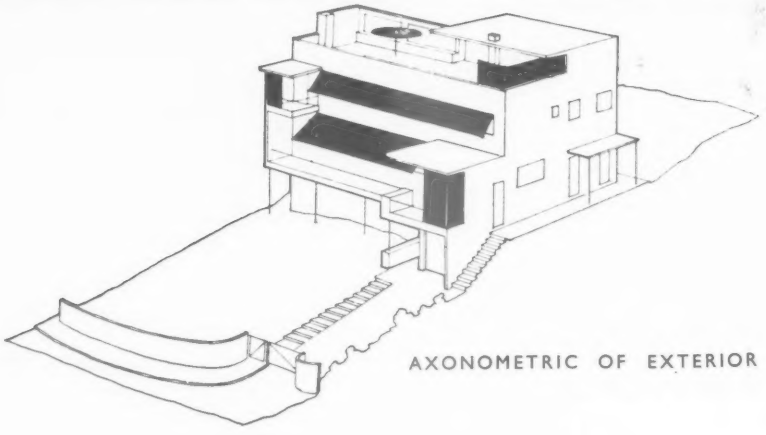
The photographs show : top left, an entrance hall in type A flat ; centre, a corner of a bedroom, with recessed radiator ; right, a kitchen with built-in refrigerator. The plan is of flat type C : living room, 18 ft. by 13 ft. 6 ins. ; bedroom No. 1, 12 ft. 8 ins. by 12 ft. 7 ins. ; bedroom No. 2, 10 ft. by 8 ft. 5 ins. ; kitchen, 11 ft. by 7 ft.

For list of general and sub-contractors see page 222.

HOUSE IN FROGNAL WAY, HAMPSTEAD:



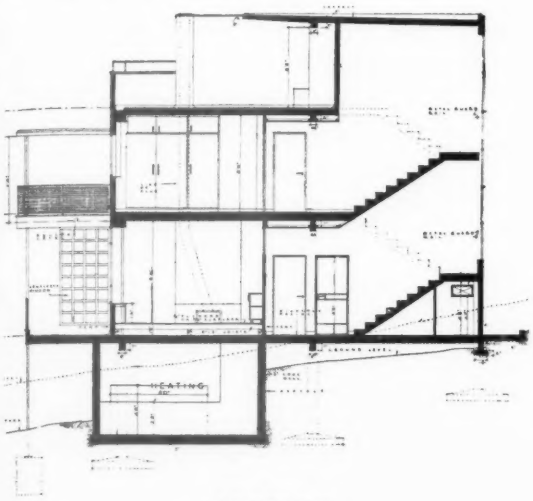
SITE PLAN



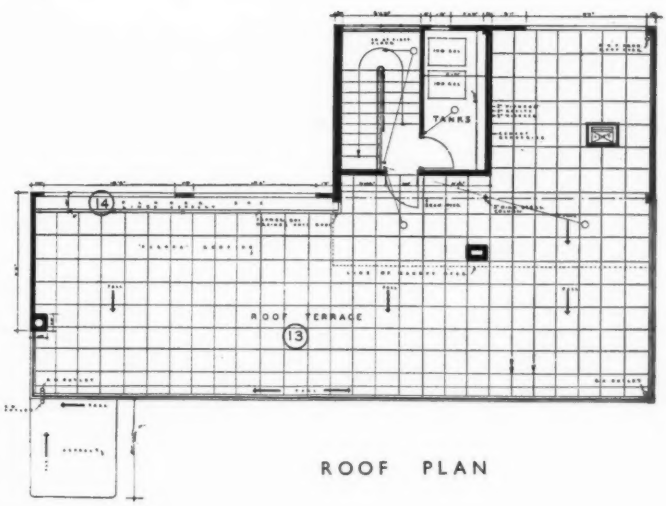
AXONOMETRIC OF EXTERIOR

SITE—*Frognal Way, the street in which the house stands, slopes steeply, and the site slopes upwards away from the street. This gave the architect the opportunity to take advantage of the fine view over London. It also presented him with certain extra problems, such as the preservation of easy access to the garage, which forms the lowest floor of the house. The slope of the ground, together with the factors of view and garage access, determined the positioning of the house on the site.*
The photograph is of the south front, and shows the living and bedroom windows and the open and covered terraces.

DESIGNED BY E. MAXWELL FRY

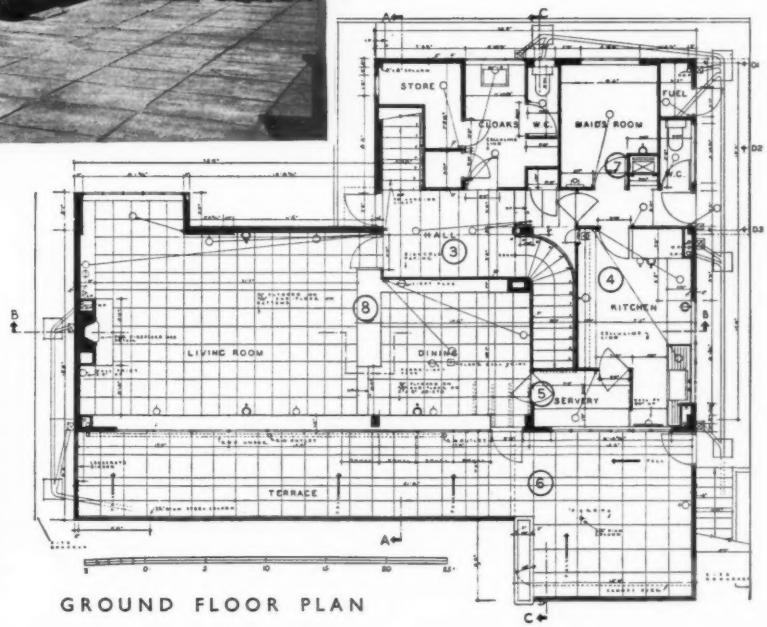


SECTION



ROOF PLAN

ROOF TERRACE — *The roof, up to which the main staircase leads, is paved and laid out as a roof garden and terrace, and there is a wind screen, having windows pierced in it to take advantage of the view. The screen is also used as a wall for climbing roses. Adjustable curtains also are hung to act as wind screens. The surface of the terrace is carefully drained so that it can be used a few minutes after rain. The photograph shows the roof terrace.*



GROUND FLOOR PLAN

CONSTRUCTION—*Reinforced concrete throughout, except for the steel columns that support the balconies and terraces and the large canopy. The smooth external face was produced by using wall board as shuttering and treating the surface afterwards with a mechanical rubber. It is finished with a concrete paint. The railings are painted a pale green, and the back wall of the loggia grey. All rain-water pipes are taken down internal ducts.*

HOUSE IN FROGNAL WAY, HAMPSTEAD:

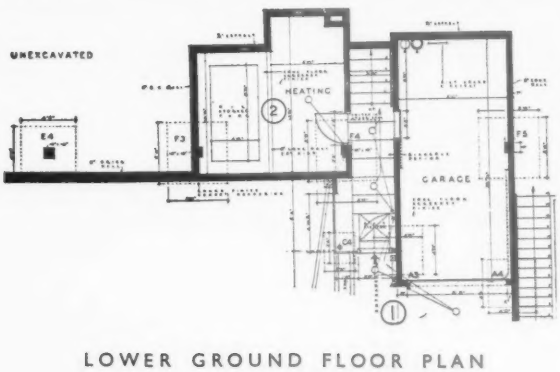
PLAN—*The orientation of the site is due south, and the view and sunlight is obtained simultaneously on the street elevation. All living room and bedroom windows, therefore, are placed on this front. The planning of the garage at lower ground level enabled the sloping site to be used with the minimum of excavation, and allowed direct under-cover access to be made from the garage to the house by a staircase leading to the adjacent entrance vestibule.*

The clients asked for the living rooms to be planned to provide large spaces for entertaining. These rooms occupy almost the whole length of the house, and take the form of a large living room with a window at the back as well as the front, and a smaller dining room adjacent to it. Both these rooms have almost continuous windows opening on to the terrace, and are separated only by a low piece of built-in furniture.

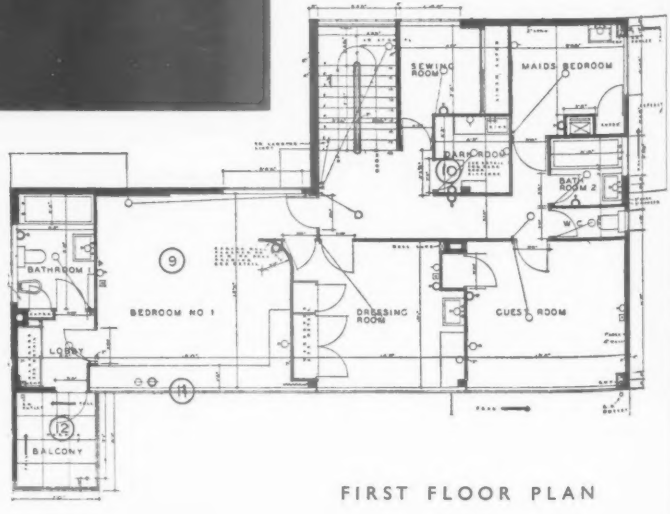
The planning of the kitchen quarters allows direct access into the living rooms and on to the terrace for serving tea. The kitchen quarters with maids' room are arranged as a separate working unit, and planned so that there shall be no cross circulation. The terrace is sheltered at either end from the wind.

On the bedroom floor the two large bedrooms and the dressing room face towards the south and the view. The main bedroom has a covered balcony of its own projecting over the terrace.

The photograph is of the east end of the south front.



LOWER GROUND FLOOR PLAN



FIRST FLOOR PLAN

DESIGNED BY E. MAXWELL FRY

The top photograph is taken looking from the living room into the dining room. These rooms are separated only by a low barrier of built-in furniture. The range of large windows look on to the terrace and the view over London beyond.

The photograph on the right is taken looking down the staircase from ground floor to lower ground floor level. The front door is seen at the end of the corridor, and on the left the door giving direct entrance to the garage.

HOUSE IN FROGNAL WAY, HAMPSTEAD:

DESIGNED BY E. MAXWELL FRY

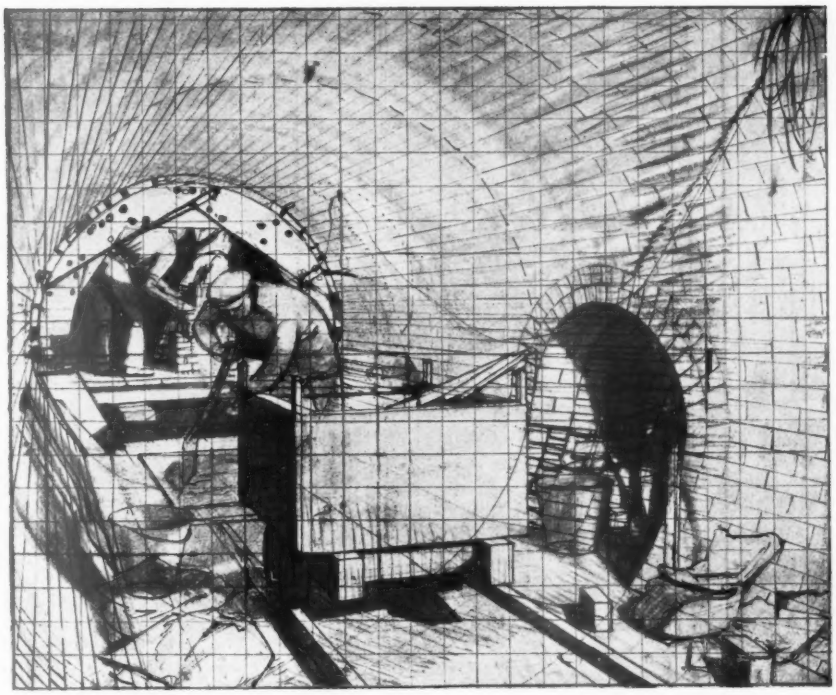
INTERIOR FINISHES — *On the wall above the staircase is a sculptured figure by Henry Ellison, and in the living room and dining room are mural paintings by Hans Feibusch. The colour scheme in the living room and dining room is cream and shades of brown, the floor being in dark brown polished parquet.*

There is a large amount of built-in furniture designed by the architect. Some of this furniture and some of the movable furniture, also designed by the architect, is seen in the photographs on this page.

