THE ARCHITECTS' JOURNAL

THE ARCHITECTS' JOURNAL
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In view of the great interest that was aroused by the article on Messrs. Davies and Sons' public-houses in Liverpool, the Editor would like it to be understood that the subject is one with which THE ARCHITECTS' JOURNAL intends to deal faithfully and systematically. It will be his endeavour to register every notable advance made in the design of the modern English inn, and further articles are already in preparation.

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CHRISTIAN BARMAN, *Editor*

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

RENDERINGS OF ARCHITECTURE

Selected and annotated by Dr. Tancred Borenius.

xxi. Gerrit Berck-Heyde (1638-1698).
A View in Haarlem
(dated 1674).

Gerrit Berck-Heyde admirably typifies the group of Dutch seventeenth-century painters of architectural subjects who went in for the utmost topographical accuracy. The greater part of his life was spent in his native city, Haarlem, and the subject which he has depicted in the present example is a favourite one with him. The scene is laid in the Groote Markt at Haarlem, and the large church seen in the middle distance is the church of St. Bavo, generally referred to simply as the Groote Kerk ("the large church"), a late fifteenth century edifice, the tower of which was completed in 1519. Light and shade are very sharply and effectively contrasted throughout the picture; and in its smoothness of technique and neatness of detail it is a very characteristic specimen of the artist's style. The figures which people the square are very natural in their action; indeed, the effect of the whole is virtually that of a photographic record of seventeenth-century Haarlem. [National Gallery, No. 1,420.]

THE ARCHITECTS' JOURNAL

Wednesday, June 9, 1926

BETTER BUILDING

THE gift of one thousand pounds by Mr. A. C. Bossom, the New York architect, towards the foundation of a studentship and lectureship in building research, is, we hope, only the beginning of a movement for the more systematic study of building science. We have to recognize that, although the health and welfare of our people is largely dependent upon the building of our homes and offices, in many respects the average British builder to-day makes far too little use of modern scientific methods. A few contractors utilize labour-saving machinery, which is more or less equal to that used in the United States, but there is unfortunately a widespread ignorance throughout the building trade, not only of the best methods, but even of the most economical use of traditional materials. During the past five years, for example, many cottage houses have been built far too expensively and too solidly, because those responsible had no idea as to how heavy walls need to be in order to hold up a roof.

Turning to buildings of a larger character, there are many recent instances that show that we know comparatively little of the effect of heavy motor traffic and vibrating machinery upon steel frame buildings. The rapid deterioration of the stone used in buildings erected only a few years ago proves that we have a good deal yet to learn on weather resistance, while the defective acoustic properties of some of the most important public buildings indicates that more research work by such scholarly architects as Mr. Hope Bagenal is urgently needed. It would be possible to extend the list of examples, but in every case we should be brought to the conclusion that the building industry to-day in Great Britain, with few exceptions, relies far too much upon antiquated methods, old-fashioned procedure, and obsolete equipment.

The Institute of Builders has admittedly made some endeavour to meet the needs for the better education of building-trades apprentices; and the Government last year wisely allocated £30,000 to enable the Building Research Station at Garston to be enlarged so that systematic investigations of methods and building materials might be carried out, and the results placed at the disposal of the industry. But far more yet remains to be done, and Mr. Bossom's gift to the Chadwick Trust, although only a modest beginning, may well have far-reaching effects. The trustees who will be responsible for expenditure of this money include Sir Frank Baines, the director of works at the Office of Works; Mr. G. W. Humphreys, the chief engineer of the London County Council; and Mr. W. E. Riley, F.R.I.B.A. The chairman of the Chadwick Trust is Sir William Collins, K.C.V.O., who, both in the House of Commons and as chairman of the L.C.C., has shown himself to be a man of wide vision. The two expert advisers nominated to help in the administration of the new fund are Dr. R. E. Stradling, the director of the Building Research Station, and Mr. B. S. Townroe, both of whom, though not commercially connected with the building industry, have a wide knowledge of its ramifications and possibilities. With such men behind the new scheme, which admittedly is to start as an experiment, it is likely to develop with some rapidity, and we can be sure that those responsible will unite in working for the best interests of architecture and the building industry. The terms of reference under which the gift was accepted are very wide, and will include investigation into all aspects of building problems, including methods of construction, types of materials, the organization of labour, office administration, costing, and economy in carrying out work. It is not suggested that builders alone have much to learn. For the weak points of the building industry can be discovered in many other national industries. Under the trust a practical builder may offer to investigate one or other aspect of industry, and during his period of research he will be assisted out of the fund. It may be that a material such as bricks, or some method, or even the management of labour, will be studied.

This is not the place to suggest in any detail the most vulnerable points of the building industry, or to venture to indicate how they can be remedied. It must, however, be generally agreed that if this industry is to carry out its duty to the public, a more reliable science of building must be developed, and economies and improvements effected in building materials and construction. Knowledge can only be gained by study and research.

The paint industry has already allocated certain funds for examination by experts of some of its own problems. At Bristol University the movements of concrete under different conditions of moisture and heat and cold are being carefully measured. Similar work is also in progress at Birmingham, Bradford, Sheffield, and elsewhere. There is a growing appreciation of the importance to the nation of building science. The Bossom Building Research Fund will, we trust, enable more young builders who have the practical experience, and also the mental capacity for such work, to undertake for a definite period of time detailed investigation into one or other of the vital problems that still await solution.

NEWS AND TOPICS

IT is most unfortunate that the Senate of London University has been unable to make up its mind whether or not to accept a portion of the Bloomsbury site which was offered to it by the Government on certain conditions. While it is true that one of the conditions named was the removal of King's College to the new position, and the offer to King's College was somewhat lacking in generosity inasmuch as this body was asked to exchange property valued at nearly £2,000,000 for a site worth £180,000 and a Treasury grant of £370,000, it would still have been possible for the Senate in the long period which was at its disposal to negotiate with the Government in the hope of obtaining better terms. The trouble was, however, that the Senate could not make up its mind on the question of general policy, and while one section of it was in favour of the University retaining its present site, another section was of opinion that the activities of the University could be pursued under more favourable circumstances if it were removed to the outskirts of London, where there would be ample room for the buildings to spread themselves.

* * *

There can be little doubt, however, that outside the Senate the overwhelming weight of opinion among those who are intimately associated with the University of London is in favour of accepting the Bloomsbury site, for if this latter be rejected during the considerable period which must elapse before the University could be translated elsewhere, three important institutions would be left without a home. These three University buildings on the Mallet Street portion of the site are the Institute of Historical Research, the Architectural Atelier, and the Students' Union. The first was erected at a cost of £20,000 by the help of generous benefactors, and the work done in this building is not only unique but is also of national, imperial, and international importance; the second, which was the gift of two good friends of the Bartlett School of Architecture, is, as it were, the laboratory for senior students of the School. It provides for them a place and opportunity for working out designs in connection with such important competitions as the Prix de Rome and others of a like character, and is essential to the advanced work in architecture and town-planning; the third building is a temporary one, and provides accommodation for the Students' Union of the whole University. Through the institution of this Union, which would not have been possible but for the Bloomsbury site, a sense of *esprit de corps* in the University as a whole is steadily being established.

* * *

The bodies managing these three University institutions have received notices to quit their present premises on Michaelmas Day next as a consequence of the action of His Majesty's Government in selling back the Bloomsbury site to the Duke of Bedford. Should these notices become effective all three institutions will have to close their doors and cease work, for the University has no land to which they could be removed and has no funds to provide for their removal. We have previously expressed the opinion in these columns that the proper place for a Metropolitan University is not in a suburb or in some semi-rural locality, but in the heart of the metropolis itself, for it is essential to the fulfilment of the civic idea that University buildings should occupy a prominent position and receive in the pattern of the city the formal emphasis to which their spiritual status entitles them. It is good news, therefore, that there is still a slight possibility of this matter being satisfactorily settled, for the Government has now arranged for a conference with representatives of the University of London to discuss the issue which has arisen as a result of the re-sale to the Duke of Bedford of the proposed Bloomsbury site.

* * *

The selection of such an historic and architecturally interesting centre as Canterbury for the sixth annual meeting of the Franco-British Union of Architects was an excellent idea. Most, if not all, of our French colleagues are acquainted with London, its recent developments, and new buildings, but few French architects have any real conception of the singular charm and harmony of the houses, great and small, scattered over our countryside, which form the unique heritage of England from remote days, and of which the tradition is so well preserved in much recent work. The programme for this meeting of the Union, which is doing a great deal of work in promoting closer relations between architects of Great Britain and France, included visits to such places as Waldersham Park, the seat of the Earl of Guildford—a fine example of the English mansion of the eighteenth century, standing in a great park, with magnificent trees and fine vistas. The earlier type of house was represented by Sturry Court, where members were the guests of the Viscountess Milner. It is a late Tudor brick and stone building set in a charming garden cunningly schemed by Sir Reginald Blomfield.

* * *

As is the custom on all such occasions, the congress concluded with a banquet where, amid convivial surroundings, several witty and informal speeches were made by Sir Reginald Blomfield (president), Mr. E. Guy Dawber, P.R.I.B.A., Monsieur Legros (vice-president), president of the Société des Architectes Diplômes of France, Monsieur Louvet, representing the Minister of Fine Arts, Monsieur Bruel, Société Centrale des Architectes Français, etc. Just before leaving for France the visitors were the guests of the Lord Warden of the Cinque Ports (the Earl Beauchamp) at Walmer Castle, and much appreciated his brief address and parting message of goodwill towards France, and faith in the power of the Entente to preserve the liberties of the old world and secure the blessings of permanent peace.

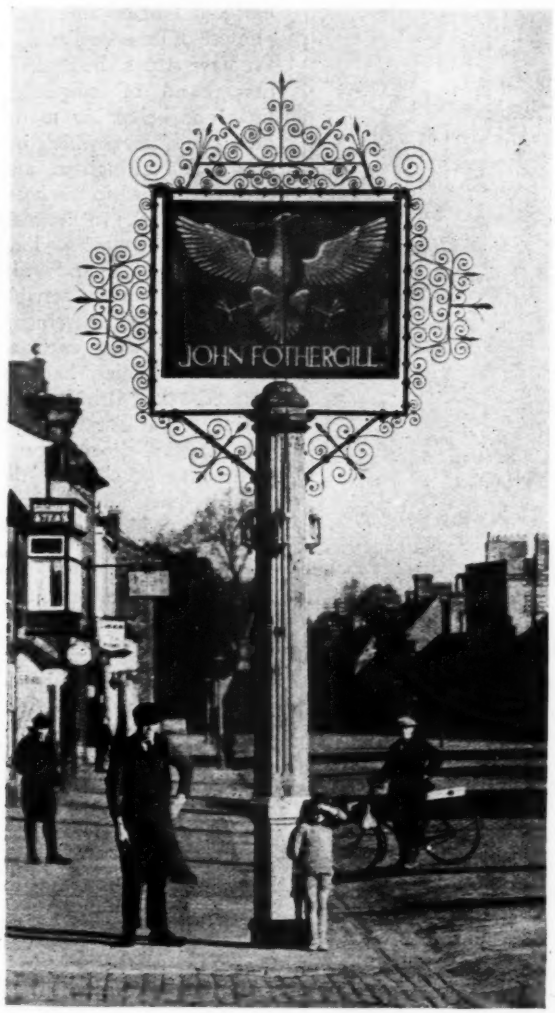
* * *

There is no other form of industrial strike which can so paralyse the country as a coal strike, and yet "it is an ill wind——" Londoners just now are enjoying a delicious immunity from sky signs and the whole hierarchy of electric monstrosities. Even an American it would appear, coming from the native soil of the sky sign, is outraged at our amenity-destroying habits, at our lack of decency. "Then I'd invent a whole lot of brand-new tortures for any hulking Philistine of a manufacturer who started writing his blasted name on God's sky at night. Piccadilly Circus nowadays is an eyesore." These, according to Mr. Beverley Nichols, are the remarks of Mr. H. L. Mencken. I wish that they were the sentiments of most Londoners, so that these monstrous things might cease to be. If the strike continues,

another benefit will accrue to an over-industrialized nation. The smoke pall will lift from the manufacturing districts, and the sunlight will once more—for the first time maybe since the strike of 1921—penetrate into, cleanse, and purify the crannies of our smoke-besmirched towns, and the infants born this month will have a longer expectation of life than those born last month.