The sliding windows, with a minimum amount of metal, were designed in co-operation with the manufacturer, modifications being made where necessary after testing at full size. A service lift from the kitchen is continued up on to the roof.

The photographs show : top, the living room looking towards the fireplace and the mural paintings by Hans Feibusch ; centre, a corner of the principal bedroom.

For list of general and sub-contractors see page 222.



"A constructed working drawing of a sewer in course of being built. The workmen in the distance are laying bricks from a raised platform, and a templet is seen to maintain the circular section of the cylinder. The main sewer is three bricks thick. This section of brickwork is to be seen at the intersecting smaller tunnel on right of diagram. The smaller tunnel entered the main sewer at an ascertained number of degrees and was of two bricks thickness. The smaller tunnel had vertical sides and semicircular top and bottom. The ellipses of pails as well as the ellipse of main sewer, shown by bricks, were of great value in steadying the several dimensions; besides making possible the construction of shadows. The areas of light on walls and the gradations also involved the drawing of ellipses. These were controlled by the assumed intersections of spheres and surfaces of cylinder in tunnel."—From "*Perspective.*"

L I T E R A T U R E

PERSPECTIVE

BY GORDON TAYLOR

Perspective. By Frank Medworth. London: Chapman and Hall. Price 15s. net.

IT is a commonplace that the architect must possess a peculiarly extensive knowledge. Like the pictorial artist, he must be master of many things, both material and æsthetic. Not the least important, he must be cognizant of the laws of perspective. For this study enables him to think readily in terms of three dimensions, and the architect is concerned above all things else with solid form.

Mr. Medworth is eminently competent to be one's mentor of this subject, for his long experience as a teacher and examiner makes him ever-ready to anticipate the difficulties of the student. In *Perspective*, he has presented his subject in such a way as to encourage the reader to be resourceful always, to solve the problem for himself rather than to refer to any prescribed formula. He avoids the confusing maze of lines so often to be found in technical books dealing with this subject. His style is lucid. His text is comprehensive.

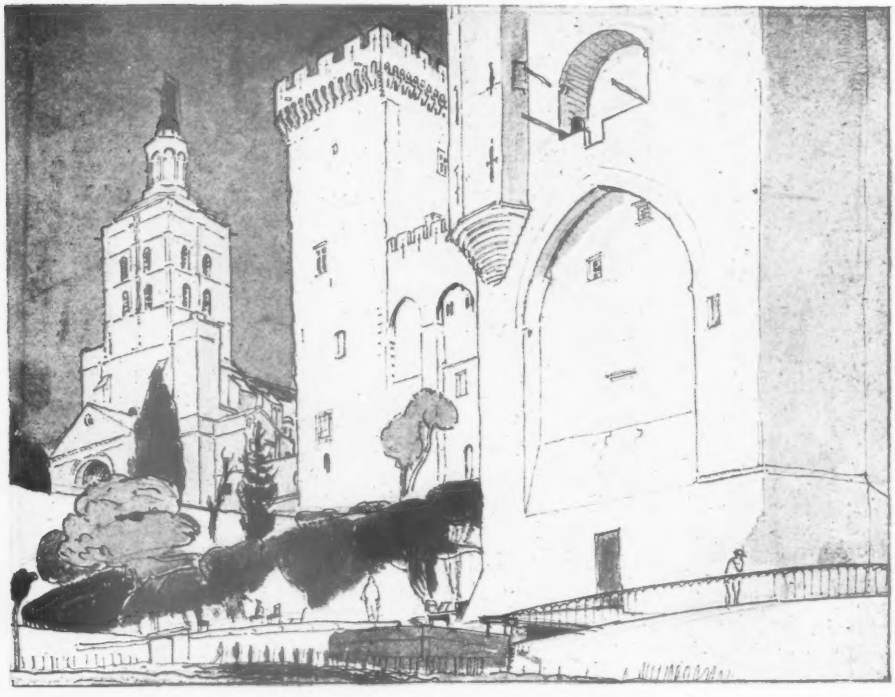
One may doubt whether the layout of the letterpress is entirely successful. The division of each page into two columns has resulted in some of the diagrams (especially in the earlier chapters of the book) being reproduced on too small a scale. However, the illustrations are well placed and they succeed one another logically. Text and diagram are inseparable in a treatise of this kind, and they have here been carefully arranged in relation to each other.

The book will be of particular help to all who enjoy outdoor sketching. To the architect who is also an artist, therefore, the book is invaluable. The author explains many secrets of natural fact and appearance which he has observed through a long practice of pictorial representation.

He is particularly happy when describing the phenomena of landscape and seascape, notably in his chapters on "Clouds" and "Water." Mr. Medworth has added real interest to a technical subject, and there is evidence throughout of an underlying concern, not with picture planes and vanishing points alone, but with a deeper interest in nature, in humanity, and in all living things.

In these days, when there are so many who decry accuracy in drawing, it is refreshing to find a book dealing so attractively with a study which must always be a basis of sound draughtsmanship. Even the modernist painter will here discover much that, far from restraining his creative expression, will assist him to draw with added power and facility. This treatise is, in fact, a very recommendable publication, for here is an exact science handled in a simple and interesting manner.

The artist who places his faith in sane and confident draughtsmanship will find this book well worth his while,



Le Palais des Papes, Avignon. From "Perspective."

and, to borrow a phrase from the author himself, will surely join "in the honest approval of a job well done."

THREshing THE AIR

BY A. H. SPARROW

Windmills in Sussex. The Rev. Peter Hemming, M.A. London: C. W. Daniel Co., Ltd. Price 8s. 6d.

WINDMILLS, like barns and hayricks, are pleasant features of the English landscape; they relieve the monotony of trees and grass to which their highly conventionalized geometrical shapes offer an agreeable contrast, and they are attractive in the same way as a bridge, a group of radio masts, or a series of electric pylons. And I am told that when they were first built the same kind of objections were raised against them by lovers of the countryside. Now that they are rapidly falling down, however, a different view is taken, and a class of people is appearing who can be described as "windmill enthusiasts" the term is not mine but the author's. They are people who would walk miles to see a windmill; who would subscribe money to maintain a windmill, and who collect information about windmills as eagerly as a philatelist collects stamps. It is for these people that Mr. Hemming's book is chiefly intended.

The book itself is by way of being a dictionary of windmills in Sussex. (There are 48 of them now and there used to be another 136.) They are all described in a most orderly manner, starting with A and working through the alphabet. A photograph is given of each one and a careful survey is made of its condition. We are told whether it is active or derelict, or used as an advertisement for one of the rival types of brown bread; how many sweeps were carried away by the last storm, and how much of its machinery remains in position. It is the kind of news that is interesting, because it is about an old friend.

From the point of view of the general reader the book suffers from the fact that the attraction of windmills is in relation to the landscape, which the photographs do not show, while their interest lies in the fact that they were after all pioneers of power production.

In a short paragraph when he describes how the stones may get out of control in a squall and set the mill on fire in five minutes, Mr. Hemming does suggest to one's imagination what an adventurous enterprise it was to put up mills to be driven by the wind. One feels that if one knew more about their working and their history a catalogue of their remains could be interesting. Unfortunately, no such introduction is given, even in relation to Sussex, is which county the scope of the book is admittedly limited.

S.P.A.B.

59th Annual Report, 1936. Price 2s. 6d.

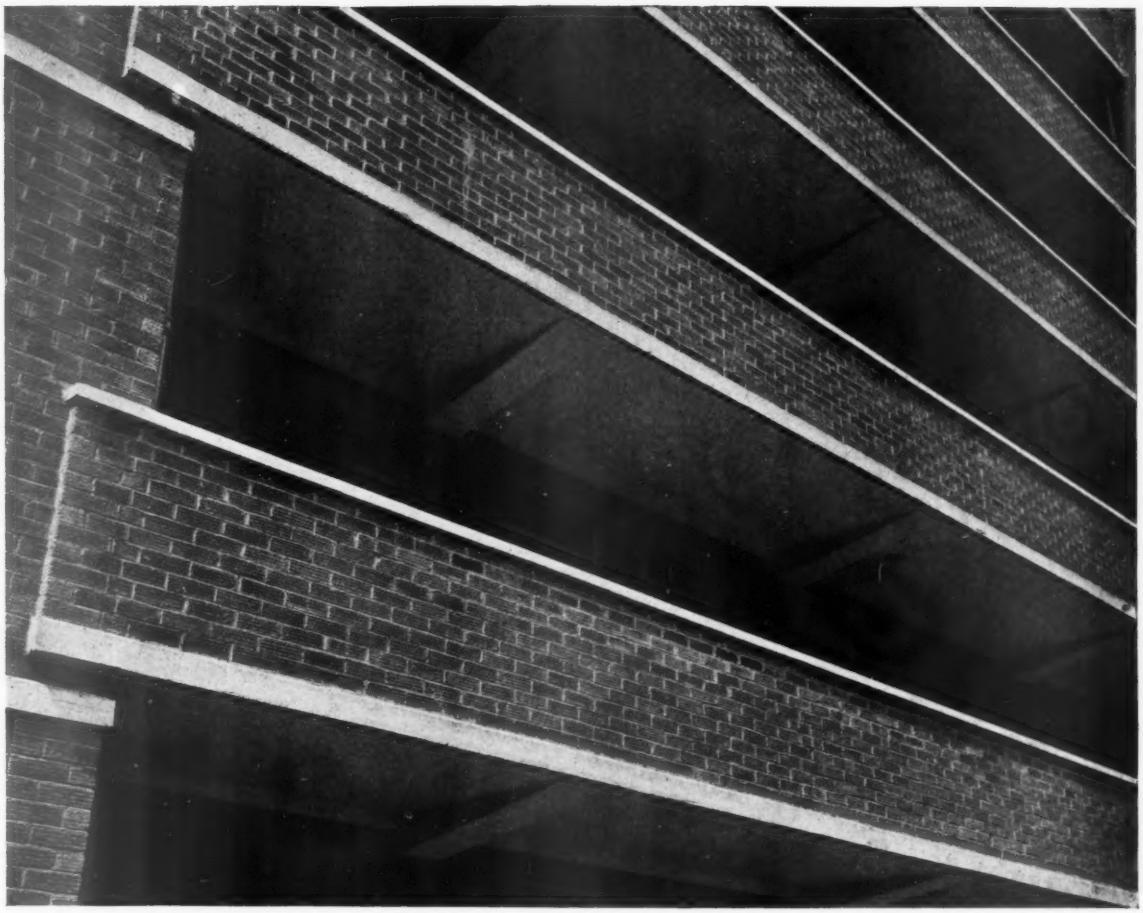
TWO months before its annual meeting, the Society for the Protection of Ancient Buildings sustained a severe loss by the too-early and lamented death of Mr. A. R. Powys, for a quarter of a century its secretary. Though the shadow of that event lies over the pages of this report, with its preface of appreciations by several who had worked with him, in itself it conveys the best tribute to the energetic and enduring quality of his work—witness, for example, Montacute.

Windmills, bridges (including Waterloo), churches (including All Hallows, Lombard Street), Adelphi Terrace, a slum area at St. Ives, Cornwall, and old houses all over the country: over such has warfare been waged with commercial interests, which, not seldom, have been characteristically won over to sympathetic co-operation in the aims of the Society.

But it was little wonder that Lord Esher, in addressing the general meeting from the chair, voiced anxiety as to the effects of the Town and Country Planning Act of 1932. For the protection of venerable buildings it provided ample powers, but not a single local authority had applied for their exercise. The record these pages contain of irreplaceable treasures saved should go far in fostering that "strong public opinion" in favour of adding to their number, which, as he said, "it is our business to create." It cannot be too widely known that the policy of the society is far from being obstructionist: not the mere age of a building but its intrinsic æsthetic value is the decisive factor in determining its fate. H. F.