* * *

I was motoring to Oxford the other day, and as usual I made my customary detour through Thame in order to have tea at the "Spread Eagle," for the Greek honey they give you there is ambrosial. As I drew up I was surprised to see the wondrous erection, of which I give you a photograph, before the door. During tea I asked Mr. Fothergill —the most entertaining host in all the land—to explain its presence, and at the same time offered him my congratulations upon it. He told me its history. It appears that the whole thing is the work of local men. The nucleus of the ironwork was wrought in 1834 by one Timms, the Thame smith, at the age of twenty-two, and it hung on the house until comparatively recently as a bracket carrying the old sign. It has now been remodelled by Mr. Timms, a grandson of the maker. The oak post was cut and fluted by ship's carpenter Cook of Thame, who also made the patterns for the bronze lamps and the iron shoe. The lamps were cast by Mr. Spencer Jackson of Thame, and the lead cap was made by Mr. H. Gibbs of Radnage. The erection was the work of Messrs. Howland, builders, of Thame. Mr. H. J. Birnstingl, who also lives at Radnage, is responsible for the general design of the whole thing and the details.



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Hoarding is a word that to most of us is fraught with sinister significance. It suggests the miser, the builder dropping hefty objects on you as you pass, the billposter affronting you with ugly and untruthful advertisements. It is the advertising hoarding that most especially aggrieves Mr. Alfred Davies, M.P., whom I hasten to assure of my heartfelt sympathy. In a letter that appears in the *Times* under the heading: "Regulation of Hoardings," Mr. Davies mentions that no fewer than twenty-two out of the sixty-one councils in England and Wales "failed over a long series of years to take any action for the protection of scenery in any portion (however precious or restricted) of their respective areas." But the outlook is now more hopeful, and Mr. Davies is fain to sound a more optimistic note at the end of his useful communication. Gratified to learn, through Sir Edmund Turton, that the County Councils Association are now moving in earnest in the matter, Mr. Davies appeals to the general public to give more strenuous support to the endeavours of their county councils to protect our sorely and sordidly defaced countryside, and, as a condition precedent, to obtain more efficient by-laws. Mr. Davies will no doubt applaud the Somerset justices who convicted a billposting company for disfiguring the landscape with advertisements displayed on a hoarding, and will feel as grateful as I do towards the justices of the higher court who upheld the humane and beneficent verdict.

* * *

Two events have to be registered in connection with the battle of Waterloo Bridge. I welcome the news that Sir Reginald Blomfield, whose nomination, as joint assessor with Sir Giles Gilbert Scott, for the new bridge, was announced at so unseasonable a moment, has refused to take any part whatsoever in the substitution of a new bridge for the old one. The publication by the Conference of Societies of their two letters to the Prime Minister is a remarkable testimony to the steady and devoted work that has been done during the last few months by this handful of distinguished enthusiasts. I note, by the way, that the copies of the letters are issued from the R.I.B.A., despite the fact that the Royal Academy heads the list of societies. I hope that someone will one day tell us how much of the administrative and other incidental work in connection with this Conference has been done by the R.I.B.A., and how much by what is still regarded by many people as the premier artistic institution of this country.

* * *

I further note that the Conference suggests that the efforts being made to save Waterloo Bridge will have a better chance of success if architects and others "refrain from publishing letters or drawings containing ideas or suggestions for improvements and alterations to the existing structure." I congratulate the Editor of THE ARCHITECTS' JOURNAL on his avoidance of such ideas and suggestions, and pray that he will so continue. Some time before the strike I met a young architect who, having dined very well, drew me—but there! I almost fell into it myself.

ASTRAGAL

GEOLOGY AND BUILDINGS FROM LONDON TO HARROGATE

[BY HOPE BAGENAL]

II: FROM THE JURASSIC TO THE CARBONIFEROUS

We are crossing the Jurassic limestones at a narrow part of the belt. The train is racing for Grantham and the lias; but if Time and her locomotive could be stopped anywhere for a moment it would be here. Here I would salute England in winter—the cold, bright hills, the silver walls, the fugitive sun. But such may not be. This train does not stop in its mad geological descent for another hundred miles. At Grantham (105 miles from King's Cross) all is changed: the lias clay (the lowest series of the Jurassic) makes a uniform red brick; we are back as if by magic in the "midlands." The same bricks are to be seen on the same lias south-westwards at Melton Mowbray, Market-Harborough, and Rugby. The lias is responsible also for a great part of midland farming—it is calcareous clay formed largely from the decay of pre-existing limestones, and provides some of the richest pasture lands in England.

A sketch map showing the geological formations between Peterborough and Durham.

At Newark (120 miles from King's Cross) we cross the Trent, and follow the river valley for a few miles until Sutton is reached. Here a brick wall and a ploughed field strike the eye. Both have noticeably changed colour, and the contours of the country have also changed. We are now in another world — the Trias. The Trias is the first horizon we have met that is land-made rather than sea-made. Though we are chronologically only ten minutes gone from the lias sea, yet we are now in the heart of a large northern continent where marls and sandstones were laid down by the agencies of winds, rivers, and floods. There are still to be found in the Keuper marls beneath our wheels the prints of raindrops and of creatures. From the carriage windows the hue of the marl, a rich plum colour with a kind of wet bloom under the winter sky, is seen in the furrows. On the grass and low hills there is a brown satin sheen. The bricks are first of a peculiar red tint, but the station of Tuxford is in a brown brick, and yellow bricks also are seen. Evidently the Keuper marls are fertile in brick colours and textures that look durable. These clays extend south and westward into Staffordshire. At Retford (138 miles from King's Cross) the Bunter sandstone beds of the lower Trias begin. Just beyond Bawtry the rock can be clearly seen in a cutting. Immediately the brick bridges have sandstone voussoirs and quoins. At Doncaster, just before reaching the station, cuttings and quarries reveal a red stone; these quarries are given on the large scale geological map as on the margin of the Bunter beds. But for many miles we have been converging with the magnesian limestone, and Doncaster Church is of that material. The train does not stop, and after some miles turns off the main line to the north-east: at Norton there is a glimpse of limestone rubble. We have struck the remarkable band of magnesian limestone belonging to the Permian system, which begins near Nottingham, and runs northward to the coast at Sunderland. In Permian times there was a long period of peace and sedimentation after the terrible earth wars and movements in the preceding carboniferous age which had separated the British coal basins. The Permian system was laid down upon a continent occupying the greater part of northern Europe, in which were landlocked seas like the Caspian. The inheritance it has left us, from an architect's point of view is a mixed blessing. At first sight nothing could be more generous than 150 miles of masonry rock beginning as a reddish sandstone in Nottinghamshire, and then changing into a soft, golden-toned limestone. But it has caused, and will cause, a great deal of trouble. The maintenance of the Houses of Parliament is a considerable yearly item. The Mansfield on St. Pancras station is in an advanced state of decay, and the base of the Geological Museum in Jermyn Street, though comparatively durable, will yield to the scrape of a spoon quite an appreciable dose of Epsom Salts (magnesium sulphate).

The country as we advance becomes much more hilly and wooded, and in the cuttings the old plate-layers' huts are of limestone rubble. At Knottingley a fine silvery

limestone is seen in pits and quarries: at Ferrybridge the bridge is in limestone ashlar. At Tadcaster the station is quite appropriately in Gothic, and likewise other stations along this line. Magnesian limestone is a Gothic material, and this obviously weighed with Barry in the choice of the stone for Westminster. Two buildings are specially mentioned by the Commissioners, of whom Barry was one, in the report of 1839 on the choice of a stone. These are Southwell Cathedral, "built of stone similar to that of Bolsover Moor . . . throughout in a perfect state, the mouldings and carved enrichments being as sharp as when first executed," and also Spofforth Castle, which the train is now rapidly approaching. At Spofforth the mill-stone grit of the carboniferous system begins, and the Castle is notable for its two materials, namely, ashlar walls in carboniferous sandstone, and decorated dressings in magnesian limestone. "Although the magnesian limestone," say the Commissioners, referring to Spofforth Castle, "has been equally exposed with the sandstone it has remained as perfect in form as when first employed, while the sandstone has suffered considerably." Now, though the Commissioners honestly acknowledge the convicting evidence of the medieval buildings in York of the magnesian limestone (an illustration of which is here given), it is obvious that the durability of ornament in this material in the two buildings just mentioned was present to their minds, and Barry must have known also how easily and cheaply it could be worked, and how much more his design would cost in a harder material. All the medieval stone buildings in York can be cut with a penknife like cheese. The marginal region between the magnesian limestone and the grit yields other interesting buildings in which the durability of sandstone and limestone can be compared, for instance, Pontefract Castle, Fountains Hall, and Ripon Cathedral.

The train enters a tunnel, and emerges upon Crimple Viaduct, from which a good view westward can be had over the grit country towards Almes Cliff Crag. The carboniferous system with its coalfields is, industrially, the bed rock of Great Britain. In the earlier part of the period the sea prevailed, and great masses of limestone were deposited, which give their peculiar character to Derbyshire and the central plain of Ireland. Later, land emerged and the grits and sandstones were formed, upon the soils of which grew the great forests that were later converted into coal. Then came the earth movements, and the folding of the Pennine Chain. The difference between a grit and a sandstone—both derived ultimately from the debris of ancient granites—is thus described by Howe in the *Geology of Building Stones*:

. . . "The coarser quartz grains when aggregated and consolidated form beds of *Grit*; the finer-grained quartz waste goes to form beds of *Sandstone*."

The Cistercian builders in the twelfth century chose sites near Yorkshire sandstone quarries, and used the stone for their buildings—Kirkstall, Fountains, Rievaulx, are good examples. But the secular buildings seen from the train are hard and large-stoned, and fall as naturally into a lintel, or rough "classic" style, as the magnesian limestone buildings into a Gothic. A fine Yorkshire type peculiar to this country is the single low pediment embracing the entire side of the house: an eighteenth-century building of this type used to be visible on the east side of Crimple Viaduct. Instead, a view of the Grange, Beckett's Park, Leeds, is given. As Harrogate is approached the nineteenth-century rock-faced villas in gritstone with wooden spikes and barge boards impart to the northern spa a sufficiently undistinguished character. The pump-room built in Regency times of sandstone from Woodhouse, near Leeds, is, however, a classic building suited to its material. The train comes to a standstill in Harrogate station after a non-stop run of close on two hundred miles.

Above, The Grange, Beckett's Park, Leeds, an illustration of carboniferous classic. Below, The Earl of Stafford's Arms, *York, an example of magnesian limestone.*

A MODERNIST VICTORY—i

[BY S. C. R.]

I ONCE knew a lady (I use the term advisedly in spite of our post-war objection to it, because the more generally accepted title would not convey a correct impression of that rare dweller in the higher altitudes) who had so wonderful a gift of interpretation. She could interpret anything and everything, and amongst my choicest memories is her interpretation to himself of one of our modern prophets, whose own favourite rôle was that of " Interpreter of Life," both ancient and modern. Whilst she confined herself to the exposition of his greatness and wisdom he listened with a slight smile of patronizing tolerance, but when she, greatly daring, touched upon some of his slighter foibles, then the lion angrily shook his mane and with a few devastating roars sundered the friendship of a lifetime. I must confess that on the occasion when I last lunched with my uncle George I envied her her rare, if somewhat dangerous, gift. My uncle had 'phoned me from the City, saying that with my consent he proposed to descend upon me somewhere in the region of 1 o'clock with the kindly intention of making me a partaker of an avuncular feast.

In spite of my real affection for him, it is always somewhat of an ordeal when my uncle George pays me a state visit. Particularly is this the case when he comes to my somewhat shabby little office. At home it is not so bad. There I have Celia to bear the brunt of the attack, and as she is rather a favourite of his, treating him with a pleasant flippancy only possible in a niece by marriage, the occasion passes more easily. For my uncle George is the successful member of our family, and his direct relations have been, perhaps, somewhat over-impressed by his achievements from their infancy upwards. They, for the most part, either avoid or rather obviously court him. I myself have always tried to steer a middle course, but I must frankly confess that I, too, am imbued with the family tradition, and in his heavier moments find him distinctly an ordeal.

I saw as he entered my sanctuary that this was to be decidedly one of his heavier moments. After we had shaken hands he subsided into the chair kept for distinguished clients, and sighed : " I saw Clarence yesterday," he murmured, and his jolly red face with the white toothbrush moustache clouded over.

" Oh, really," I said, " and how is our great painter ? "

" He is all right," said our joint uncle, " but tell me frankly Charles, what do you think of his work ? " and he glanced down his immaculately pressed trousers till his eyes found a resting place on his box-cloth gaiter or spat as it is called.

" Oh, his work—what sort of work ? " I hedged.

" Well, he is *supposed* to be painting my portrait "—there was just the slightest emphasis on the word " supposed " !

I nearly said " Good God ! " but just managed to turn it into another fatuous " Oh, really !—and don't you like it ? " I continued.