WORKING DETAILS : 471

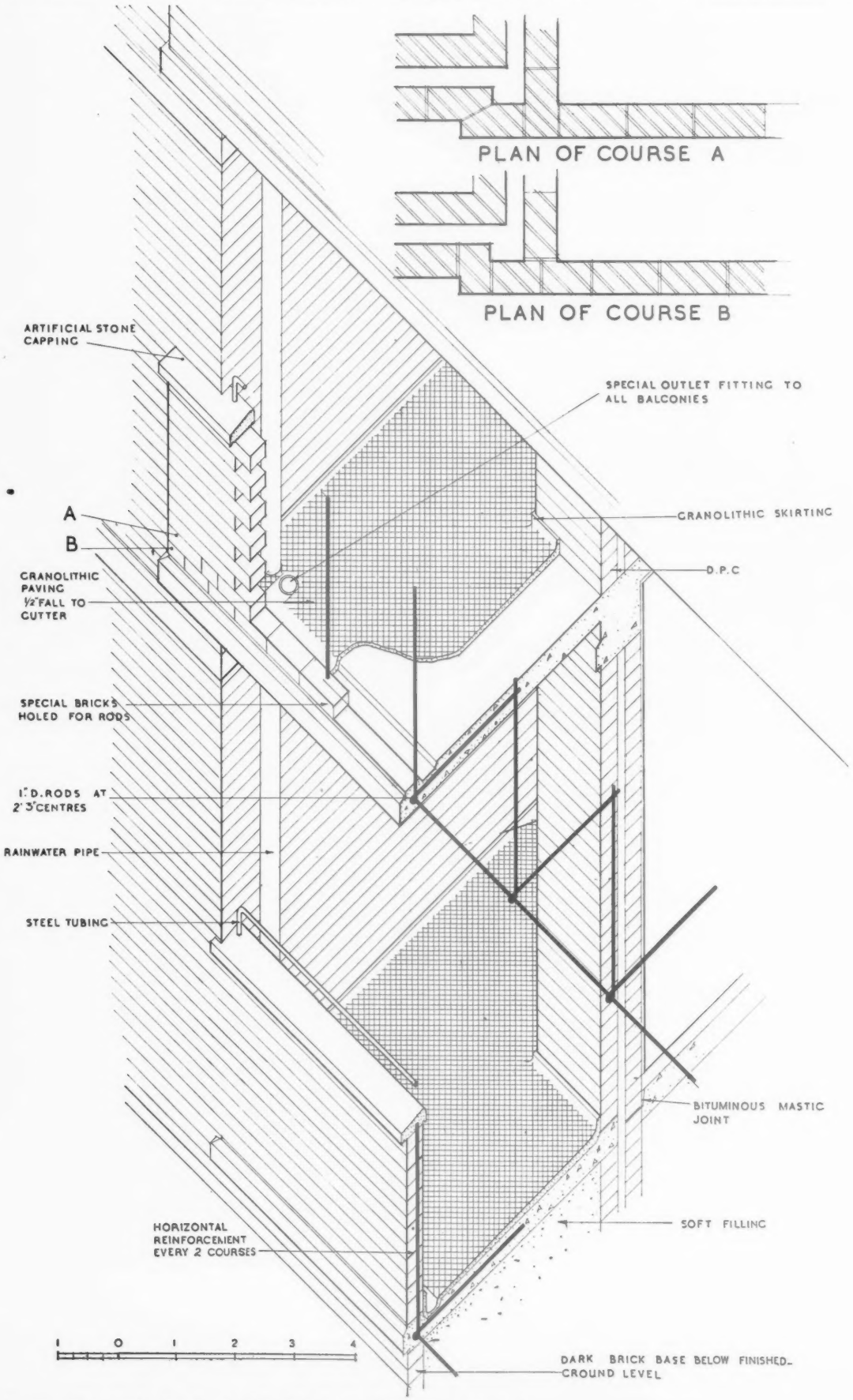
BALCONIES • BRAE COURT, KINGSTON-ON-THAMES • ARMSTRONG AND BAYNE



In designing the reinforced brickwork balconies illustrated above it was considered desirable to avoid the strong horizontal emphasis generally given by concrete balcony upstands on a background of brick. In order to keep down weight to a minimum the wall is only one brick thick, and is reinforced with 1 inch rods at 2 ft. 3 in. centres (special holed bricks being used where necessary) and the whole wall being laid in lime mortar gauged with cement to give adequate strength. An axonometric is shown overleaf.

WORKING DETAILS : 472

BALCONIES • BRAE COURT, KINGSTON-ON-THAMES • ARMSTRONG AND BAYNE



Axonometric and detail of the balconies illustrated overleaf.

WORKING DETAILS : 473

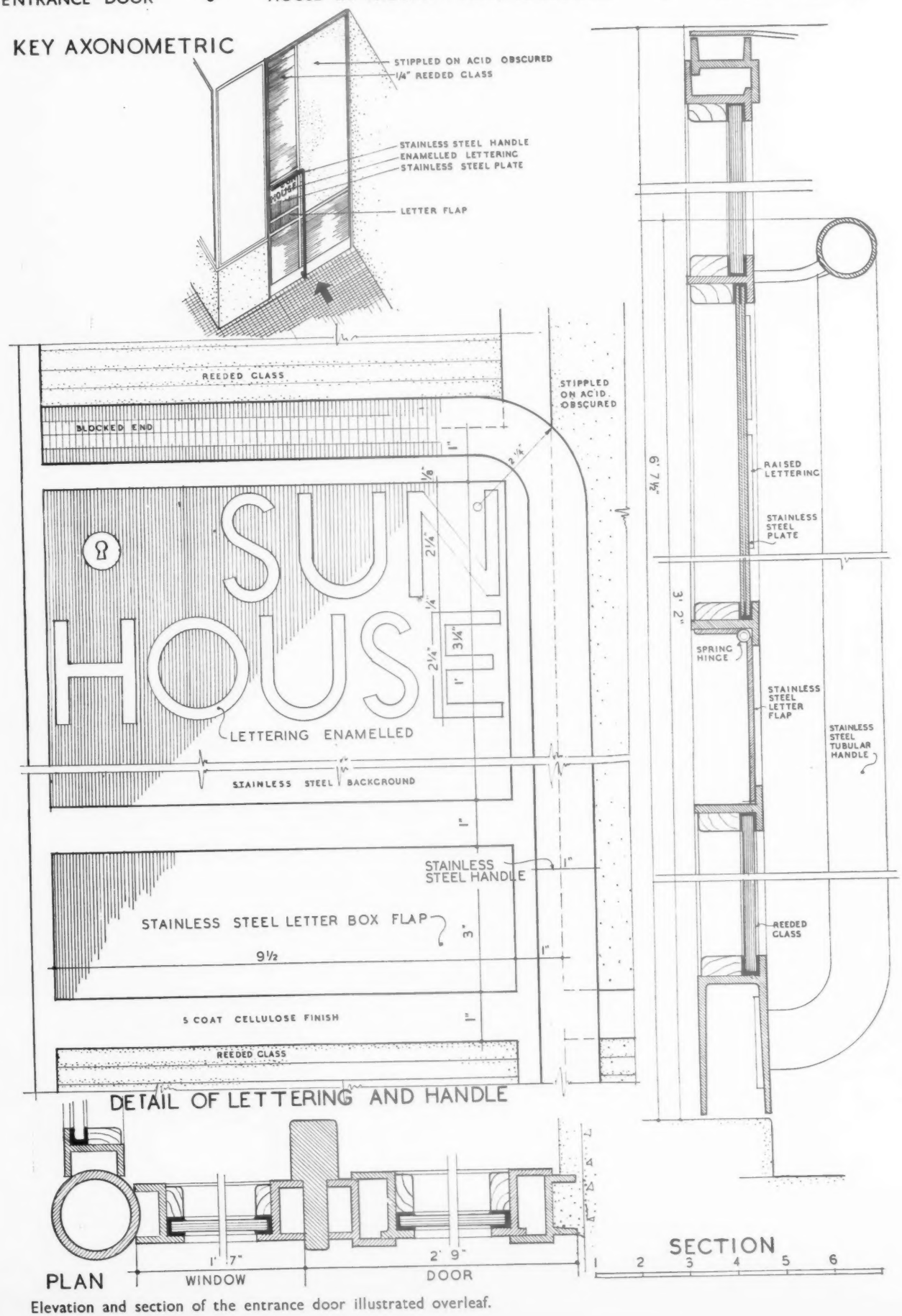
ENTRANCE DOOR • HOUSE IN FROGNAL WAY, HAMPSTEAD • E. MAXWELL FRY

The entrance door illustrated above is glazed with reeded and stippled acid-obscured glass, lock plate, letter-box flap and tubular handle being in stainless steel. Lettering is in vermilion enamel, and the steel door frame is finished with three coats of cellulose. An elevation and sections are shown overleaf.

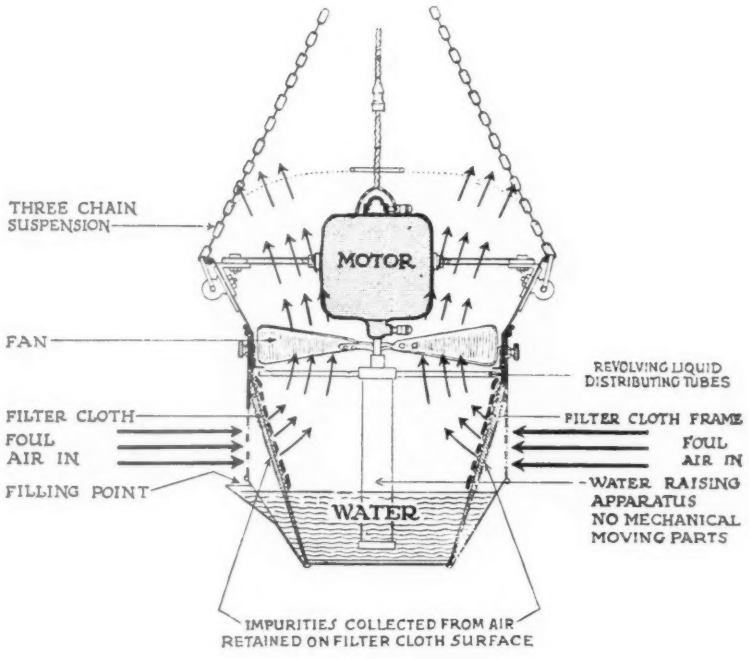
FILING REFERENCE:

WORKING DETAILS : 474

ENTRANCE DOOR • HOUSE IN FROGNAL WAY, HAMPSTEAD • E. MAXWELL FRY



Elevation and section of the entrance door illustrated overleaf.



TRADE NOTES

[*EDITED BY PHILIP SCHOLBERG*]

Fresh Air Indoors

THE headpiece to these notes shows a section through the Sterilizair, a device for filtering and recirculating the air in a room, each unit being suitable for a volume of about 5,000 cubic feet under normal conditions. The unit is self-contained, and hangs from the ceiling, a motor-driven fan drawing the air through a filter cloth which is kept moist by an even flow of water, to which can be added a disinfectant if necessary.

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The filter cloth can easily be changed when it has got dirty, and, after washing in ordinary soap and water, is ready for further use. Incidentally, the unit is only a fitting and cannot be classified as a landlord's fixture, and thus may be removed to another office when necessary.

A British Standard Glossary of Acoustical Terms

In 1933 the Royal Society decided that a glossary of acoustical terms and definitions had become a necessity, and asked the British Standards Institution to set up an appropriate committee. Consequently, a committee of experts, under the chairmanship of Dr. G. W. C. Kaye, of the National Physical Laboratory, was formed in May, 1933, the result of whose work has been the issue this month of a British Standard Glossary of Acoustical Terms and Definitions (No. 661–1936).

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Close touch has been kept with similar work being done in the United States and Germany, as well as with the work of the International Consultative Committee on telephony.

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The success of the campaign against undesirable noise is bound up with the provision of methods of measurement and fundamental units and standards, and these needs have largely been met by the publication of this glossary.

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An interesting distinction is made for the first time between intensity and loudness measurements, the decibel being restricted to the former and the latter now being expressed in a new unit, the "Phon (B.S.)." Thus will be avoided the confusion in terminology which has sometimes existed in the past between these two conceptions.

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The proposals of the glossary in these respects have, I understand, already been adopted by a number of official and industrial bodies, including committees of the Ministry of Transport, the Ministry of Health and the Air Ministry, the National Physical Laboratory and the Post Office Research Station.

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Taking the second aspect referred to, the designer should now be helped by the section dealing with musical terms and attempts having been made to interpret such terms on a sound physical basis.

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The British Standards Institution Committee is continuing this work, and hopes presently to report in greater detail on the development of standard methods of measurement of sound and noise. Once again we have an example of the type of work which the British Standards Institution is peculiarly well fitted to carry out—the preparation of schedules and definitions rather than the fixing of qualities or of design.

Coloured Asbestos Fabrics

Some months ago I mentioned in these notes the fact that coloured asbestos fabrics were available, and since that date further advances have been made, notably in the elimination of a rather unpleasant feeling of clamminess and a tendency to distribute a peculiarly tenacious fluff over clothes and floors.

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So far six colours are possible, blue, green, beige, brown, yellow and pink, these colours being block printed to any desired pattern. Various weights are available, from 10 oz. per square yard upwards, and it would seem that there should be a considerable field of use for such a product, not only for ships and aeroplanes where fireproof fabrics are essential, but also in public buildings of all kinds. Prices are reasonable, and any design in the available colours can be delivered in about a fortnight.

Addresses

Sterilizair, Ltd., St. Chad's Place, Gray's Inn Road, W.C.1.

The British Standards Institution, 28 Victoria Street, S.W.1.

Bestobell Products, Bestobell Works, Slough, Bucks.

Manufacturers' Items

We are informed that the increasing demand for Harco products has necessitated a further large extension of the works of Messrs. G. A. Harvey & Co. (London), Ltd., at their Greenwich Metal Works, London, S.E.7, and a new building having a floor space of more than 100,000 sq. ft. is now nearing completion. This extension, comprising three bays each 800 ft. by 50 ft. wide and 43 ft. high, will enable an increased production of the present heavy tank department to take place and ultimately increase the number of men employed by 300 to 500. The varied activities of this company include metal perforating, wire weaving, galvanizing, sheet metal and steel platework, as well as the manufacture of steel equipment for works and offices.

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Messrs. Marryat & Scott, Ltd., lift manufacturers of London, have opened a branch office for the Midlands at 52 Wheeleys Road, Edgbaston, Birmingham (telephone : Calthorpe 2336), where Mr. B. P. Hutton will represent the company. Architects and building owners are offered a complete free technical advisory service, and are invited by the firm to ask for assistance in the planning of lift service in any building.

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Messrs. Yarrow & Co., Ltd., of Glasgow, have received the order from the London Passenger Transport Board for the supply of 16 Yarrow land type boilers, complete with mechanical stokers and other auxiliary plant for the Board's generating power station at Greenwich.

LAW REPORTS

PROPOSED ALTERATIONS—IMPORTANT JUDGMENT

F. W. Woolworth & Co., Ltd. v. *Lambert.—Court of Appeal. Before the Master of the Rolls and Lords Justices Romer and Greene.*

THIS was an appeal by F. W. Woolworth & Co., Ltd., from a judgment of Mr. Justice Clauson, sitting in the Chancery Division, in an action by Woolworth & Co., Ltd., against Mr. Garnet Ewart Lambert and Mr. Wm. Robert Joel Lambert.

The plaintiffs' claim was for a declaration that on the true construction of a lease they held of shop premises at 18 and 20 Commercial Road, Bournemouth, from the defendants, and in the events which had happened, the defendants were not entitled to withhold their licence or consent to the making of certain proposed improvements and alterations to the premises. They also sought a declaration that they were entitled to make the proposed improvements without any further licence or consent of the defendants.

By their defence the defendants denied that the proposed alterations were "improvements" to which the Landlord and Tenant Act, 1927, applied.

The facts of the case were that the premises in question were demised by the lease to the plaintiffs for a term of 45 years from 1931 at the yearly rent of £3,500 till June, 1945, and thereafter at a rent of £3,750. There was a covenant in the lease by the plaintiffs with defendants, that plaintiffs would not without the previous consent in writing of the lessors erect or suffer to be erected on the premises or make or suffer to be made any structural alterations in or additions to the premises. It also provided that in the event of the lessees making with the consent and approval of the lessors any further additions, alterations, improvements to, or extensions at any time during the term of the lease, no fine or premium or increase in rent would be demanded for such approval. The Landlord and Tenant Act, section 19 (2) provided that the consent of the lessors should not be unreasonably withheld to improvements, but that a reasonable sum should be paid by the lessees in respect of any damage or diminution in the value of the premises and neighbouring premises, and further that there must be an undertaking on the part of the lessees to reinstate the premises in the condition in which they were before the improvement was executed.

The plaintiffs sought to connect the premises with adjoining premises at the rear not belonging to the defendants, but at present occupied by the plaintiffs under a lease, so as to extend their premises, and they undertook to reinstate the premises at the end or sooner determination of the term granted by the defendants. In May, 1935, the defendants refused their consent to the proposed improvements, except on the footing of the payment of £7,000 to defendants. Plaintiffs contended that the defendants had unreasonably refused their consent to the alterations and brought action.

The submission of the plaintiffs was that the alterations and extensions they proposed were improvements from the tenants' point of view, whilst defendants replied that they would seriously damage the reversion.

Mr. Justice Clauson held that the Landlord and Tenant Act, 1927, applied to alterations in the nature of improvements, that the proposed alterations were not improvements within the meaning of section 19 (2) of the Act, that the alterations involved a crucial change in the nature of the premises, that on the reinstatement of the premises legal difficulties might arise, and he could not say that the defendants were not entitled to withhold their consent, and he dismissed the action.

The plaintiffs now appealed.

The Master of the Rolls, in giving judgment, said he came to the conclusion that the judgment of Mr. Justice Clauson must stand, and therefore the appeal must be dismissed.

Proceeding, his lordship said Mr. Justice Clauson had laid down certain principles on the construction of the Landlord and Tenant Act which might be of a far-reaching character, and which his lordship thought were unfounded and not in accordance with the true construction of the Act. Mr. Justice Clauson had held that the plaintiffs' proposed alterations would not be "improvements" within the meaning of the Act. His lordship (the Master of the Rolls) could not agree with that. In his opinion, not only were the proposed alterations capable in law of being deemed to be "improvements," but in fact were "improvements." If the alterations as suggested were made and business was carried on as contemplated, the premises could still be used as a shop, though attached to them and forming part of them were other premises which were not part of the demised premises. He did not think that the pulling down of a wall and the removal of certain apparatus and changing the construction in other respects, constituted destruction of the premises. So far as he could see, the alterations would constitute no breach of any covenant of the lease.

Lord Justices Romer and Greene agreed.

Lord Justice Greene, however, did not concur in the conclusions of the Master of the Rolls, and Lord Justice Romer on the question of improvements. It did not seem to him to be right to give an extravagant meaning and say that it was justified by results. In his view, the true test was that the improvement must be an improvement to the premises which were the subject matter of the covenant, and not merely an improvement which derived its character as such from its effect and result on some composite building. It was impossible to say in this case that the removal of one wall and of a large part of another wall could be called an improvement to the premises. He agreed that it was desirable from the view of the composite premises, but something was being introduced which the Act did not authorise. In this case he did not think that the alterations fell within the word "improvements" in the section.

ARCHITECT'S CERTIFICATE — ACTION BY BUILDERS

Mattock Bros. v. *Ansoll Estates, Ltd.—King's Bench Division. Before Mr. Justice Goddard.*

THIS was an action by Mattock Bros., builders, of Winkfield Road, London, N., against the Ansoll Estates, Ltd., of Buckley Road, N.W., to recover £1,000 alleged to be due on an architect's interim certificate in respect of a building contract.

Mr. R. A. Walles appeared for the plaintiffs, and Mr. Van Oss for the defendants.

Mr. Walles said the action concerned a contract for the erection by the plaintiffs of a block of flats for the defendant company in Harlesden. The defendants, in a counter-claim, alleged breaches of contract by the builders in respect of the walls and floors. They said that the walls were not built of the specified thickness, and that the floors were not in accordance with the specification. The defendants claimed to set off the damages they alleged to be due to them in respect of those matters. The plaintiffs denied that there had been any breach of the contract by them as alleged.

As the plaintiffs' claim was admitted, subject to the counter-claim,

Mr. Van Oss said that the contract was signed in May, 1935. It was an R.I.B.A. contract, and in order to meet the regulations of the local authority it was suggested that certain variations as to height and thickness of the walls should be made. The suggestions were considered by the defendants, who did not desire the variations. The building started in July, 1935, and later the defendants discovered that the suggested variations had been adopted. The total contract price was £6,521, and the first five certificates were paid by the defendants subject to a protest, which defendants made, about the variations. However, when the last progress certificate for £1,000 was issued, the defendants came to the conclusion that then was the time to raise the counter-claim.

The plaintiffs, in answer to the counter-claim, denied that there had been any breaches of the contract as alleged by the defendants.

His lordship, after hearing the evidence, in giving judgment said he was satisfied that the plaintiffs had carried out the work according to the letter of the contract. The trouble had arisen because the defendants' representative had misunderstood the plans provided. He came to the conclusion that the plaintiffs had established their claim, and he gave judgment for them for £1,000 and costs, and he dismissed the counter-claim with costs.

THE BUILDINGS ILLUSTRATED

BRAE COURT, KINGSTON HILL (pages 205-209). The general contractors were Wm. Griggs and Son, Ltd., and the principal sub-contractors included : Ragusa Asphalte Paving Co., Ltd., asphalt; Frazzis Ltd., Paropa special roofings ; F. Bowman Glass Works, Ltd., glass; H. A. Booth, Ltd., central heating and plumbing; Electrical Installations, Ltd., electric wiring; John Bolding and Sons, Ltd., sanitary fittings; F. Knight & Co., Ltd., door furniture; W. James & Co., casements and window furniture; J. and W. Shale, Ltd., iron staircases and metalwork; Gypsum Mines, Ltd., Sirapite plaster; Shapland and Petter, Ltd., joinery; Heal and Son, Ltd., furniture; Evans Lifts, Ltd., lifts; D. Anderson and Sons, Ltd., bituminous felt; London Brick Co., Ltd., phorpres rustics and phorpres cellular; Brookes, Ltd., artificial stone; Ideal Boilers and Radiators, Ltd., Ideal boilers.

HOUSE AT HAMPSTEAD (pages 210-214). The general contractors were W. H. Gaze and Sons, Ltd., and the principal sub-contractors and craftsmen included : L. G. Mouchel & Partners, reinforced concrete; Helical Bar and Engineering Co., Ltd.,

reinforcement; London Brick Co., Ltd., flettons; Frazzi, Ltd., Paropa patent roofing; F. McNeill & Co., Ltd., Insulcrete partitions; Cellulin Flooring Co., cork carpet and lino; Venesta, Ltd., walnut plywood flooring; Richard Crittall & Co., Ltd., panel heating; Bratt Colbran & Co., Ltd., grates; Falkirk Iron Co., Ltd., gas fixtures; Gas Light and Coke Co., Ltd., gas-fitting; Mortimer Gall & Co., Ltd., electric wiring, bells; Troughton and Young, Ltd., Allom Bros., Ltd., Ascog, Ltd., and Best and Lloyd, Ltd., electric light fixtures; Greenwoods Ventilating Co., Ltd., vent duct to dark room; Shanks & Co., Ltd., sanitary fittings; Baldwin, Son & Co., Ltd., and Comyn Ching & Co., Ltd., door furniture; Oscar Kanter, "Wehag" door furniture; Williams and Williams, Ltd., steel windows, window furniture, steel front door and casements; P. C. Henderson, Ltd., sliding door gear, garage; Hilmor, Ltd., external metalwork; Light Steelwork, Ltd., staircase balustrade; Synthetic Stone, Ltd., copings; Fenning & Co., Ltd., living room fireplace; Fairways, Ltd., tessellated tiles; A. Quiligotti & Co., terrace tiling; B. Cohen and Son, furniture and built-in furniture; Waywood-Otis, Ltd., lifts; Smith's English Clocks, Ltd., clocks.

THE WEEK'S BUILDING NEWS

LONDON AND DISTRICTS (15 miles radius)

BARKING. *Estate Development.* Messrs. Leftley Bros., Ltd., Longbridge Road, Barking, are to develop the Longbridge estate by the erection of 233 houses.

BERMONDSEY. *Flats.* The B.C. is to erect 26 flats on the Lynton Mews area, at a cost of £15,741.