" Like it ! Like it ! " said my uncle, raising his voice into what in a less dignified person would be a shout. " Could anybody like the damned thing ! " It appeared that my uncle, whose activities in the City have always been more or less a mystery to me, but which I know include attendance at board and superintendence at companies' meetings, was about to retire from one of his more important directorships, and that his fellow-directors had wished to present him with his portrait—" Done in oils in a 'andsome gilt frame ! " as my cousin Clarence would say sardonically. It also appeared that my uncle, thinking to do young Clarence a good turn, had mentioned his name—" as a promising painter of portraits "—and the picture was, added my uncle George, " now supposed to be finished." He also added that, so far, only he had seen it—which statement appeared to afford him a certain amount of relief.

" Why do they do it ? " he plaintively asked.

" Ah—why ? " I asked, adding rather inconsequently, " Do what ? "

" Paint like that," said my uncle, " if they call it painting. It doesn't look like a painting, and as for being a portrait ! Well, I hope not ! " he added.

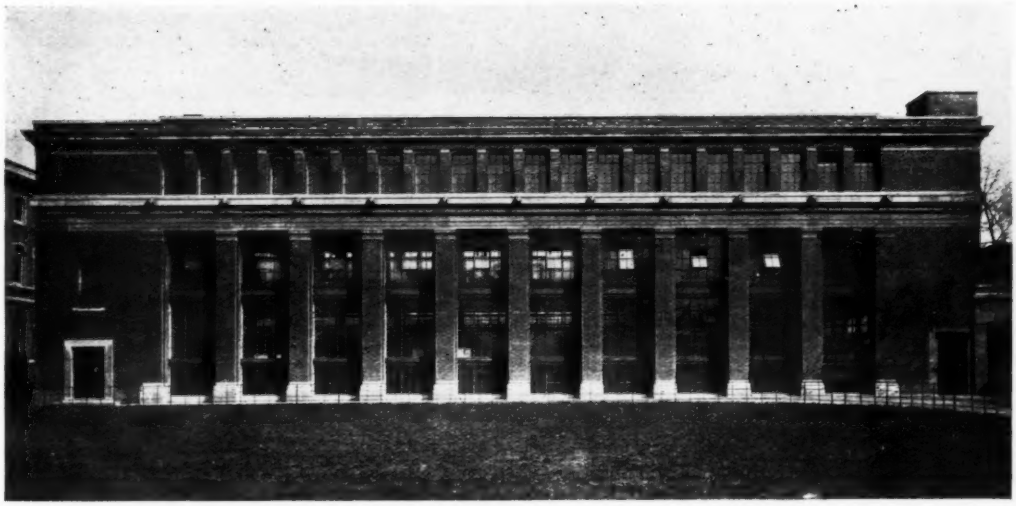
" What's it like ? " I asked, trying to get him to descend to particulars.

" Like," he said, " it is like nothing on earth ! It looks like an Egyptian mummy, boiled a light pink with a blue icicle on the upper lip—it isn't even painted in oils, but with some stuff Clarence calls tempera, and which looks like chalk and Fuller's earth—perfectly ghastly," he finished with a groan.

" Too bad," I said sympathetically. " Too bad. What will you do with it ? " I added, as I thought of my uncle's substantial retreat in the Surrey Hills—and the more I thought of it, the less I could fancy it as a home for one of Clarence's masterpieces. My uncle had bought the house some twenty years ago in the hey-day of his success, from the trustees of a bankrupt financier. It was a largish—though not unduly large—house, in the style favoured by the more conscientious speculative builder in the early 'nineties, working under the influence of the late Norman Shaw's more picturesque continental models. My aunt's drawing-room epitomized the whole establishment. It was a large room, some 35 ft. long and about 20 ft. wide, with a curious flat projecting bay with rounded corners in the middle of the garden wall, the upper part of which was divided into very small squares, with plate glass underneath. The fireplace had an effective modern interior surrounded by pink tiles, with an elaborately carved and fretted wood mantelpiece painted, like the rest of the woodwork, a very shiny white. At the opposite end to the fireplace was the grand piano, which was a very shiny black, covered with family photographs in all manner of gilt and silver frames. Between the two stretched a vast area of light-green carpet, trellised over with a darker green vine, and echoing the colour of the mantelpiece tiles with roses of a similar hue. There were one or two quite good pieces of old furniture, including some Chippendale chairs and a really exquisite Louis XV writing bureau. In addition, there were several of what my uncle called " comfortable chairs," covered with a non-committal chintz. The walls were finished with a light paper in which lines of grey and silver competed for prominence. A white bearskin rug lay before the fire. I certainly could not imagine a real genuine Clarence of the extreme left at home here. It was equally difficult to picture it in the Jacobean dining-room; neither could I see it in my uncle's own particular room—a combination of library and smoking-room, furnished with those very cunningly contrived extendible bookcases competing for wall space with rather faded photographs in " oak Oxfords " of school and college groups.

[*To be concluded.*]

CURRENT
ARCHITECTURE
SECTION



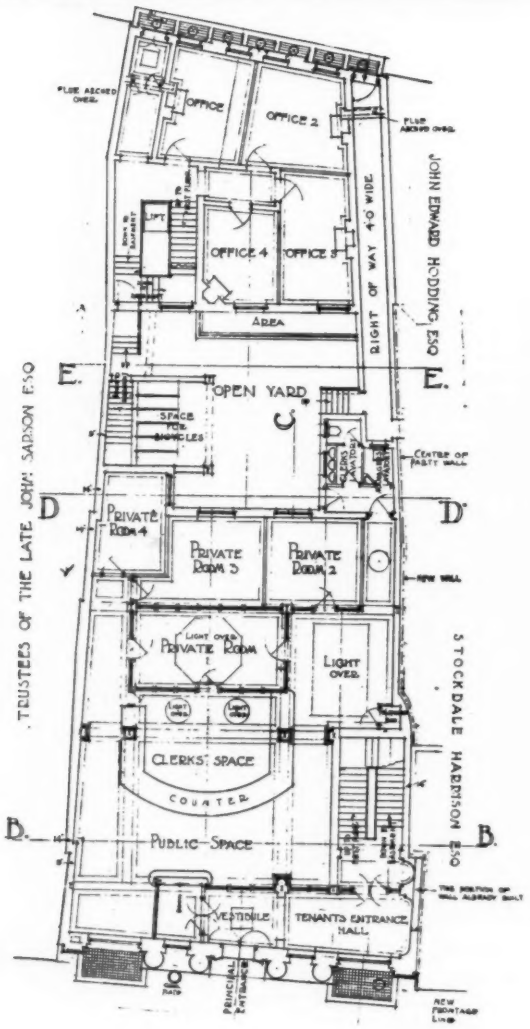
NEW BUILDINGS IN LEICESTER

[BY FRANK GRANGER]

THE visitor who is in search of architectural interest turns first to the setting against which the new must find its place; then he considers the purpose which is in the client's, and presumably the architect's, mind. Next, he notes the materials which are at the architect's disposal, and only in the last place the style employed. This last matter, from the point of view of expressiveness, comes high in importance, for it determines the opportunity of the skilled craftsman, the sculptor, and the painter. Such is the order of our topics. The reason why we begin with this somewhat formidable statement of first principles is because of the problems which Leicester presents. The city is little changed from medieval times in the disposition of its central districts. The open spaces are comparatively small, and the streets are narrow. The remarkable prosperity of Leicester in the Victorian age seems to have swept away much of the Georgian brickwork in houses and larger buildings. Consequently the architect who demolishes an old building, or clears a site, has little on his conscience save the disappearance of work that has been done since 1840. The present Westminster Bank in St. Martin's, of which something will be said in the sequel, was erected on the site of an older building, which was in what one might call—for its lack of meaning and proportion—the Tottenham Court Road style. It is not a misfortune when the disappearance of the old leaves few regrets.

At the same time the Corporation of Leicester has under its careful guardianship some of the finest secular medieval buildings. The restoration of the old Town Hall is worth noting. The new Leicester will be rich on this side at least. In a word the city is like a chrysalis bursting its husk. The growing wealth of the inhabitants has been accompanied by the development of an æsthetic consciousness. The Leicester of the present is being guided, not merely passing, into the Leicester of the immediate future. And here a tribute must be paid to the Corporation of Leicester

Above, St. Margaret's Works, Leicester, for Messrs. N. Corah and Sons. The shipping department. By Stockdale Harrison and Sons. Below, new premises in Rutland Street for Messrs. Pfister and Vogel. By Fosbrooke and Bedingfield.



for its readiness to invite criticism, and, with that in view, to call into its counsels the Architectural Society. Following the example of Birmingham, there has been constituted an Advisory Art Committee for the City of Leicester, consisting of the mayor, the city surveyor, the director of the museum and libraries, the principal of the School of Art, four members of the local Society of Architects, and two others. Their capacity is advisory and not executive, but they may be called upon to report upon all public buildings, bridges, lamps, gates, all proposals for laying out parks, and all new statues and monuments erected in public places. In the neighbouring City of Nottingham, for example, there is no such advisory committee, and there are risks being run in the many bold undertakings of the Corporation, against which such an advisory committee might be of use. This public recognition of the function of the expert in the practice of building, sculpture, and painting sets an example which cannot be too widely known. Perhaps Leicester was driven to this admirable expedient by the unusual difficulties which, as we have seen, must be encountered in transforming her present interior into one that shall correspond more completely to her resources and aspirations.

It is in the light of these conditions that the new buildings of Leicester are to be estimated. The most modern building of Leicester, if the paradox may be allowed, is the Town Hall, built in 1875 from the design of Mr. F. J. Hames. The use of brick was especially appropriate in a brick district, and the sober, classic touch of the design compares, on the whole, favourably with the architecture of fifty years ago, and of the time that has elapsed since then. Too few buildings erected in Leicester have followed this excellent model; only of late years has there begun to flow the general movement towards the important school of local architecture which is here illustrated. Leicester clients deserve praise for giving it a generous scope.

Taking the use of material first :

There is a recent example of the use of *brickwork* in the hosiery factory of Messrs. T. Morley & Son, which is to be seen on the other side of Great Central Street as one leaves the railway station. Messrs. A. E. and T. Sawday, of Leicester, were the architects, and have produced one of the finest designs for this kind of work to be found anywhere. The illustration fails to do it justice. The wide windows of the factory are between projecting brick piers, which are carried right up and finished with arches under the eaves. The effect on either side is of a succession of very lofty buttresses when viewed from the adjoining pavement. And the design admirably expresses the structure. The bricks are set in old English bond, and are narrow, of a pleasing dark purplish-red. The same firm of architects is carrying out a similar building near the Midland Station.

The Saracen's Head Inn is also in this dark brick. The design is of a medieval turn, with mullioned windows and the barely necessary stone dressings. The plain stretches of brickwork between the windows and the absence of stringcourses produce a simple effect, which blends completely with the architectural background. Leicester would have gained if the local brickwork had been employed more widely in any of the manners represented by these buildings.

Among the new *stone* buildings the banks furnish some successful designs. Lloyds' Bank in High Street is in the

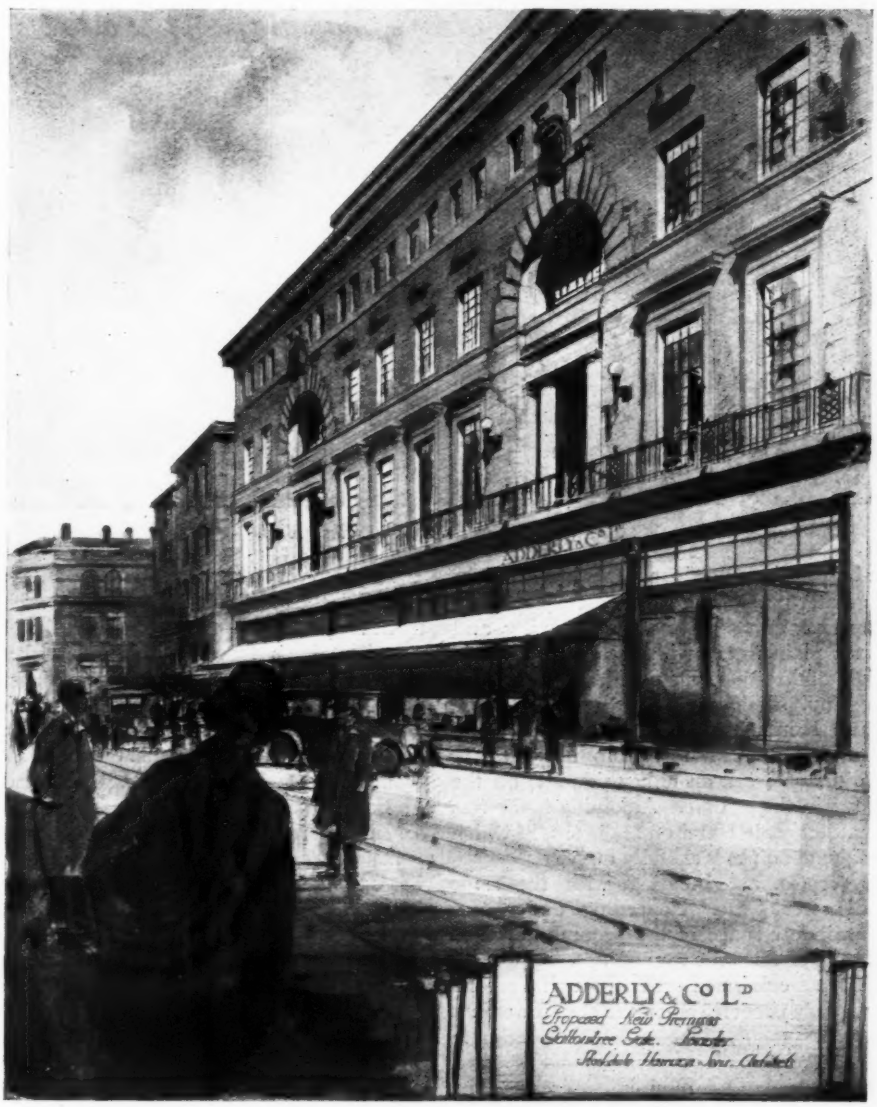
The Prudential Assurance Company's Building, Hotel Street and Greyfriars, Leicester. By the late Paul Waterhouse. Above, the main front. Below, the ground floor plan.