BERMONDSEY. *Warehouse, etc.* Plans passed by the B.C.: Warehouse, corner Pottery Street and Salisbury Street, for Caledonian Wharfage Co., Ltd.; conversion, 21–5 Galleywall Road, to offices, for Messrs. W. J. Dixon and Sons; two shops and stores, corner Long Lane and Weston Street, for Royal Arsenal Co-operative Society, Ltd.; riverside warehouse, Bermondsey Wall, for Mr. D. G. Waring; extensions, 200–4 Long Lane, for Mr. R. S. Andrews; hall, Jamaica Road, for Rotherhithe Labour Club, Ltd.; alterations and additions, 177–185 Abbey Street, for Messrs. Alder, Turvill and Danvers; extensions, factory of Cross and Blackwell, Ltd., Grimscott Street, for Messrs. Joseph.

DENHAM. *Flats.* The U.D.C. has approved plans by Mr. W. S. Mobley for seven blocks of flats to be erected at Denham.

FINCHLEY. *Branch Library.* The Corporation has approved plans for the erection of a branch library at East End, at a cost of £9,450.

FINCHLEY. *Flats, etc.* Plans passed by the Corporation: Nine flats, Bow Lane, for Leamington Court Estates, Ltd.; two houses, Ken Wood Close, for Messrs. R. Hart and Sons, Ltd.; alterations and additions, Queen's Head Hotel, East End Road, for Messrs. Courage & Co., Ltd.; alterations and extensions, 31–3 High Street, for Messrs. Priors; three houses, Dunger Place, for Halliwick Estates, Ltd.; four houses, Rowan Walk, for Mr. H. E. Brown; two houses, Milton Close, for Mr. H. Lawrence; four houses, Church Path, for Mr. J. J. Lovesay; two houses, Spencer Drive, for Mr. L. C. Gibson; alterations, clubhouse, Nether Court, for Finchley Golf Club, Ltd.

HARROW. *School.* The Middlesex Education Committee has acquired a site in Porlock Avenue, Harrow, for the erection of an elementary school.

HAYES. *School.* The Middlesex Education Committee has purchased a site on the Minet estate, Hayes, for the erection of an elementary school.

ILFORD. *Houses, etc.* Plans passed by the Corporation: 189 houses, Hanover Gardens, etc., for Davis Estates, Ltd.; 34 houses, off Brian Road, for Mr. J. S. Broadbent; 12 houses, Somerville Road, and 62 houses, Oakleafe Gardens, for Mr. J. T. Perrin; 17 houses, Lord Avenue, for Messrs. Lord and Mellodew; alterations and additions, 754–6 Green Lane, for Messrs. J. Sainsbury, Ltd.; two houses, Marlands Road, for Messrs. C. Living and Son; 17 bungalows, Leigh Avenue, for Mr. W. M. Edwards; 10 houses, Marlborough Drive, for Mr. L. E. Ansell; additions, 21–3 York Road, for Mr. G. D. Hyam; extensions, 2–3 High Street, for Messrs. Haines and Warwick, Ltd.; glove factory, High Road, Chadwell Heath, for Mr. E. Meredith.

ILFORD. *Flats.* The Bunting Construction Co., Ltd., are to erect a block of 70 flats at the corner of New North Road and Clinton Crescent, Ilford.

LAMBETH. *Shops.* It is proposed to erect an arcade of shops at Coldharbour Lane and Atlantic Road, from plans prepared by Mr. V. Burr, 85 Gower Street, W.C.1.

LEWISHAM. *Stores.* Messrs. F. W. Woolworth & Co., Ltd., are to extend their premises at 142–148 High Street. Plans are by the company's own architects' department.

MALDENS. *Library and Housing.* The U.D.C. has agreed to the purchase of a site in Kingston Road for the proposed erection of a central library. The Council is also to negotiate for a site in Franks Avenue for housing purposes.

NEWINGTON BUTTS. *Extensions.* Messrs. Yates, Cook and Darbyshire are the architects in connection with extensions to be carried out at 132–138 Newington Butts.

SLOUGH. *Flats.* The U.D.C. has approved plans submitted by W. Herbert & Co., Ltd., for the proposed erection of 60 flats on the Croft Hall estate.

SURREY. *Police Premises.* The Surrey C.C. has obtained sanction to borrow £37,500 for the improvement and enlargement of police premises and £12,500 for the provision of living quarters for the police.

SURREY. *Central Laundry.* The Surrey C.C. is to prepare a scheme for the provision of a central laundry, the cost of which is estimated at £170,000.

TWICKENHAM. *Flats, Shops, etc.* The T.C. has approved plans by Mr. O. Howard Leicester, 7 Bayley Street, W.C.1, for 84 flats, 14 shops, offices, petrol-filling station, garages, and oil stores, at the junction of The Avenue and St. Margaret's Road.

WALTHAMSTOW. *College.* The Essex Education Committee has obtained sanction to borrow £170,157 for the erection of a technical college at Walthamstow.

WEMBLEY. *Schools.* The Roman Catholic authorities are to erect elementary schools in Hay Lane and in Kenton Road in the Wembley urban area.

SOUTH-WESTERN COUNTIES

BAMPTON. *School.* The Devon Education Committee is to erect an elementary school at Bampton, at a cost of £17,600.

EXETER. *Reconstruction.* The Exeter Education Committee is to reconstruct the John Stocker school, at a cost of £20,500.

TORQUAY. *Houses, etc.* Plans passed by the Corporation: Four houses, Meadfoot Road, for Miss M. Earp; 32 houses, Shipley Park Road, for Mr. J. Lloyd; four houses, Sherwell Valley Road, for Chelston Building Co.; alterations, 68–9 Fleet Street, for Messrs. Russell and Bromley, Ltd.; two houses, Fore Street, for Messrs. S. Hawkins and Son; two houses, Coombe Lane, for Mr. S. England.

TORQUAY. *School.* The Board of Education has approved the plans of the Torquay Education Committee for the erection of a school at Audley Park, at a cost of £64,977.

TORQUAY. *Pavilion.* The Corporation has approved a scheme, prepared by the borough engineer, for extensions at the pavilion, at a cost of £25,000.

MIDLAND COUNTIES

CHESTERFIELD. *Central Baths.* The Corporation has appointed a committee to prepare a scheme for the provision of central baths.

CHESTERFIELD. *Houses, etc.* Plans passed by the Corporation: Four houses, Baden Powell Road, for Mr. O. Nadin; works additions, Derby Road, for Chesterfield Tube Co., Ltd.; two houses, Summerfield Road, for Mr. Stanton; three houses, Brookside Glen, for Mr. L. W. Crossley; four houses, Foljambe Avenue, for Mr. W. Marsden; two houses, Walton Road, for Mr. G. Witham; two houses, Baden Powell Road, for Messrs. W. Rhodes and Sons; two houses, Somersall Park Road, for Mr. B. Hattersley; two houses, Brearley Avenue, for Messrs. F. Durham & Co.

LEICESTER. *School.* The Leicester Education Committee has obtained sanction to borrow £19,137 for the erection of an elementary school at South Charn Wood.

STOKE-ON-TRENT. *School.* The Stoke-on-Trent Education Committee has obtained sanction to borrow £58,013 for the erection of an elementary school.

TUNSTALL. *Kiln, etc.* Plans passed: Kiln, Plex Street, for Mr. F. Buckley; extensions, Brownhills Tileries, for Messrs. D. Platt, Ltd.; stores, Goldenhill High Street, for Burslem Co-op. Society, Ltd.; 12 houses, Sandyford Grove, for Mr. J. Smith; four houses, Chell Green Avenue, for Messrs. Ray and Son; two houses, off Norton Avenue, for Mr. J. Vickers; four houses, Turnhurst Road, for Messrs. Cope and Leigh.

WALSALL. *Extensions.* The Corporation has prepared plans for extensions at the Manor Hospital, at a cost of £31,328.

WALSALL. *Extensions.* The Corporation Transport Committee is to extend the Birchills transport depot, at a cost of £16,375.

NORTHERN COUNTIES

BOLTON. *Houses, etc.* Plans passed by the Corporation: Six houses, Crompton Way, for Messrs. Leigh Bros., Ltd.; warehouse extension, Manor Street, for Messrs. H. Whitehurst and Sons, Ltd.; works extensions, Back Broom Street, for Messrs. H. Peers & Co., Ltd.; 10 houses, Wythburn Avenue, for Mr. Maurice England; 40 houses, Barrow Bridge Road, for Mr. F. R. Makin; two houses, Lakeside Avenue, for Mr. H. Lowe; motor body building works, Manchester Road, for Mr. Miles Edwards; service garage extension, Easedale Road, for Messrs. Knight and Day, Ltd.; four houses, Andrew Lane, for Messrs. E. and H. Douglas.

BRADFORD. *Workshops, etc.* The Corporation is to erect workshops, garages, etc., at the Valley Road power station, at a cost of £16,750.

BRADFORD. *Depot.* The Corporation has agreed on the purchase, for £15,000, of the infirmary site in Westgate for the purpose of the provision of a central depot for the transport department.

BRADFORD. *Extensions.* The Corporation has approved plans by the city architect for extensions at St. Luke's Hospital, at a cost of £35,750.

HULL. *Shops.* The Corporation has asked the city architect to prepare plans for the erection of shops at the junction of Ellerburn Avenue and Greenwood Avenue, on the Endyke estate.

HULL. *School.* The Hull Education Committee has approved plans for the new grammar school to be erected in Bricknell Avenue, and is to consider whether a swimming bath should be included in the scheme.

HULL. *Extensions.* The Corporation has obtained sanction to borrow £279,220 for extensions at Sculcoates power station.

RATES OF WAGES

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

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

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

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

CURRENT PRICES

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

WAGES

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

MATERIALS

EXCAVATOR AND CONCRETOR

		£	s.	d.
Grey Stone Lime	per ton	2	2	0
Blue Lias Lime	"	1	16	6
Hydrated Lime	"	3	0	9
Portland Cement, in 4-ton lots (d/d site, including Paper Bags)	"	1	19	0
Rapid Hardening Cement, in 4-ton lots (d/d site, including Paper Bags)	"	2	5	0
White Portland Cement, in 1-ton lots	"	8	15	0
Thames Ballast	per Y.C.		6	6
¾" Crushed Ballast	"		7	0
Building Sand	"		7	6
Washed Sand	"		8	6
2" Broken Brick	"		8	0
¾" " "	"		10	3
Pan Breeze	"		6	6
Coke Breeze	"		8	9

DRAINLAYER

BEST STONEWARE DRAIN PIPES AND FITTINGS

		4" s.	4" d.	6" s.	6" d.
Straight Pipes	per F.R.	0	9	1	1
Bends	each	1	9	2	6
Taper Bends	"	3	6	5	3
Rest Bends	"	4	3	6	3
Single Junctions	"	3	6	5	3
Double "	"	4	9	6	6
Straight channels	per F.R.	1	6	2	6
¾" Channel bends	each	2	9	4	0
Channel junctions	"	4	6	6	6
Channel tapers	"	2	9	4	0
Yard gullies	"	6	9	8	9
Interceptors	"	16	0	19	6

IRON DRAINS:

		s.	d.	s.	d.
Iron drain pipe	per F.R.	1	6	2	6
Bends	each	5	0	10	6
Inspection bends	"	9	0	15	0
Single junctions	"	8	9	18	0
Double junctions	"	13	6	30	0
Lead Wool	lb.		6		—
Gaskin	"		5		—

BRICKLAYER

		£	s.	d.
Fletton	per M.	2	15	0
Grooved do.	"	2	17	0
Phorpres bricks	"	2	15	0
" Cellular bricks	"	2	15	0
Stocks, 1st quality	"	4	11	0
" 2nd "	"	4	2	6
Blue Bricks, Pressed	"	8	17	6
" Wirecuts	"	7	17	6
" Brindles	"	7	0	0
" Bullnose	"	9	0	0
Red Sand-faced Facings	"	6	18	6
Red Rubbers for Arches	"	12	0	0
Multicoloured Facings	"	7	10	0
Luton Facings	"	7	10	0
Phorpres White Facings	"	3	17	3
" Rustic Facings	"	3	12	3
Midhurst White Facings	"	5	0	0
Glazed Bricks, Ivory, White or Salt glazed, 1st quality:				
Stretchers	"	21	0	0
Headers	"	20	10	0
Bullnose	"	27	10	0
Double Stretchers	"	29	10	0
Double Headers	"	26	10	0
Glazed Second Quality, *Less*	"	1	0	0
" Buffs and Creams, *Add*	"	2	0	0
" Other Colours	"	5	10	0
2" Breeze Partition Blocks	per Y.S.		1	7
2½" " " "	"		1	10
3" " " "	"		2	1
4" " " "	"		2	6

MASON

The following d/d F.O.R. at Nine Elms:

		s.	d.
Portland stone, Whitbed	F.C.	4	4½
" " Basebed	"	4	7½
Bath stone	"	2	10
York stone	"	6	6
" " Sawn templates	"	7	6
" " Paving, 2"	F.S.	1	8
" " " 3"	"	2	6

SLATER AND TILER

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

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

CARPENTER AND JOINER

		£	s.	d.
Good carcassing timber	F.C.		2	2
Birch	as 1" F.S.			9
Deal, Joiner's	" "			5
" " 2nds	" "			4
Mahogany, Honduras	" "		1	3
" African	" "		1	1
" Cuban	" "		2	6
Oak, plain American	" "		1	0
" Figured "	" "		1	3
" plain Japanese	" "		1	2
" Figured "	" "		1	5
" Austrian wainscot	" "		1	6
" English	" "		1	11
Pine, Yellow	" "		1	0
" Oregon	" "			4
" British Columbian	" "			4
Teak, Moulmein	" "		1	3
" Burma	" "		1	2
Walnut, American	" "		2	3
" French	" "		2	3
Whitewood, American	" "		1	1
Deal floorings, ¾"	Sq.		18	6
" 1"	"	1	1	6
" 1¼"	"	1	2	0
" 1½"	"	1	5	0
" 1¾"	"	1	10	0
Deal matchings, ¾"	"		14	0
" ¾"	"		15	6
" 1"	"	1	4	0
Rough boarding, ¾"	"		16	0
" 1"	"		18	0
" 1½"	"	1	6	0

Plywood, per ft. sup.

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

		d.
Scotch glue	lb.	8

SMITH AND FOUNDER

Tubes and Fittings

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

		¼"	½"	1"	1¼"	2"
Tubes, 2'–14' long	per ft. run	4	5½	9½	1/1	1/10
Pieces, 12"–23" long	each	10	1/1	1/11	2/8	4/9
" 3"–11½" long	"	7	9	1/3	1/8	3/–
Long screws, 12"–23½" long	"	11	1/3	2/2	2/10	5/3
" " 3" M–½" long	"	8	10	1/5	1/11	3/6
Bends	"	8	11	1/7½	2/7½	5/2
Springs not socketed	"	5	7	1/1½	1/11½	3/11
Socket unions	"	2/–	3/–	5/6	6/9	10/–
Elbows, square	"	10	1/1	1/6	2/2	4/3
Tees	"	1/–	1/3	1/10	2/6	5/1
Crosses	"	2/2	2/9	4/1	5/6	10/6
Plain sockets and nipples	"	3	4	6	8	1/3
Diminished sockets	"	4	6	9	1/–	2/–
Flanges	"	9	1/–	1/4	1/9	2/9
Caps	"	3½	5	8	1/–	2/–
Backnuts	"	2	3	5	6	1/1
Iron main cocks	"	1/6	2/3	4/2	5/4	11/6
" with brass plugs	"	—	4/–	7/6	10/–	21/–

Discounts	TUBES. Per cent.		Per cent.
Gas	65	Galvanized gas	52½
Water	61½	" water	47½
Steam	57½	" steam	42½
	FITTINGS.		
Gas	57½	Galvanized gas	47½
Water	52½	" water	42½
Steam	47½	" steam	37½

		s.	d.
Rolled steel joists cut to length	cwt.	12	9
Mild steel reinforcing rods, ¾"	"	10	6
" " ½"	"	10	3
" " ¼"	"	10	0
" " ⅜"	"	9	6
" " ½"	"	9	6
" " ¾"	"	9	6
" " 1"	"	9	6
" " 1¼"	"	9	6
" " 1½"	"	9	6

SMITH AND FOUNDER—*continued*

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

PLUMBER

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

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

PLASTERER

		£	s.	d.
Lime, chalk	per ton	2	5	0
Plaster, Coarse	"	2	10	0
" fine	"	4	15	0
Hydrated lime	"	3	0	9
Sirapite	"	3	6	0
Keene's cement	"	5	0	0
Gothite Plaster	"	3	6	0
Pioneer Plaster	"	3	6	0
Thistle plaster	"	3	6	0
Sand, washed	Y.C.		11	6
Hair	lb.			6
Laths, sawn	bundle		2	4
" rent	"		3	9
Lath nails	lb.			3

GLAZIER

		s.	d.	s.	d.
Sheet glass, 21 oz., squares n/e 2 ft.	s. F.S.				2½
" " 26 oz.	" "				3
Flemish, Arctic, Figures (white)*	"				7
Blazoned glasses	"			2	6
Reeded: Cross Reeded	"				11
Cathedral glass, white, double-rolled, plain, hammered, rimpled, waterwite	"				6
Crown sheet glass (n/e 12" × 10")	"			2	8
Flashed opals (white and coloured)	"	1	0	and 2	0
¼" rough cast; rolled plate	"				5½
¼" wired cast; wired rolled	"				9½
¼" Georgian wired cast	"				11
¼" Polished plate, n/e 1 ft.	"	†10	to ‡1		1
" " 2	"	†1	2 " ‡1		4
" " 4	"	†2	3 " ‡2		6
" " 8	"	†2	9 " ‡3		2
" " 20	"	†3	1 " ‡3		9
" " 45	"	†3	3 " ‡4		0
" " 100	"	†4	0 " ‡4		10
Vita glass, sheet, n/e 1 ft.	"				1
" " " 2 ft.	"				3
" " " over 2 ft.	"				9
" " plate, n/e 1 ft.	"				6
" " " 2 ft.	"				0
" " " 5 ft.	"				0
" " " 7 ft.	"				0
" " " 15 ft.	"				0
" " " over 15 ft.	"				6
"Calorex" sheet 21 oz., and 32 oz.	"	2	6	and 3	6
" rough cast ½" and ¾"	"			8½ " 1	0
Putty, linseed oil	lb.				3

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

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

PAINTER

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

CURRENT PRICES FOR MEASURED WORK

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

EXCAVATOR AND CONCRETOR

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

DRAINLAYER

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

BRICKLAYER

		£	s.	d.
Brickwork, Flettons in lime mortar	Per Rod	26	10	0
,, ,, in cement	,,	27	12	6
,, Stocks in cement	,,	34	0	0
,, Blues in cement	,,	50	0	0
Extra only for circular on plan	,,	2	0	0
,, backing to masonry	,,	1	10	0
,, raising on old walls	,,	2	0	0
,, underpinning	,,	5	10	0½
Fair Face and pointing internally	F.S.			1½
Extra over flettoq brickwork for picked stock facings and pointing	,,			8
,, ,, ,, red brick facings and pointing	,,			11
,, ,, ,, blue brick facings and pointing	,,		1	4
,, ,, ,, glazed brick facings and pointing	,,		3	6
Tuck pointing	,,			7½
Weather pointing in cement	,,			3
Slate dampcourse	,,			10
Vertical dampcourse	,,		1	1

ASPHALTER

		s.	d.
4″ Horizontal dampcourse	Y.S.	4	9
4″ Vertical dampcourse	,,	7	9
4″ paving or flat	,,	6	3
2″ paving or flat	,,	7	6
2″ × 6″ skirting	F.R.	1	0
Angle fillet	,,		2½
Rounded angle	,,		2½
Cesspools	Each	5	6

MASON

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

SLATER AND TILER

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

CARPENTER AND JOINER

		£	s.	d.
Flat boarded centering to concrete floors, including all strutting	Sqr.	2	2	6
Shuttering to sides and soffits of beams	F.S.			7
,, to stanchions	,,			7
,, to staircases	,,		1	6
Fir and fixing in wall plates, lintols, etc.	F.C.		3	9
Fir framed in floors	,,		4	6
,, ,, roofs	,,		6	6
,, ,, trusses	,,		7	6
,, ,, partitions	,,		8	6
¾″ deal sawn boarding and fixing to joists	Sqr.	1	14	6
1″ ,, ,, ,, ,, ,,	,,	1	17	6
1¼″ ,, ,, ,, ,, ,,	,,	2	3	0
4″ × 2″ fir battening for Countess slating	,,		9	6
Do., for 4″ gauge tiling	,,		12	0
Stout feather-edged tilting fillet	F.R.			4½
Patent inodorous felt, 1 ply	Y.S.		2	3
,, ,, ,, 2 ,,	,,		2	9
,, ,, ,, 3 ,,	,,		3	3
Stout herringbone strutting to 9″ joists	F.R.			10½
1″ deal gutter boards and bearers	F.S.		1	2
1¼″ ,, ,, ,,	,,		1	6
2″ deal wrought rounded roll	F.R.			8
1″ deal grooved and tongued flooring, laid complete, including cleaning off	Sqr.	2	1	0
1¼″ do.	,,	2	10	0
1½″ do.	,,	2	17	0
1″ deal moulded skirting fixed on, and including grounds plugged to wall	F.S.		1	6
1¼″ do.	,,		1	0
1½″ deal moulded sashes of average size	F.S.		1	9½
2″ ,, ,, ,, ,, ,,	,,		1	11½
1½″ deal cased frames double hung, of 6″ × 3″ oak sills, 1¼″ pulley stiles, 1¼″ heads, 1″ inside and outside linings, ⅜″ parting beads, and with brass faced axle pulleys, etc., fixed complete	,,		3	7
2″ ,, ,, ,, ,, ,,	,,		3	10
Extra only for moulded horns ,, ,, ,,	Each			6
1½″ deal four-panel square, both sides, door	F.S.		2	0
2″ ,, ,, ,, ,,	,,		2	8
1½″ ,, but moulded both sides	,,		2	4
2″ ,, ,, ,, ,,	,,		3	0
4″ × 3″ deal, rebated and moulded frames	F.R.		1	0
4½″ × 3½″ ,, ,, ,,	,,		1	4
1½″ deal tongued and moulded window board, on and including deal bearers	F.S.		1	9
1¼″ deal treads, 1″ risers in staircases, and tongued and grooved together on and including strong fir carriages	,,		2	6
1¼″ deal moulded wall strings	,,		2	1
1½″ ,, outer strings	,,		2	4
Ends of treads and risers housed to string	Each		1	9
3″ × 2″ deal moulded handrail	F.R.		1	3
1″ × 1″ deal balusters and housing each end	Each		2	0
1½″ × 1½″ ,, ,, ,,	,,		2	9
3″ × 3″ deal wrought framed newels	F.R.		1	3
Extra only for newel caps	Each		6	0
Do., pendants	,,		6	0

SMITH AND FOUNDER

		£	s.	d.
Rolled steel joists, cut to length, and hoisting and fixing in position	Per cwt.		16	6
Riveted plate or compound girders, and hoisting and fixing in position	,,	1	0	6
Do., stanchions with riveted caps and bases and do.	,,		19	0
Mild steel bar reinforcement, ½″ and up, bent and fixed complete	,,		17	6
Corrugated iron sheeting fixed to wood framing, including all bolts and nuts 20 g.	F.S.			11
Wrot-iron caulked and cambered chimney bars	Per cwt.	1	10	0

PLUMBER

		£	s.	d.
Milled lead and labour in flats	cwt.	1	18	6
Do. in flashings	,,	2	2	0
Do. in covering to turrets	,,	2	7	6
Do. in soakers	,,	1	13	3
Labour to welted edge	F.R.			3½
Open copper nailing	,,			3
Close ,, ,,	,,			4

		½″ s.	½″ d.	¾″ s.	¾″ d.	1″ s.	1″ d.	1¼″ s.	1¼″ d.	2″ s.	2″ d.	4″ s.	4″ d.
Lead service pipe and fixing with pipe hooks	F.R.	10		1	0	1	3	2	0	2	10	—	
Do. soil pipe and fixing with cast lead tacks	,,	—		—		—		—		—		5	6
Extra, only to bends	Each	—		—		—		—		2	0	6	9
Do. to stop ends	,,	6½		8		9		11		1	6	—	
Boiler screws and unions	,,	3	3	3	9	5	0	8	0	—		—	
Lead traps	,,	—		—		—		6	3	8	9	—	
Screw down bib valves	,,	6	9	9	6	11	0	—		—		—	
Do. stop cocks	,,	7	0	9	6	12	6	—		—		—	
4″ cast-iron ½-rd. gutter and fixing	F.R.											1	0
Extra, only stop ends	Each											1	0
Do. angles	,,											1	6
Do. outlets	,,											2	9
4″ dia. cast-iron rain-water pipe and fixing with ears cast on	F.R.											1	2
Extra, only for shoes	Each											1	3
Do. for plain heads	,,											5	6

PLASTERER AND TILING

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

GLAZIER

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

PAINTER

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

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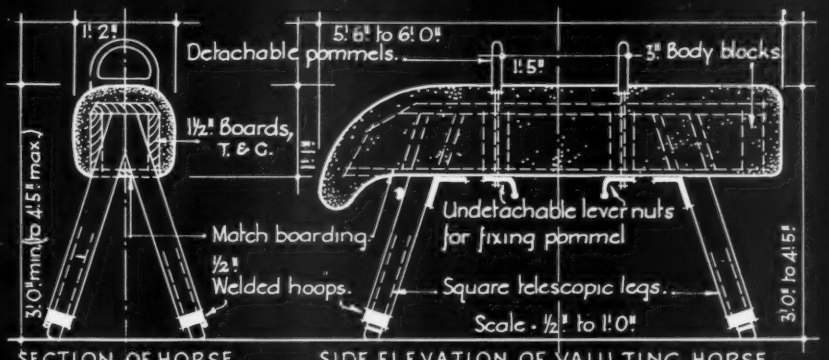
VAULTING HORSE :

The vaulting horse should be 3' 0" min. high adjustable to 4' 5", fitted with two pommels & two broad headed hardwood filling rods to fit flush with the body of the horse, for filling in the holes when the pommels are not in use.