New premises for the Midland Industrial and General Trust, Ltd., Leicester. By Stockdale Harrison and Sons.

Factory for Messrs. G. Stibbe & Company, Ltd., Leicester. By Pick, Everard, Keay, and Gimson.

manner of a Renaissance palace. The ground floor is unusually effective, with an Ionic colonnade standing just free of the facing wall. The first floor carried by the colonnade has a series of windows each with columns on either side, and a pediment above. The bank nearer the station on the other side of the street is a striking example of a fine effect obtained by the contrast of unbroken wall surface, with a few bold architectural features. The somewhat baroque detail is thus invested with a quiet dignity. Barclays Bank, on the left as one goes over from the Clock Tower towards London Road, is a pleasing application of a Georgian formula. The ground story with its two very shallow curved bays and thick window bars supports a columnar treatment carried through two stories. But I have left to the last the Westminster Bank in St. Martin's. The main building has a rusticated ground story, with an arched doorway, having coved sides and top. At either end a plain square tower rises, broken only by a window on the first floor, and surmounted by a circular colonnade supporting a cupola. The space above the door and between the towers is deeply recessed and fronted by three wide intercolumniations, with two Ionic columns standing free on either side of the central intercolumniation, and one column standing free on the outer side of each outer space. The outer spaces have a high balustrade in the form of a fine carved frieze representing "Trade" and "Commerce." The cove of the top of the doorway on the ground floor dispenses with the need for carving in the central intercolumniation. This very fine building was designed by the late Mr. Pick, of Leicester, and finished in 1902. The touches of baroque in an occasional rustication of a column, a broken pediment or two, relieve the general severity of the design. It is a delight to stand in front of such a masterpiece. The friezes just above the ground floor are the only considerable instances of carving that I found in Leicester. Mention should, perhaps, be made of the heads in the voussoirs of the ground floor windows of Barclays Bank, and a further instance is to come.

On the right-hand side of Granby Street, going towards the Midland Station, the Picture House shows once more



Proposed new premises for Messrs. Adderly & Co., Ltd., Gallowtree Gate, Leicester. By Stockdale Harrison and Sons.

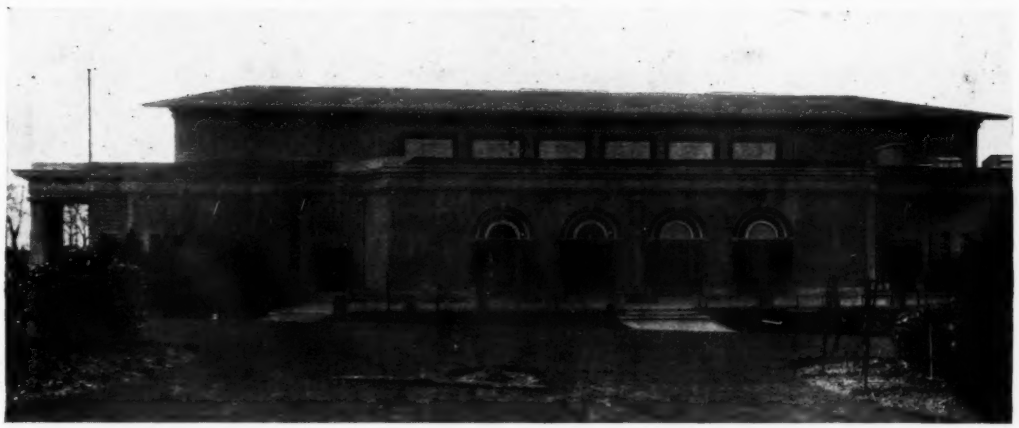
Botany House, Leicester. By Arthur Hind.

the effect obtained by well-proportioned openings in plain stonework. The greater part of the two lower of the three stories is set deeply back in a slightly oblong opening, and the jambs support a plain lintel, with a projecting Doric cornice. The weight of the superstructure above the cornice is relieved by a long, shallow window opening. The back of the Picture House opens on the pleasant little square of the Town Hall, and is not less admirably treated. An expanse of plain stonework on either side sets off the tall, arched windows in the middle. Adjoining is the fine frontage by Messrs. Stockdale Harrison and Sons, in which the distribution of the openings is skilfully directed.

Messrs. Adderly & Co. are building, with the same architects, in Gallowtree Gate. Conceding under *force majeure* the entire window space of the ground story, we can admit the dignity of the wide arched openings on the first floor rising above a columned order through a second story. Yet, that we may properly enjoy the design we must regard it as a palace from the Arabian Nights floating in the air. Until clients realize that window display may cost them street display and a diminished architectural effectiveness, they will drive the visitor in search of interest to the factories.

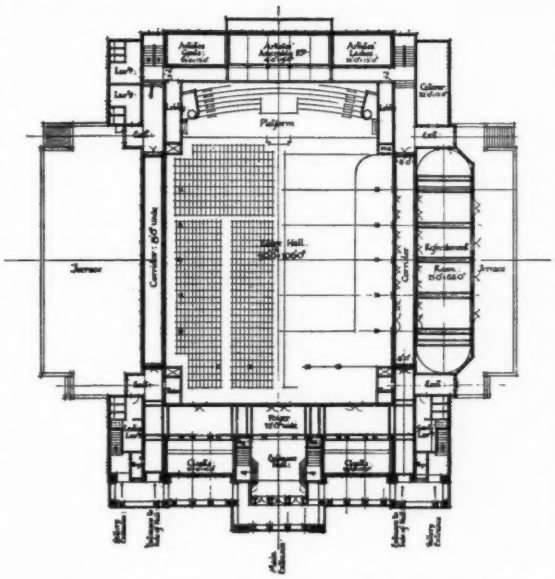
To those we will return. The Leicester architects, having explored the possibilities of classical architecture on more tractable problems—the Town Hall, the banks, the business premises—have found suitable formulæ for buildings in which new materials and new groupings are not so much obstacles to be overcome as opportunities for delightful adventure. Messrs. Pick, Everard, Keay, and Gimson have erected a factory for Messrs. Stibbe & Company in which the name of the firm, by being proportioned to its place, shows how advertisement may become part of a well-thought-out scheme. I see the influence of Pope Damasus in the broad "O" of Company. The four brackets over the door, the bases of the piers, the lintel of the cartway, and the brick basement which announces the background of the stonework, are clever touches. I like the narrowed openings in the top story of their factory for the Imperial Typewriter Company. Their small building also in Great Central Street is a delightful exercise. The Permanent Building Society is housed more ambitiously in a finely-balanced design.

In all this work that we have passed under review there is one negative virtue which gives me hope for the future of architectural sculpture in the city. There are scarcely any traces of those meaningless geometrical forms, circles,



squares, oblongs, reminiscent of the compass and set-square, which are used by some designers to take the place of sculptured detail. And there is room for sculpture in Leicester, not as it is, but as it is going to be. A hint of this is given in the doorway by Messrs. Fosbrooke and Bedingfield, which I intend to praise by describing it as baroque.

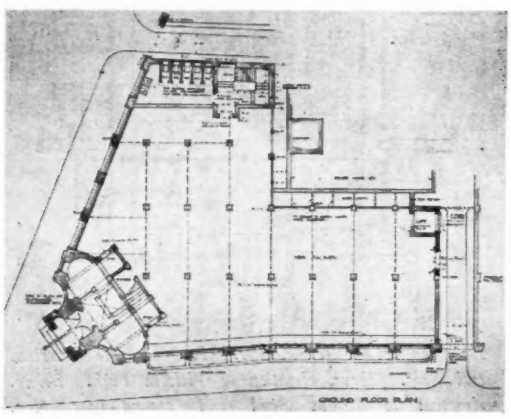
The absence of squares and broad avenues in the centre of the city leaves the Victoria Park and the War Memorial as the chief possible nucleus of a great architectural effect. Sir Edwin Lutyens' impressive arch is a fine starting point. One regret only is permitted: that sculpture did not form part of his scheme, unless, indeed, we admit under this head the Churrigueresque flags.



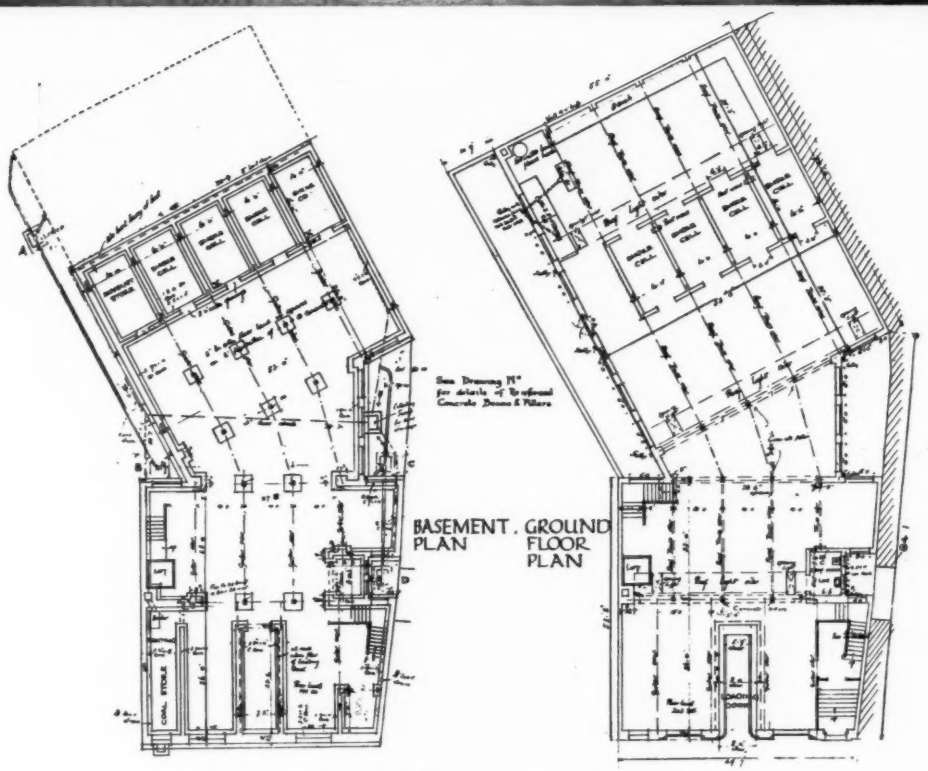
De Montfort Hall, Leicester. By Stockdale Harrison and Sons. Above, elevation to Victoria Park. Below, elevation to Regent Road and ground-floor plan.

At present the immediate neighbourhood of the memorial is not systematically laid out. An appropriate scheme would bring into one the University College (happily adapted from a well-designed older building), and also the De Montfort Hall, of which the quiet Doric architecture misses its merited effect among the blatancy which ravages Leicester streets neither more nor less than the streets of other considerable cities. But every good building which is put up, and especially those which have formed the subject of this study, ought to be forerunners of a new and admirable state of things.

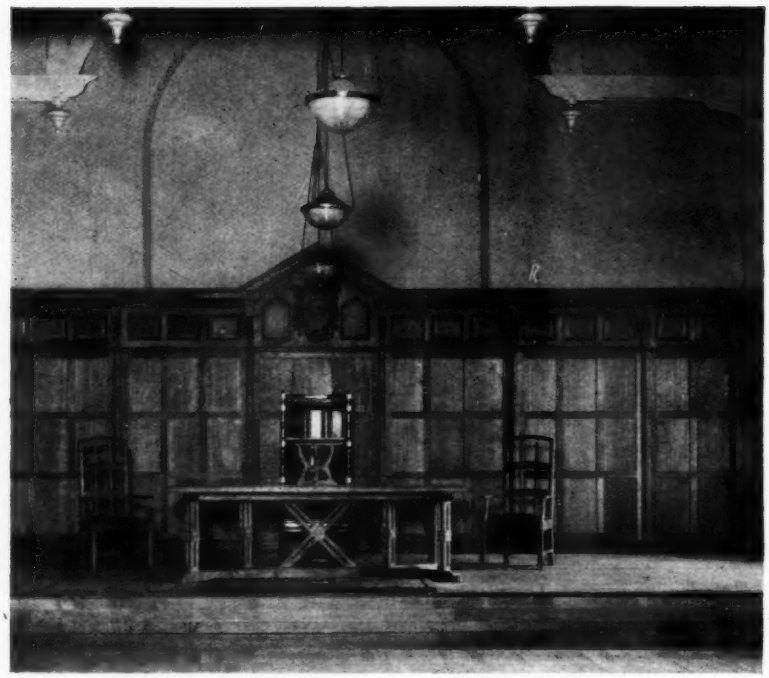
[The names of some of the general contractors and subcontractors who executed work on the buildings illustrated appear on page 799.]



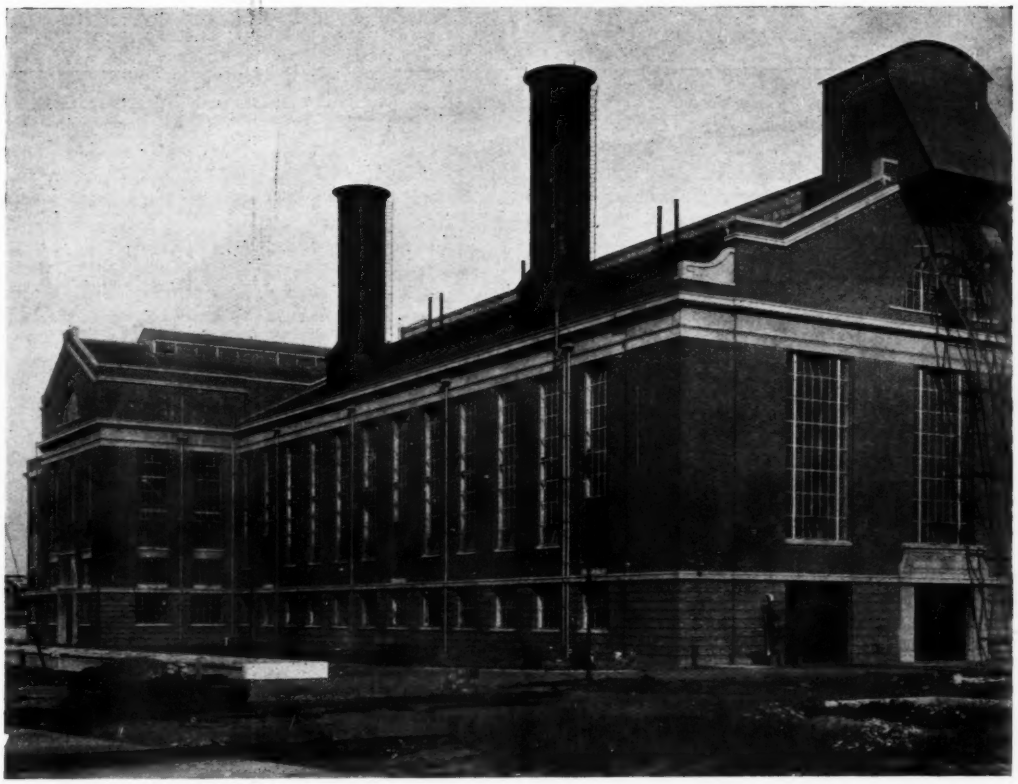
Factory for Messrs. Thomas Morley and Son, Great Central Street and Friars Causeway, Leicester. By A. E. and T. Sawday.

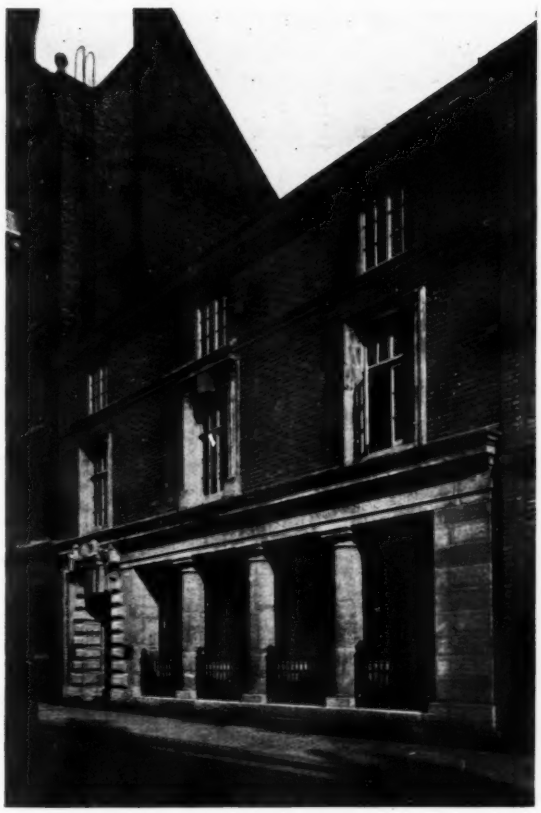


Provision warehouse and offices for Messrs. Mason & Co., Great Central Street, Leicester. By Pick, Everard, Keay, and Gimson.



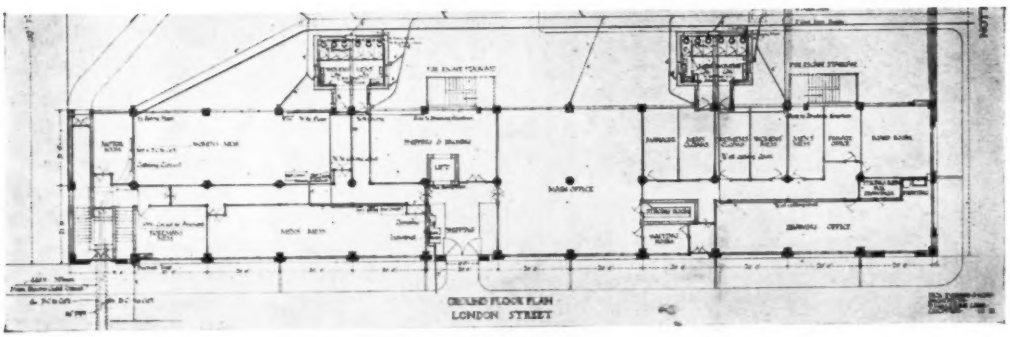
Above, the Leicester Junior Training Corps Headquarters. By A. E. and T. Sawday. Below, Leicester, Leicestershire, and Rutland College. By Pick, Everard, Keay, and Gimson. Panelling and dais to the hall.





Above, the Leicester Central Generating Station, Freemen's Meadows. By William Keay. Below, new premises for the Permanent Building Society. By Albert Herbert.

The Imperial Typewriter Company's factory, London Street and Nottingham Road, Leicester. By Pick, Everard, Keay, and Gimson.



THE COMPETITORS' CLUB

[*In this article* SENESCHAL, *the well-known architect who conducts this page, compares the competitive conditions of America with those of this country. He points out that in spite of the elasticity in the requirements of the American Institute it is found that promoters seek to evade them. Is not, he asks, the moral to be deduced from this that if the architect is prepared to protect his interests the promoter will come into line?*]

AMERICAN PRACTICE

MR. CHARLES BUTLER, the chairman of the Competitions Committee of the A.I.A., in an article on the conditions in America is frankly critical, and many of his suggestions imply that in this branch of practice whatever shortcomings we meet with at home these are no less evident across the Atlantic. The main differences between the American code and ours are as follows: They require that open competitions shall be in two stages, and they accept a jury of laymen, provided one member is a practising architect. As regards the first stage it will not surprise us that Mr. Butler finds it unreasonable, but his statement of the original grounds for its adoption is hardly intelligible at the present day. He gives these as based on a desire to protect the promoter against the possibility of the competition being won by a clever architect without the necessary experience to carry through the work. Now, it could only be operated to effect this if the names were disclosed prior to the second stage, a course which seems grossly unfair. In any case, we can only heartily commend the present proposal that this stipulation be "stricken out."

The demand for at least one practising architect on the jury indicates a far greater latitude in respect of the adjudication than we accept in England. Apparently it is usual for building committees to judge for themselves, and all that the A.I.A. demands is that they shall be sure of having someone who can give the necessary explanations on technical points. There is no suggestion that the professional adviser shall be more than an adviser, and the idea that he should be an assessor, whose decision is binding on the promoters, does not seem to have occurred to the American Institute.

There have been numerous competitions in America with a professional assessor or jury, but as they are not even hinted at in Mr. Butler's article, we can only assume that they are relatively rare. If this be the case, it may well be claimed that we are in a much happier position, in that we are assured that our judges are, whatever their shortcomings, more or less expert in the technical aspects of the problem. We are also not left to gamble on the vague preferences of the layman, apart from his inevitable lack of knowledge, as to how a competition should be organized to ensure fair treatment of the competitors.

An instance of this is given by Mr. Butler. The committee for a masonic temple had invited a number of competitors, but realized that some of them were entirely lacking in experience. When asked why these had been invited, the reply was that they were the sons of members of the lodge, and it seemed hard to refuse them the invitation, but that if one chanced to be successful they could give him a prize and get rid of him. Fortunately the committee was brought to see that such a recompense would be no consolation to a winning competitor, and persuaded to decide on the employment of a professional adviser, who would obtain from those wishing to compete, proofs of their competency.

Again, a lay committee is bound to get into difficulties over the communications to competitors, answers to questions, etc., and the American Institute seems to have had an extensive experience of such tangles. Any member of a committee, in touch with a competitor, is bound to try and explain his idea, which may be quite a wrong one, of what is required. The case is cited that the ablest competitor might be a friend of the least well-informed member of the committee, and if allowed to talk with him during the preparation of his design may be wasting his time and ability on an utterly false solution of the problem. All this, if it fairly represents present happenings, goes to show that competition methods are by no means so clearly formulated in America as with us, and while many here think that a little more flexibility in our procedure might be advantageous, it is easy to see how relaxations in the organizing and adjudication of competitions might speedily result in their slipping back into the chaos from which they have been extricated. Certainly America seems farther from a clear-cut and well-defined programme than we are.

In addition to these points there is a curious clause prescribing that the programme should "specifically set forth the nature of expert engineering services for which the architect will be reimbursed." We have had the same difficulty here owing to the fact that architectural education in this country fails to recognize that for building work the architect should be as good an engineer as the engineering expert, and consequently many architects have to employ others to supplement their own knowledge; but in any case, the question is one to be dealt with under the general rules of practice and not by a special clause in conditions of a competition.

In spite of the elasticity in the requirements of the American Institute it is found that promoters seek to evade them, and it is hinted that many architects would accept even less security but for the discipline exercised. Is not the moral to be deduced from this rather that if the architect is prepared to protect his interests, the promoter will come into line? After all, it is the promoter who stands to gain the greater benefit by competitive methods, and he will not lightly resign this, even if he considers the disciplinary measures unduly stringent. Evidently if they were slackened there are still those who would want them looser still.

SENESCHAL

COMPETITION CALENDAR

The following competitions are announced with the full approval of the R.I.B.A.

Monday, June 14. Dance Hall, Restaurant, Pavilion, and Shops at the Sea Beach, Aberdeen, for the Town Council. Assessor, the President of the Incorporation of Architects in Scotland. Particulars from Mr. A. B. Gardner, Town House, Aberdeen.

Saturday, July 31. Australian National War Memorial, Villers Bretonneux, France. Open to Australians. Particulars from the High Commissioner's Office, Australia House, Strand. Deposit £2 2s.

The conditions of the following competitions have been received by the R.I.B.A.

June 21-23. Royal Society of Arts: Competition for Industrial Designs. Particulars from the Secretary of the Society, Adelphi, W.C.2.

Monday, July 12. Royal National Eisteddfod of Wales, Swansea, Competitions: (1) National Parliament House of Wales (Prize, £100); (2) Street Façade to a Large Stores (Prize, £25); (3) Set of Measured Drawings of Architecture (Prize, £25). Assessor, Mr. Arthur Keen, F.R.I.B.A. Particulars from the publishers, Messrs. Morgan and Higgs, Heathfield Street, Swansea (1s. 2d. post paid).