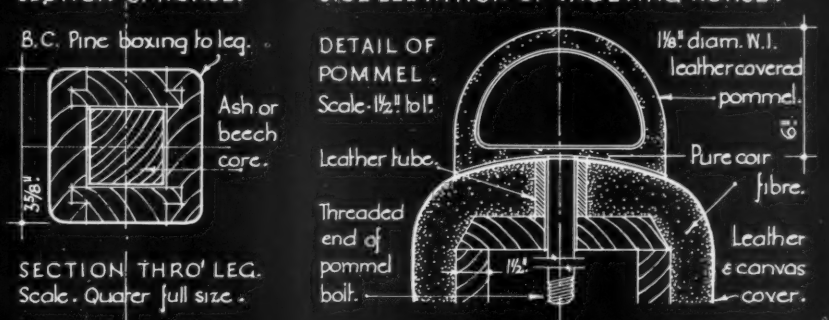
The legs to be of British Columbia Pine, the sliding core of ash or beech, the leg boxes strengthened at the base by welded iron hoops. The legs should be fitted & screwed together in pairs, fixed in the body with position blocks, glued, wedged and nailed together, each leg fixed by a W.I. bracket 5" x 1½" x ½".

A steel plate is recessed into the sliding core with holes at 2" centres. A strong steel pin ⅝" x ⅜" fits into the holes & is operated by a handle on a steel spring recessed into the side of the leg boxes.

The pommels should be of wrought iron fastened to the horse with undetachable lever nuts under the body. The leather covering to be flesh side out & seams of grips flattened on the inside.



SECTION OF HORSE. SIDE ELEVATION OF VAULTING HORSE.



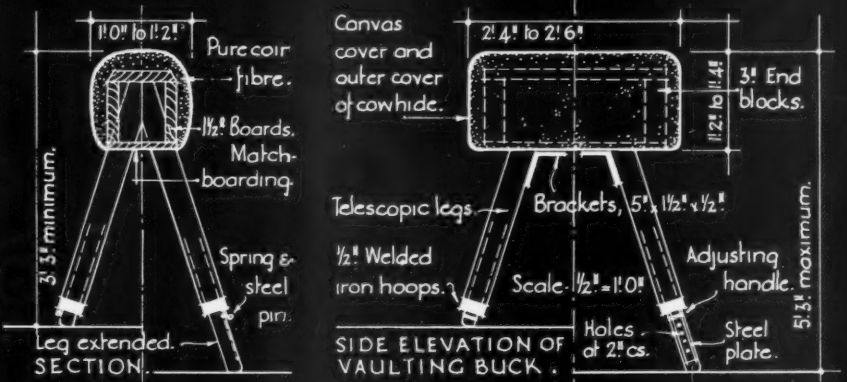
SECTION THRO' LEG. Scale. Quarter full size.

VAULTING BUCK :

The Vaulting Buck should be 3' 3" min. high adjustable to 5' 3". The body box to be of 1½" timber, tongue & grooved, glued and nailed together in rectangular section.

The shaping of the body is obtained by padding of pure coir fibre stuffed hard as possible, 2" average thickness.

A good canvas cover should be provided & an outer cover of grain cowhide, flesh side outwards, or middle split, 2mm. min. thick, well stretched & nailed on the under side, seams stitched with waxed thread and flattened.



SECTION. SIDE ELEVATION OF VAULTING BUCK.

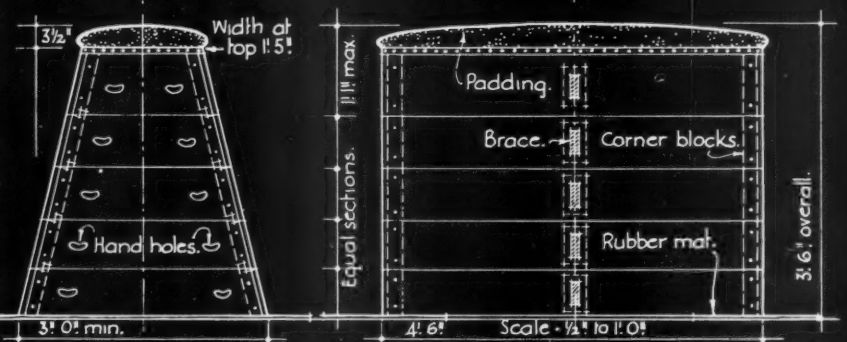
VAULTING BOX :

The Vaulting Box consists of five sections, the sides ⅞" min. thick finished, to be tongued and grooved together.

Each corner to be fitted with an ash or beech block part fitted into the section above, glued & screwed with countersunk screws in brass cups. Handholes to be neatly cut and all edges rounded off.

The top should be padded with pure coir fibre and covered with canvas & brown grain cowhide, flesh side out, as described above. The padded top to project over the wood all round. The exposed edges of the leather to be finished with leather banding & brass gimp pins.

To prevent the Box from slipping a loose, ribbed rubber mat 4' 0" x 1' 6" x ¼" thick, with a rubber covered canvas back may be placed under each end.



SIDE ELEVATION. FRONT ELEVATION OF VAULTING BOX :

PLAN AT ANGLE.

Data from Board of Education Physical Training Series No. 14, by Permission of the Controller, H.M. Stationery Office.

INFORMATION SHEET : GYMNASIUMS : 5 : DETAILS OF VAULTING HORSE, VAULTING BUCK & VAULTING BOX.
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1. Oscar A. Blayne

Supplement to THE ARCHITECTS' JOURNAL for August 13, 1936

THE ARCHITECTS' JOURNAL
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INFORMATION SHEET

• 391 •

GYMNASIUMS—V

Vaulting Horse

A suitable length for a vaulting horse is between 5 ft. 6 ins. and 6 ft. ; and it should be fitted with telescopic legs which permit of adjustment of the height through a total distance of about 1 ft. 5 ins. The minimum height should be approximately 3 ft. Two pommels are provided.

The core of the legs being made of hardwood, it is necessary to provide shoes for this apparatus only when the gymnasium floor is slippery. In some cases vaulting apparatus is fitted with cast iron shoes and these, when in bad condition through wear, cause damage to the floor of the gymnasium. Rubber shoes are preferable but are not necessary on a floor that is not slippery and will wear rapidly on a knotted or uneven surface. Their use is therefore recommended only on slippery floors.

The holes for the pommels should be fitted with leather tubes leading down into the body about 1½ inches. The pommels should be wrought iron, fastened to the body, with undetachable lever nuts on the underside of the body, and covered with grain cowhide fixed flesh side outwards or "middle split" cowhide, the seams of which should be on the inside, smooth and without any ridge.

Rods must be provided to fill the pommel holes when not in use. It has been found that filling rods of wrought iron often cause damage to the thread of the lever nut on the base of the body by being dropped into the holes on the nut. It is therefore preferable to make the filling rods of turned hardwood which, if broken, can be replaced at comparatively small cost. The rods should be turned with a broad head which fits flush with the body of the horse. When not in use, they may conveniently be carried in straps fixed for the purpose on the underside of the body of the horse.

Vaulting Buck

The general principles of the construction of a vaulting horse apply equally to a vaulting buck. The total length of the padded top should be 2 ft. 4 ins. or 2 ft. 6 ins. It is possible to adjust the total height of this apparatus through a distance of nearly 2 ft. The minimum height should be about 3 ft. 3 ins.

Suitable dimensions for the width of the body (including padded cover) would be 12 ins. to 14 ins., and for the height 14 ins. to 16 ins.

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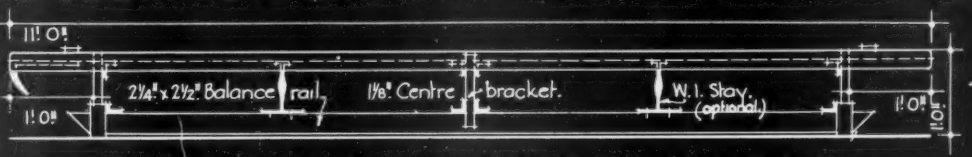
BALANCING BENCH:

The balance rail should be fitted over the feet & centre leg with housed bridle joints secured by W.I. brackets. The ends to project and be cut as shown. Round all edges.

Four hardwood knobs to be provided to form firm bearing for bench inverted.

Hooks at end of bench should be best quality malleable iron with leather coverings made to fit over beams etc. without causing abrasion.

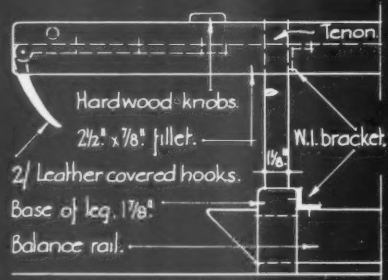


HALF INCH SCALE SIDE ELEVATION OF BALANCING BENCH.

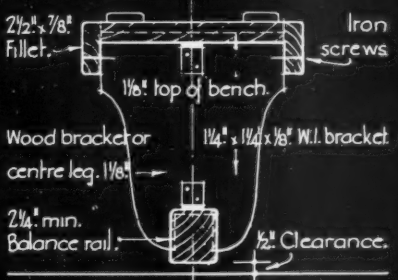
The end legs should be fixed into the top of the bench & leg bases by tenons, glued & wedged. The centre leg to be dovetailed 5/16" deep, right across & glued, strengthened by 1¼" x 1¼" x ⅛" W.I. brackets.

HALF INCH SCALE PLAN OF BALANCING BENCH.

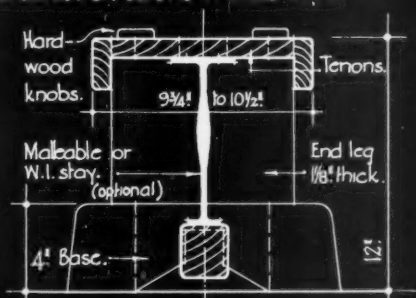
The top of the bench to be reinforced by side fillets fitted vertically, glued, cramped & nailed to the side of the top, screwed at the legs with 2" countersunk iron screws in brass cups.



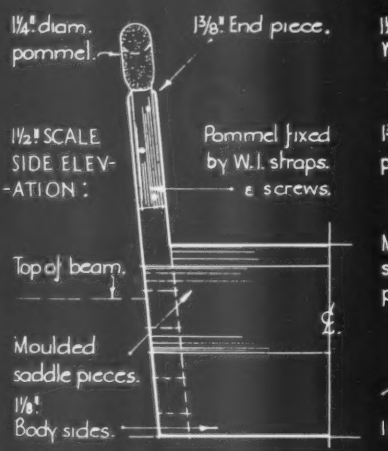
1½" SCALE ELEVATION OF END OF BENCH.