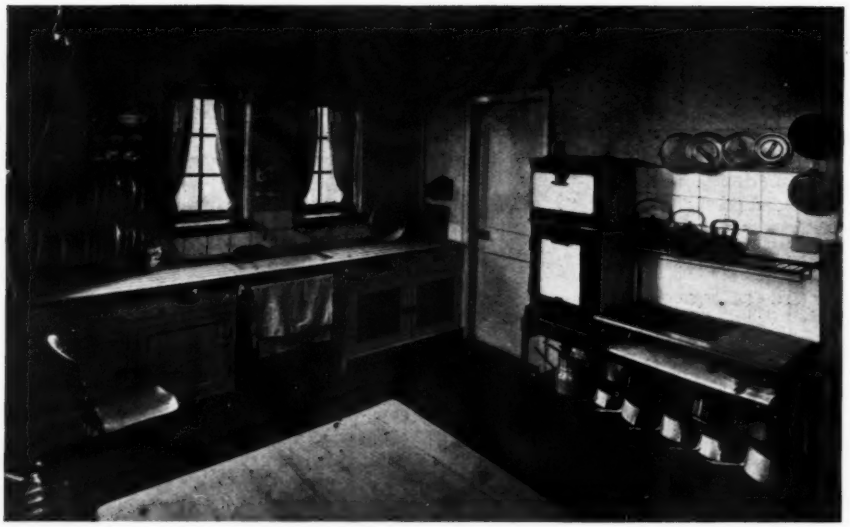
Monday, July 12. Lay-out for new cemetery for Leicester City Council. Assessor, Mr. H. V. Lanchester, F.R.I.B.A. Premiums, £100, £50, and £25. Particulars from the City Surveyor. Deposit £1.

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans. Sir John Burnet, R.A., British representative on jury of assessors. Particulars from the R.I.B.A.

The conditions of the following competitions have not as yet been brought to the notice of the R.I.B.A.

No date. Manchester Town Hall Extension. Assessors, Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A.

No date. Cenotaph for Liverpool, on the St. George's Hall Plateau. Particulars from the Town Clerk.

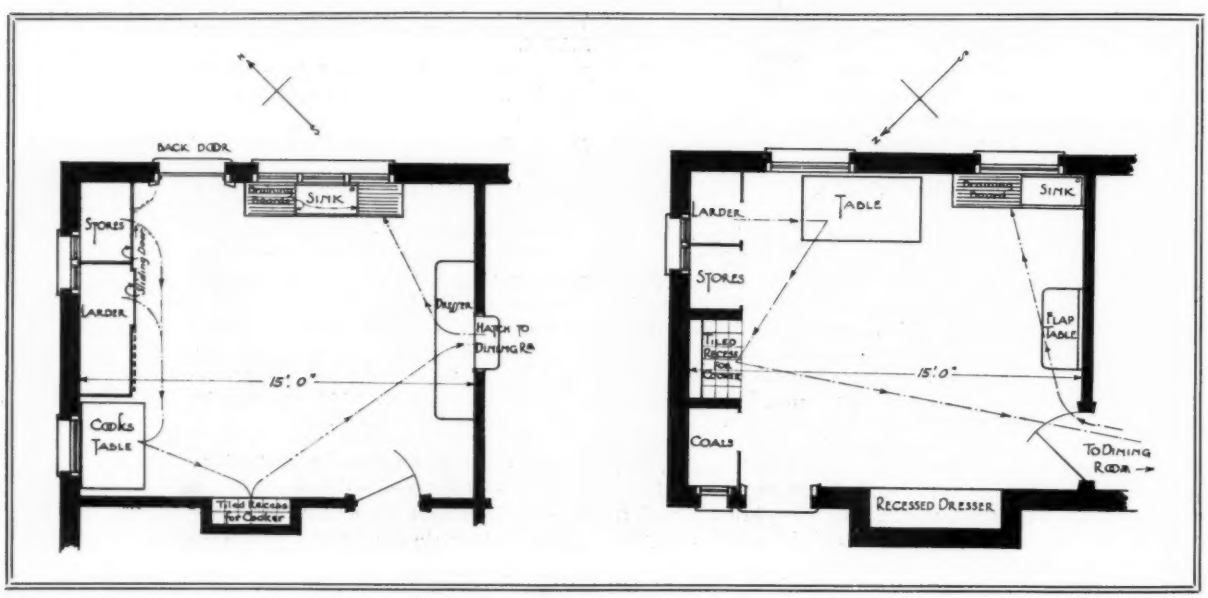


THE MODERN KITCHEN—I

[BY JOHN AND G. M. GLOAG]

KITCHENS have received much thought since labour-saving has become a national study, and the attention that has been focused on housework problems generally during the last few years has produced a perplexing collection of devices, all claiming to contribute some vital service or economy for the smoothing and simplifying of everyday life. Real labour-saving qualities are derived mainly from the initial planning of a kitchen and its fittings. In reviewing the needs of the modern kitchen our ideas are naturally shaped by the realization that this room is very much a workshop. Good lighting is essential; spaciousness is not. To have a separate room for a scullery in a small or moderately sized house means more journeys, which add to a big proportion of tasks a little extra time, and a little extra fatigue; and the separate scullery is only really justified when the kitchen has to serve as a maid's sitting-room, a plan that demands a larger kitchen, and the introduction of features that may interfere with the organization of an easy sequence of service therein. This central workshop of the house runs better when it includes the features of a scullery, and the maid has other accommodation for her leisure.

The planning of a kitchen and its equipment may be examined under two headings: 1: working parts, and 2: storage. Of course, these sections overlap here and there, but concerning ourselves with the working parts of the kitchen we may discuss the range, the service to the dining-room, the place for independent furniture, and the sink. The cook works primarily for the dining-room, and that fact influences the plan of the efficient kitchen. The sequence of tasks leads from storage, which must be convenient, to the preparation of food, which must be facilitated by a range placed so that it derives the fullest benefit



Above, a kitchen by Leslie Mansfield. Below, plans of modern kitchens.

from daylight and artificial light, and the cook is saved from the profound discomfort of working in shadow. The height of the range should save stooping, and with gas-cookers the oven that is only 4 in. or 5 in. above floor level is quite needless. The surroundings of the range should be tiled, and, if possible, the independent gas-cooker should be sunk in a tiled recess so that the floor of the kitchen is freed from projecting fixtures. A hinged flap fitted at table height close to the oven would be a great convenience for plates and dishes, for a range does not always provide a place for setting such articles down when they are removed from the oven. This flap should have a metal top: tin would be best, bordered by narrow beading. It is not difficult to discriminate between tools and "gadgets" when the kitchen is planned as a workshop.

Service to the dining-room follows in the sequence of tasks. The table on which the final results of the cook's work are placed should be close to the serving hatch, or near the door, if there is no hatch. The possibility of making the hatch the central feature of a dresser is worth considering, both from a space-saving and a journey-saving point of view. Such an arrangement provides the hatch with table or, rather, shelf space on the kitchen side, and the convenience of its contiguity to the storage centre, as it were, for china and cutlery, may be emphasized.

Before dealing with the final phase of the sequence, the place

Above, a kitchen in an American apartment house.
Below, a small kitchen by H. H. Scott Willey.

of independent furniture must claim attention. The best position for the table where food is prepared is beneath a window, because good light and coolness are essential. Incidentally, one window is scarcely sufficient for a kitchen, and if there are two the space beneath them should be reserved for the table and the sink. The amount of independent furniture should be reduced; the placing and design of the various fixtures should aim at the elimination of articles other than chairs and, perhaps, two tables. Free floor space is of infinite value in a kitchen : it cuts down the daily mileage of those responsible for domestic work.

Lastly, we come to that most important working part, the sink, its equipment, and surroundings. The height of the lip of the sink should be somewhere about 3 ft. 3 in., or bent-arm level for a woman of average height. It must be possible to reach the bottom of the sink without stooping. There should be draining-boards on either side, and slatted shelves above these boards—3 ft. to 3 ft. 6 in. above to allow comfortable clearance for articles—whereon saucepans can be placed to drain, for the majority of these utensils being made to-day of aluminium do not require drying with a cloth. A narrow shelf with a rail in front of it, and about 5 in. to 6 in. above its level can accommodate saucepan lids, which can be placed vertically, a method that secures tidiness and saves space. There should also be a shelf for sink cleaning materials, possibly a small rack for swabs. Underneath the sink there is usually a complicated dust-trap of pipes, and the enclosing of the under part so that a cupboard is formed provides a good place for pails, scrubbing brushes, and floor cloths. Drawers fitted beneath the draining-boards are a practical asset also.

The desirability of a window immediately above the sink has been mentioned. A window as close as possible should be contrived in any case, for light should fall directly over the sink, and then there is that most important of all matters in the working and general efficiency of the kitchen—ventilation. The plan of the room can secure thorough ventilation by the effective disposition of the windows. Windows taken up to ceiling level and fitted with fanlights at the top with casements underneath are, perhaps, the best solutions to this problem. So many kitchens are dismal because a maze of lines stretches from wall to wall, and on those lines hang dish cloths and dusters, drying, and making the atmosphere of the place damp and unpleasant; and this common feature suggests the very real practical value a small radiator, caged in by rails on which cloths could be dried, might have in a kitchen; and, apart from that office, it would solve with simple neatness the heating problem, economizing housework once again.

[*To be continued.*]

PAINT AND PAINTING

[BY BERNARD CAYLEY]

Of all the white pigments white lead remains the favourite. It may be tinted to almost any colour required, although ultramarine and vermilion should not be used, owing to the sulphur contents. White lead remains popular for three reasons : 1 : it has excellent body or opacity; 2 : it is durable; 3 : it is easy to apply. It has its disadvantages : 1 : that it is poisonous; 2 : that under certain circumstances, for instance, when it is exposed to the sea-air, it is likely to chalk, which means to rub off like badly-bound whitewash. To counteract this, a mixture of zinc oxide and white lead in the proportions of from half and half, to two-thirds of white lead, to one-third of zinc, makes an excellent paint.

Zinc oxide is made from metal zinc, by burning, and is an excellent, and very white pigment, of considerable durability. It is used in the preparation of the well-known white enamels, mixed with specially treated linseed oil and varnish, although sometimes the latter is omitted. Zinc by itself is liable to become brittle, but this is overcome by the addition of white lead as described above. It can be used, however, as a finishing coat, but must not be mixed in the same way as white lead would be. The proper way is to use a refined boiled linseed oil, cobalt driers, and very little turpentine. Lithopone is non-poisonous, has excellent body, and consists approximately of two-thirds of barium sulphate (precipitated), and one-third of zinc sulphide. It is the principal base of nearly all the washable water paints, but it is not suitable for outside work. In addition to the pigments mentioned, there are very many others which may be used with perfect safety, the chief among them being the natural or earth colours, such as ochre, sienna, Indian red, Venetian red, iron oxide, etc., and in addition, coloured pigments, such as chromes, various bright reds, etc.

At this stage, we have arrived at a point where we have taken white lead, zinc oxide, ochre, or some other pigment. The painter adds raw linseed oil until a mixture something like the consistency of cream has been produced, or perhaps a little thicker, and in order to make the paint more liquid, turpentine is added. As long as American turpentine can be obtained, I do not advocate the use of substitutes.

The driers used for lead paints are litharge, lead acetate, and lead borate; and for zinc oxide, manganese sulphate, manganese borate, and the salts of cobalt. Some paints require the addition of no driers at all : red lead, for example. White lead requires a little driers, but the blacks, vandyke brown, and the lakes usually require a good deal.

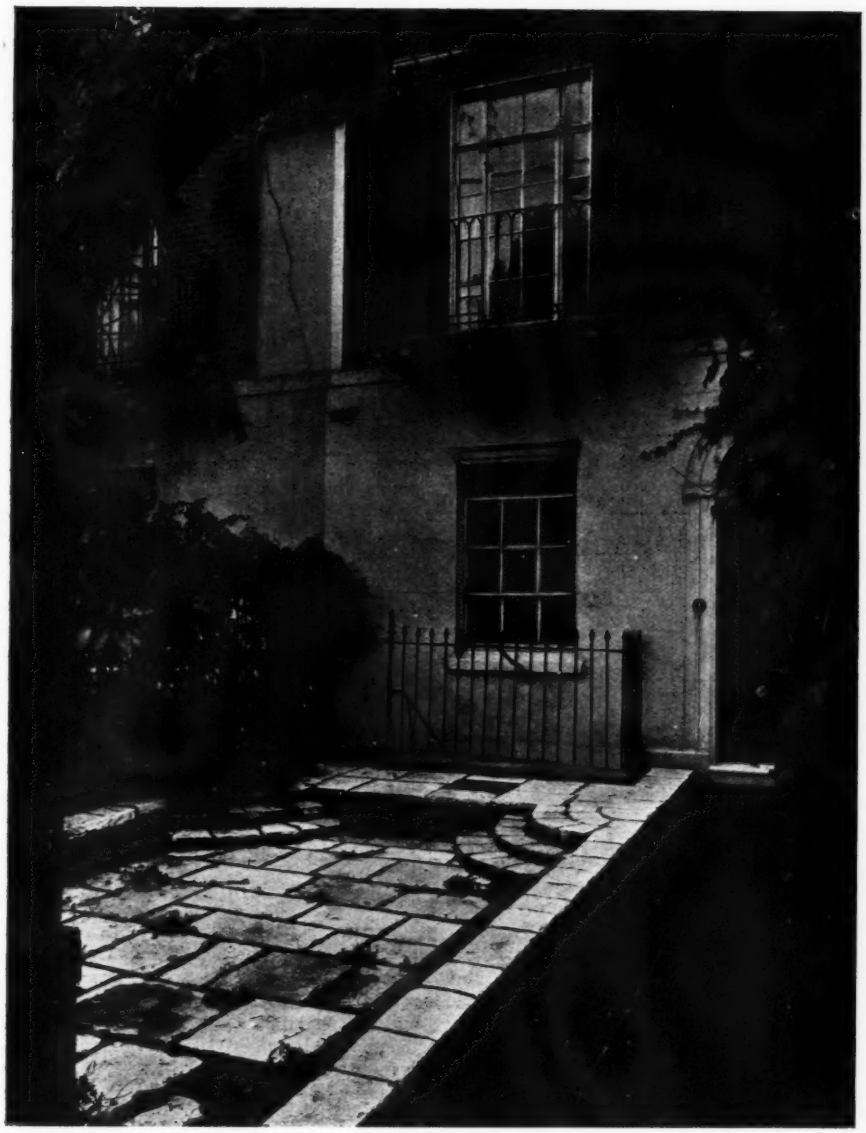
An excess of driers in paint causes a great deal of trouble. Another point which may be mentioned is that as the driers assists the paint in absorbing oxygen from the atmosphere, it is necessary to provide for an adequate amount of fresh air to supply it. I have investigated on many occasions cases where a paint failed to dry, and have found that, almost without exception, the reasons might be divided under three heads : 1 : the paint was applied to a greasy or dirty surface, which was not properly cleaned; 2 : an excess of driers was used; 3 : the room in which the paint was used was very badly ventilated and cut off from a supply of pure air.

Of late years a class of paint has been marketed which is of great interest and importance. I refer to those flat or glossless paints, made specially for application to walls, which are known as flat oil paints, flat wall finishes, and several other names of a similar kind. The outstanding virtue of this class of paints is that they are washable. This important characteristic is due to the fact that they contain Tung oil, or Chinese oil, which has the property of resisting moisture.

Enamels, on the other hand, are made from pure zinc oxide, mixed with specially treated oil, and quite frequently special varnishes are added. They have the immense advantage of very great durability. They should not be applied over white lead, which has a tendency to cause a yellowing of the lighter varieties, but a special zinc undercoating should be used instead. Flat enamels may be used with excellent decorative effects in connection with glossy enamels.

Varnishes may be roughly divided into oil and spirit and flat varnishes. The first of these is by far the most important. If the varnish is applied over paint, the coat immediately beneath it should be mixed so as to dry quite flat or free from gloss, and when this is done, the adherence between the varnish and the flat paint is rendered perfect. Sometimes two or even three coats of varnish are given, the first two being rubbed down with either powdered pumice stone and water, applied by means of a moistened felt, or by one of the waterproof abrasives exceedingly fine in grain, which does the work equally well. When a dull surface is required, flat varnish, which usually contains a proportion of wax, can be applied, but the better way is to rub down a rubbing varnish as suggested, and leave it dull. It should be remembered that varnishes are very delicate materials, and if applied under adverse conditions, trouble may arise. One which unfortunately occurs somewhat frequently is "blooming." This means that a bloom appears on the face of the glossy surface. Usually it occurs owing to want of proper ventilation or the presence of moisture.

[The above extracts are from a paper read before the students in architecture at the Regent Street Polytechnic.]



Above, a front garden in Chelsea. From Gardens in Town and Suburb.

LITERATURE

GARDENS FOR TOWN AND SUBURB

Despite the smallness of scope, the history of the town garden is a pageant of design, changes of civilization, and climate demanding changes of scheme. Through Egypt, Greece, and Rome, the classic garden may be said to have culminated in Pompeii. Here were gardens woven into the very workings of the house. The monasteries linked classic to Renaissance with the cloister, the four-square garden to surrounding arcades. The Italian Renaissance echoed the temperament of its States : in Rome, the plain court, with its rich fountain and glimpse for the passer-by; in Florence, a select rectangle of curving and billowing wall tops; in Genoa, the incomparable terrace gardens, steps climbing into the sky. France developed the graceful artifice of shapes; Spain and Holland concentrated on the partially enclosed garden; while London contributed the river gardens of the palaces that stretched from Westminster to the City. Even after such a past, modern civilization has effected a greater change than any to the town garden. Distribution of wealth, in drawing people from city to suburb, has called for a fresh aspect in planning. Pomp and grandeur give way to the small man's garden. Yet the idea remains the same. Here is the rectangle, free from the business of the house, dedicated to " the purest of human pleasures."

Miss Solly's *Gardens for Town and Suburb* exactly interprets this spirit of the man of the suburbs, whether her examples are in town or not. In this lucidly written book—that cannot fail to appeal, so human is the subject—there is an unconscious bond of sympathy with the past. Underlying the author's knowledge of plants, her suggestions of arrangement, and her gay schemes for keeping out the cats, there is proof that design for all its forms is in its principles unalterable. House and garden are to be so blended that neither is complete without the other. Take away the gardens of Pompeii, and what remains of the house? In England, with the barrier of climate, one must find other ties

than those of circulation. Many of the gardens illustrated are good in themselves, but we are left to surmise the relation to the house, in scale, type, and form. The forecourt illustrated (page 795) is interesting in this respect, and worth comparing with plate v, which shows a treatment of small crazy paving before a house of coarse scale. A garden is an extra room of the house, and just as a room is not designed for the flower vase, so is the garden not primarily dependent on its details. With or without flowers, the form is to be interesting. There are some gardens shown that in winter may yet be pleasant decorative features. They are not only, however, to be spread before one like a picture; they should invite. Ways and means are discussed, and the most valuable contributions are probably the suggestions for planting. No greater praise can be given than to say that anyone who hopes to take up this book, look at his plot, and decide to have the garden on such and such a page, will be disappointed. Moreover, it is not only a book of reasoning. In illustrating the dainty garden designed by Mr. H. M. Fletcher at Campden Hill, it suggests that in its own sphere the suburban garden of to-day could rank with the choicest of the palace gardens of the past.

To collect the plates at the end is probably the best and most economical arrangement, and the grievance of having constantly to refer to them is here more the fault of author than publisher. It is not worth breaking the continuity of reading unless there is real necessity. The cover is not quite in keeping with the well-printed interior. Like the portals to a garden, a cover should stand for permanency, and with its hint of what lies within, invite one to enter.

G. A. JELLICOE

Gardens for Town and Suburb. By V. N. Solly. London: Ernest Benn, Limited. Price 15s. net.

THE PRACTICAL BOOK OF TAPESTRIES

In decoration it seems that we have completed a cycle. Tapestry is, perhaps, the richest form of decoration which has ever been known, and from the early fifteenth to the late eighteenth century it was the most coveted and sought-after of all forms—not only because of its magnificence, but also because of its portable nature and adaptability. Another early practice in interior decoration was painting, either as at first, directly on the walls, or as later, on canvas stretched to the walls. This was particularly applicable to buildings of a monumental type, such as the churches of the Norman and Gothic periods, the Sistine Chapel in Rome, and the Doge's Palace in Venice. Early in the sixteenth century we find panelling; then wallpapers, and, lastly, distemper, giving large and bare fields of a colour which may or may not be in tune with the nature of the casual beholder. The last two types of decoration are, of course, not of much importance in comparison with those others mentioned before. It appears as though we have now completed this cycle, and that a new interest is about to spring up in tapestry. How few people to-day, even those who profess to be interested in the decoration of their homes, know anything at all about this super-decorative art, either of its craftsmanship, or its pictorial significance!

Although tapestry may be beyond the pockets of many, there are to-day obvious signs of a return of its study and appreciation, for already the demand for the richer form of decoration obtainable in needlework and embroideries is very rapidly gaining ground in this country. That remarkable exhibition of early English embroideries which was held at Bathurst House, Belgrave Square, this March, and the recent exhibition held at the Independent Galleries of the more modern designs for hand-made embroideries, etc., by Mr. Roger Fry, Mr. Duncan Grant, and others, all go to show this tendency very strongly, as well as the attempt to bring the possibility of decoration in the richer materials (in a minor sense as opposed to tapestries, of course) within the reach of anyone who is interested in the home. It is, therefore, very stimulating to find a book on the subject of tapestry which takes so broad a survey of the whole art as Mr. George Leland Hunter's *Practical Book of Tapestries*. The author treats of tapestries made from the loom, which are tapestries in the proper and primary sense, throughout the ages in Europe in a way which keeps the outline of the subject always intelligently clear before the reader. At the same time, the reading from an historical point of view is interesting, because the author has done a great deal towards tracing the "life" of so many of the pieces with which he deals, and giving the vicissitudes through which many of them have passed. Apart from the technical side, the study of tapestry from a pictorial and decorative point of view is naturally to the architect of the very greatest interest and importance. For while pictorially it reflects so strongly the period in which it was produced; decoratively, it should ever be a source of inspiration.

The various periods of tapestry and its types are admirably grouped under headings such as "Gothic, Religious, and Allegorical," "Gothic, Historical, and Romantic," "Renaissance," etc., etc., while a set of illustrations dealing with the most important pieces mentioned in any particular group, appears at the end of each chapter; in this way the book is well and adequately illustrated. Although the greatest number of the famous tapestries in Europe, such as those at Saragossa in Spain, the Unicorn set in the Cluny in Paris, and various others, are fully described, the author has in the greater part of his work dealt with the many pieces which have crossed the Atlantic, and are now in the great public and private collections in America, and from the point of view of the English reader it is a great disadvantage that more of the tapestries in the museums and collections of this country are not illustrated. The wealth of tapestries which are now in America is, of course, enormous, and Mr. Hunter's work confirms this; it is to be hoped that America will profit by the possession of these masterpieces, and one day produce an art with which she can repay Europe for the art which the latter has given her. Mr. Hunter's book is of great interest, both technically and historically—we do not know of a better book on that most "Aristocratic" of the decorative arts—tapestry.

CLAUDE MILLER

The Practical Book of Tapestries. By George Leland Hunter. J. B. Lippincott Company, Philadelphia and London. 8 Colour-plates and 220 Illustrations in doubletone. Price £2 2s.

ILLUMINATION RESEARCH

A pamphlet, under the title of *Illumination Research*, issued by the Department of Scientific and Industrial Research (which will supply copies on request), gives an indication of the wide range of the investigations on the proper utilization of natural and artificial light which the Department is conducting under the supervision of its Illumination Research Committee. Such matters as the relation between illumination and speed and accuracy of work in the printing and other trades; the design of reflectors; the access of daylight in picture galleries; and the effect of colour, distribution of light and "flicker" on ease of work are being considered.

PUBLICATIONS RECEIVED

Decorative Art, 1926. The Studio Year-Book. The Studio, 44 Leicester Square, London. Price 7s. 6d. and 10s. 6d. net.

The Encyclopædia of Furniture. Compiled by authors in various countries under the general direction of Dr. Herman Schmitz, of the Schloss Museum, Berlin, and with an introduction by H. P. Shapland. London: Ernest Benn, Ltd. Large quarto, 42s.

The Making and Testing of Portland Cement and Concrete. By G. and T. Earle, Limited. Price 10s.

Dutch Architecture of the Twentieth Century. Edited by J. P. Mieras and F. R. Yerbury. London: Ernest Benn, Ltd. 1926. Pp. xiv. Plates 100. 32s. 6d. net.

The First International Congress on Architectural Education. Published by the R.I.B.A. Price 10s. 6d.

WATERLOO BRIDGE

THE Conference of Societies set up to urge the preservation of Waterloo Bridge has published the text of two letters addressed to the Prime Minister on this subject. In the course of its first letter, dated January 15, the conference says :

" In February, 1925, a deputation urging the preservation of the bridge waited on the London County Council and was invited to submit considered arguments to show that the course advocated was feasible. Further inquiry was accordingly held, and a memorial was prepared setting out the æsthetic value of the bridge. The technical problems of conservation were investigated with the greatest care. In the opinion of my conference our claim that the bridge could be maintained was fully established. We showed, moreover, that the alternative of a new six-line bridge was extravagant in cost and likely to enhance rather than diminish the congestion of traffic. On December 15, 1925, the subject was discussed by the London County Council, and our recommendation to review the situation was defeated by a substantial majority. The matter is one of such national importance that we feel justified in appealing to His Majesty's Government."