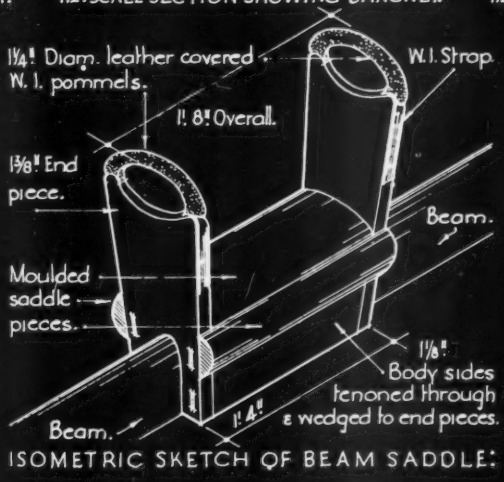


1½" SCALE SECTION SHOWING BRACKET.

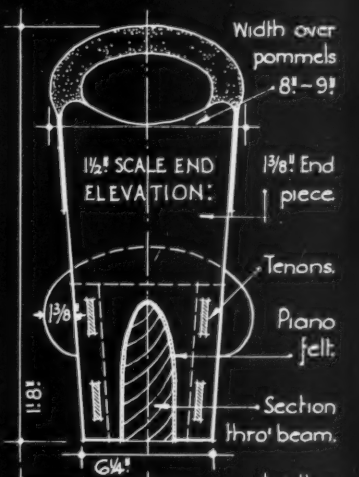


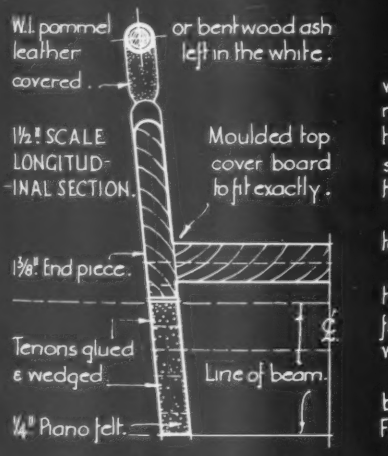
1½" SCALE SECTION SHOWING END LEG.

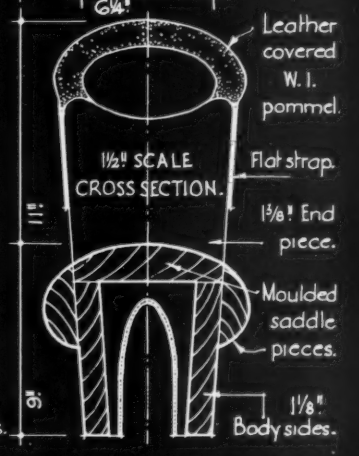




ISOMETRIC SKETCH OF BEAM SADDLE.







BEAM SADDLE:

The body sides should be tenoned, glued & wedged through the end pieces. The top cover board must fit exactly and be glued to the body sides, the two moulded saddle side pieces glued & nailed on so as to form a continuous curve with the top piece the nail holes being properly filled.

The end pieces are cut to half-oval shape at the top & all angles should be rounded.

The pommels may be of bent wood ash, left in the white, glued & screwed to the end pieces or made from ¾" diam. W.I. forged flat at the ends & wound with tape & covered with leather, 1¼" diam. finished.

The Saddle should be cut to fit exactly onto the beam, the ends being lined with ¼" piano felt. Fixing screws are undesirable as they damage the beams.

Data from Board of Education Physical Training Series, No. 14, by permission of the Controller H.M. Stationery Office.

INFORMATION SHEET: GYMNASIUMS: 6: DETAILS OF BALANCING BENCH & BEAM SADDLE.

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

Supplement to THE ARCHITECTS' JOURNAL for August 13, 1936

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GYMNASIUMS—VI

Beam Saddles

The body sides should be tenoned, glued and wedged through the end pieces. The top cover board must fit exactly and be glued to the body sides, the two moulded saddle side-pieces glued and nailed on so as to form a continuous curve as shown in the drawing, the nail holes being properly filled.

The end pieces are cut to half-oval shape at the tops and the corners should be rounded. The pommels may be bentwood ash, left in the white, glued and screwed to the end pieces by countersunk screws in cups or sockets, but equally satisfactory pommels are made from $\frac{3}{4}$-in. diameter wrought iron forged flat at the ends, bound tightly with tape and leather covered to form a pommel measuring $1\frac{1}{4}$ ins. in diameter.

The saddle should be cut out so as to make an exact " press on " fit over the beams and lined at the ends with $\frac{1}{4}$-in. thick piano felt. Thumb screws and similar devices for tightening should not be used as these damage the beams.

The shelves or racks for storing the saddles when they are not in use should be of simple construction consisting merely of lengths of beam pieces supported by two uprights and fixed to the walls.

Suitable measurements for this apparatus are : Overall length at top about 20 ins. and at bottom 16 ins. The overall width at the top of the end pieces (i.e., greatest width of pommels) should be 8 to 9 ins. and at the bottom of the end pieces about 6 ins. The vertical height to the top of the saddle should be about 9 ins. and to the top of the pommels about 1 ft. 8 ins.

Balancing Benches

Suitable dimensions for this apparatus are : Length 11 ft., height 12 ins., and width of top $9\frac{3}{4}$ ins. to $10\frac{1}{2}$ ins. The top, centre and end legs should be $1\frac{1}{8}$ ins. in thickness and the feet 4 ins. high and $1\frac{7}{8}$ ins. in thickness.

One end of the bench should be fitted with two wrought iron hinged hooks which must be so shaped that they fit over beams or wall bars. The hooks should be fitted with a bolt through the top, and at least two screws in each fixed leaf. Unless the hooks are constructed to fit accurately over beams or wall bars and have no sharp edges which are likely to cause damage to other apparatus, they should be covered in leather which is kept in position by being stitched through small holes drilled in the hooks.

Supple

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5'1"0"

1'0"

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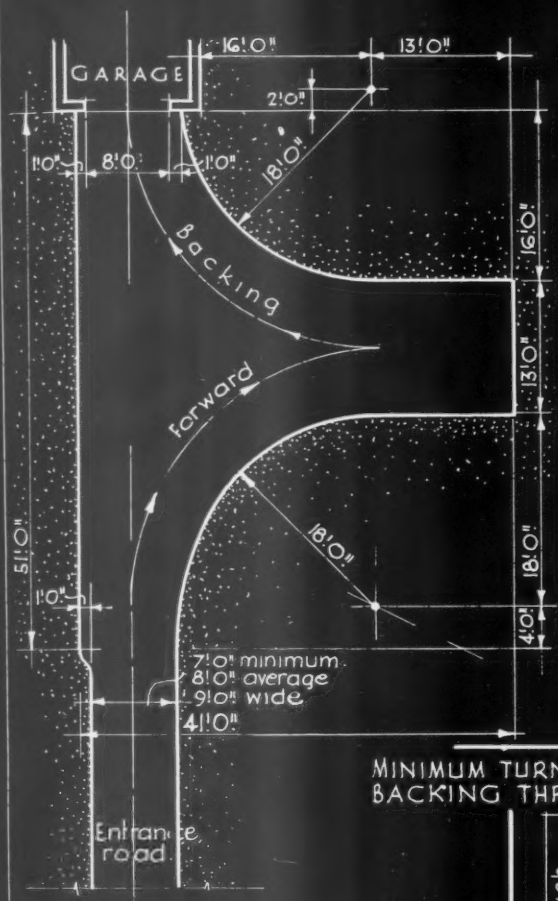
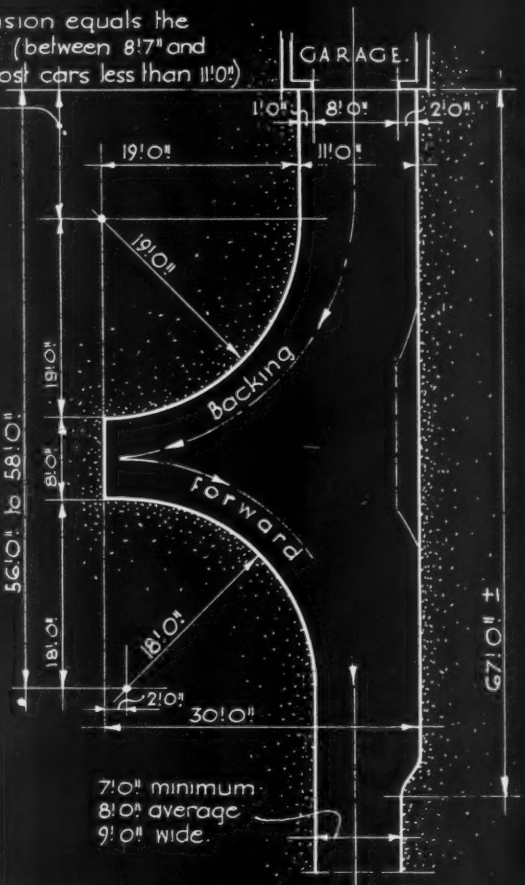


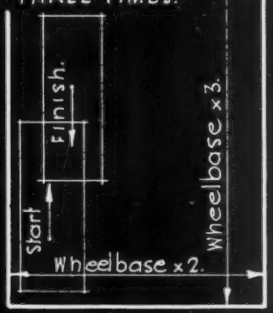
"Y" TURN
for backing in to garage.

NOTE: All turns require 1'6" clearance beyond the road lines shown. These turns are for easy driving with average size car. Larger radii will permit faster & easier driving. Smaller radii should be used for small cars only.

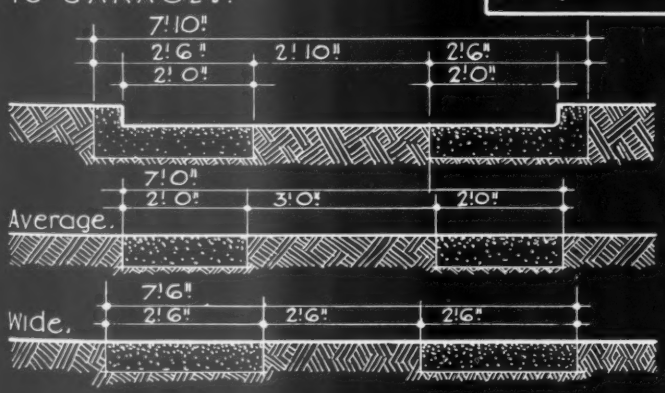


"Y" TURN
for backing out of garage.

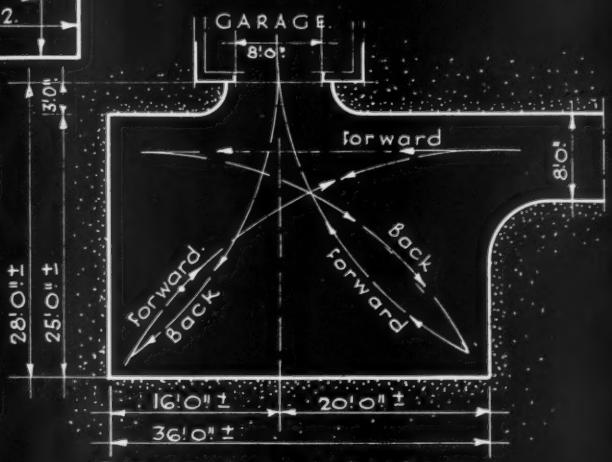
MINIMUM TURNING SPACE BACKING THREE TIMES.



CONCRETE RUNWAYS TO GARAGES.



Curbs should not be used on narrow runways as trucks may have track up to 5'10" or 6'0". Runways should be widened at all bends.



DOUBLE "Y" TURN
requiring backing both ways.
Exact size depends on car.
Figures given are average cars.

Diagrams from "Architectural Graphic Standards"

INFORMATION SHEET: APPROACHES TO PRIVATE GARAGES
SIR JOHN BURNET TAIT AND LORNE ARCHITECTS ONE MONTAGUE PLACE BEDFORD SQUARE LONDON WC1 • Elsa A. Bayne.

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GARAGES AND DRIVES—I

The layouts shown on the front of this Sheet give the areas and necessary dimensions of turning spaces for medium sized cars: the dimensions are fairly generous, allowing a clearance of about 1ft. 6ins. while manœuvring, any reduction is to be discouraged as far as possible, and should only be allowed when it is quite unavoidable.