The following points are referred to *seriatim :*

a. " The State is interested alike as owner of Somerset House and as guardian of the Duchy of Lancaster property. In order to protect Somerset House the Treasury has always retained rights over the adjacent embankment, and no encroachment can be made without the assent of the Government.

b. " The amenity of the two frontages in Wellington Street and the convenience of those engaged in these buildings must be prejudiced by the increased congestion which must inevitably occur in this street if a wider bridge is built. In its original scheme the L.C.C. proposed to carry traffic below the Strand by subway, thus linking the bridge with Aldwych. Without some such relief the addition of three lines of traffic to the three lines already carried by the bridge must produce congestion of traffic at the bridge head, and the condition of the Strand will not only be serious in itself, but will react to the detriment of transport for a considerable distance in all directions. The L.C.C. resolution of February 24, 1925, laid down that the subway should be an integral part of the road improvement. No reference was made on December 15 to this subway, doubtless for good reasons connected with levels and gradients which would not permit the passage of omnibuses, double-deck trams or other vehicles requiring ample head room. This raises a fresh aspect of the question, and as it appears inevitable that, so far from diminishing congestion, the scheme will now increase it, the case against widening Waterloo Bridge is emphasized.

c. " So heavy an outlay is contemplated on a new bridge where it is not required that on the one hand increased demands will be made upon the Road Fund, together with further claims for Government contributions in lieu of rates, while on the other hand bridge building in districts where the demand is insistent and generally admitted will be suspended for want of funds. The destruction of Waterloo Bridge must, therefore, postpone far more urgent improvements elsewhere, without advantage to London traffic or finance.

d. " The L.C.C. differs from municipal authorities generally, in that it is not a traffic authority. This responsibility is vested in the Ministry of Transport (with its Traffic Advisory Committee) and in the Metropolitan Police. Traffic considerations of such magnitude are involved, and the ultimate effects of destroying Waterloo Bridge will be so far-reaching, that we urge the necessity of immediate inquiry by the Government into the whole question of London communications with special relation to Thames bridges. The L.C.C. not being the authority for roads, traffic, police, or waterway, and not having control over the City bridges, is not in a position to review the situation in a comprehensive manner. The crucial matter in our opinion is the necessity to save Waterloo Bridge, to avoid fresh congestion, and to devote available funds to pressing needs in other parts of London.

e. " Having asked for further investigations, my conference was officially invited by the L.C.C. to indicate a suitable tribunal, and we suggested that the First Commissioner, as a Minister of the Crown, and uncommitted on either side of the controversy, would be eminently fitted to establish a tribunal at once impartial and authoritative. To this proposal we received no reply. The importance of Waterloo Bridge itself would fully justify the intervention of H.M. Office of Works."

The second letter is dated June 1, and from its contents we take the following :

" Four months of valuable time have elapsed since we made our suggestion, and the situation has become more difficult during the interval. It is stated that the river-bed at Waterloo Bridge is undergoing modifications, and that the scour is increasing, possibly owing to unforeseen causes arising from the temporary constructions. Traffic over the new steel bridge is only permitted at a foot's pace. It is generally known that Westminster Bridge requires close and constant observation. The whole question of London bridges is being allowed to drift. The matter becomes more urgent every day. The proposal to erect a new bridge at St. Paul's, the southern end of which is only 270 yards distant from Southwark Bridge (now remarkable for the paucity of its traffic), is unlikely to improve transport facilities, and in any case gives rise to deep anxiety amongst those in charge of the Cathedral fabric.

" Meanwhile the suggested destruction of Waterloo Bridge raises serious traffic problems. Between three and four years were required for the removal of Vauxhall Bridge. At Waterloo tidal forces are more powerful, the curve of the river is more pronounced, and the complication of the adjacent steel bridge enhances the difficulties of demolition and replacement. The very existence of this new bridge will intensify the navigation problem while the old bridge is being centred for removal. Had the London County Council accepted our scheme when approached by my conference in February, 1925, much of the necessary strengthening of the old structure would to-day be completed.

" One must, therefore, contemplate a long period for demolition during which the space within the arches will be blocked by their timber supports, followed by three or, perhaps, four years needed for reconstruction. Throughout this period traffic will be diverted to the metal bridge, which with its narrow width, its speed limit, and awkward approaches, will be inadequate even for its temporary purpose. Westminster Bridge cannot carry much more diverted traffic. Lambeth Bridge is remote and cannot be completed for several years—and London is, therefore, threatened by a traffic congestion which will react upon the whole commercial life of the Capital. It appears to my conference that through prolonged delay, and injudicious treatment of Waterloo Bridge, the gravity of the situation is daily increasing. No effort is being made to protect the foundations of Waterloo Bridge from scour pending removal, a course of action which is imperative whether demolition or preservation be determined."

The letter ends by asking that the conference be allowed to give its views in full in connection with the inquiry about to be instituted by the Minister of Transport. Both letters are signed by Mr. Arthur Keen, the chairman of the conference, which includes representatives of the Royal Academy of Arts, the Royal Institute of British Architects, the Town Planning Institute, the Society for the Protection of Ancient Buildings, the Architecture Club, the London Society, and a group of civil engineers.

SIR REGINALD BLOMFIELD AND WATERLOO BRIDGE

The following letter, from Sir Reginald Blomfield, appeared in the *Times* last week :

SIR,—It has been stated that I am one of the assessors in the competition for a new Waterloo Bridge. May I say in your columns that I have declined the invitation of the London County Council to act as an assessor ?

As I still think the existing bridge can and ought to be saved, I cannot assist in a competition which, if realized, involves the destruction of the bridge, so long as there is any chance of saving it.

REGINALD BLOMFIELD

CORRESPONDENCE

HOW HE WOULD REGULATE ARCHITECTS

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—"Still Hopeful" and other correspondents point out that architects will design small houses when they are asked to do so, and I do not think "A Client" would have to go very far to find some of their designs carried out. Unfortunately, most of the "small house" people do not understand the position of the architect. They know what the builder can do, and they go to him often because they know no alternative. Architects must not advertise, of course, but could not something be done to explain to the people? The countryside is being laid out with "ideal homes," bungalows, etc., which grow up anywhere and anyhow: the unfortunate public has to live somewhere. Why does not the R.I.B.A. get a column in one of the daily papers and explain simply what an architect is, and how he should be employed? It seems to be the only thing to do. A STUDENT

IN PARLIAMENT

[BY OUR PARLIAMENTARY CORRESPONDENT]

The Progress of Housing

A number of interesting figures in regard to the progress of housing were given in the House of Commons last week by Mr. N. Chamberlain, the Minister of Health.

In reply to a question put from the Liberal benches by Mr. T. Thomson, who asked for information as to the number of houses at present sanctioned for construction, and the number sanctioned a year ago, Mr. Chamberlain said that up to the end of May, 1926, 292,067 houses had been authorized for erection under the 1923 Act, and 126,138 under the 1924 Act. The corresponding figures for May, 1925, were 205,030 and 58,359 respectively.

Mr. Herbert Williams, the Unionist member for Reading, asked the Minister if he could now state the number of houses completed during the twelve months ended March 31 by municipal authorities, by private enterprise with subsidy, and by private enterprise without subsidy?

Mr. Chamberlain said that 106,987 houses were completed during the period in question in connection with State-assisted schemes—44,218 by local authorities, and 62,769 by private enterprise. He regretted that statistics were not yet complete showing the number of houses erected by private enterprise without assistance during the year ended March 31 last.

Brigadier-General Clifton Brown, a Unionist member, who always takes a great interest in rural housing, inquired whether the Minister was aware of the shortage of houses in rural areas; how many cottages had been built under the 1923 and 1924 Acts which were let at 5s. or less, and whether he proposed to bring in any further legislation this year?

In reply, the Minister said that he was aware that there was still a shortage of housing accommodation in agricultural districts, and added the important statement that he hoped it would be possible to introduce a Rural Housing Bill this session. Statistics were not available showing the number of houses erected under the 1923 and 1924 Act, which were let at rentals of 5s. or less, but under the special financial provisions of the 1924 Act, 6,064 houses had been authorized for erection in agricultural parishes to be let at the appropriate normal rentals contemplated by the Act.

London Bridges

The question of London bridges is not to be allowed to drop. Sir W. Davison, the Unionist member for South Kensington, has tabled a question on the matter and was to have put it to the Prime Minister on Monday, June 7, but, at Mr. Baldwin's request, the question has been postponed until Wednesday, June 9. The actual terms of the question are as follows: "To ask the Prime Minister whether he will appoint a special committee of qualified persons to consider and report as rapidly as possible on the bridges over the Thames in the London area, and the approaches thereto; as to what additional bridges, if any, are required, or will shortly be required, and of these which, in the opinion of the committee, is of the greatest urgency, and should first be proceeded with, and, pending the report of such committee, whether representations can be made to the Corporation of the City of London to defer further action with regard to the proposed St. Paul's Bridge."

SOCIETIES AND INSTITUTIONS

The Association of Architects, Surveyors, and Technical Assistants

"I cannot see why a house built of concrete should be more box-like than one built of any other material, nor why it should be of inferior design," said Mr. T. J. Clark, in reading a paper under the auspices of the Association of Architects, Surveyors, and Technical Assistants on "The Manufacture of Portland Cement and its Uses, with special reference to Buildings." Surely, he said, the beauty of the design was limited only by the ability of the designer, and anyone who would produce a bad design in concrete would produce a bad design in any other material. There was no reason whatever why the elevation of a concrete house should not be as pleasing and as artistic as that of any other kind of house. In colour and texture concrete presented a wide field for effort in surface treatment, since it contained within itself the elements for the production of rich and beautiful effects. Not only may the surface be treated by the addition of roughcast, pebble-dashing, stucco, and colour-washing, but, by a judicious selection of sand and coarse aggregate, various simple methods may be adopted whereby the outer film of cement was removed and the aggregate exposed to view, and by this method a great variety of charming effects could be produced. Perhaps the simplest of these methods was that of scrubbing with a stiff brush and clean water. The same effect could be produced by tooling or sand-blasting. Mr. A. Seymour Reeves, L.R.I.B.A., vice-chairman of the Executive Council of the Association, occupied the chair.

Joint Board for Hampshire Architects and Builders

Members of the Hampshire and Isle of Wight Association of Architects and of the Southern Counties' Federation of Building Trades Employers met at Southampton to discuss the proposal to form a Hampshire and Isle of Wight Architects' Joint Consultation Board. The meeting was called at the instance of the R.I.B.A. Mr. J. Arthur Smith, F.R.I.B.A., presided, supported by Mr. A. L. Roberts (hon. secretary of the Hampshire and Isle of Wight Association of Architects), Mr. Croad (Gosport), and Mr. G. A. Hotter (secretary, Southern Counties' Federation of Building Trades Employers), representing that body. Mr. Smith explained that the R.I.B.A. suggested the establishment of such Joint Consultation Boards throughout the country, and Hampshire was among the first to take action in the matter. The idea was to provide by means of the Boards common ground for discussing matters of mutual interest to architects and builders. Mr. Roberts said the Board would consider only such matters as were submitted by the two organizations or any of their branches in Hampshire and the Isle of Wight. All questions of wages and labour, and all matters of a personal character would be excluded from consideration. A sub-committee was appointed to arrange the preliminary matters precedent to the setting up of the Board.

ANNOUNCEMENTS

The address of Mr. Henry J. Wise, F.R.I.B.A., is now 49 South Molton Street, W.1. Telephone: Mayfair 4346.

Mr. Reginald Sharman Wilshere, chief assistant architect to the Essex County Council, has been appointed architect to the Education Authority of Belfast.

Mr. James M. Honeyman, A.R.I.B.A., has acquired the practice of Messrs. John B. Wilson and Son, of 92 Bath Street, Glasgow. He will carry on the practice, together with his own, at that address under the name of Messrs. John B. Wilson, Son, and Honeyman. Telephone: Douglas 1972.

Mr. W. G. Davies, educational architect to the Belfast Corporation, and formerly assistant architect to the Bradford Corporation, has been appointed city architect of Sheffield in succession to Mr. F. E. P. Edwards. Mr. Edwards was formerly city architect of Bradford.

The Sunderland Board of Guardians has appointed Mr. Ernest Griffiths, M.Inst.Mech.E., of Liverpool, to act in conjunction with their architects as consulting engineer for the reorganization of the heating and hot water supply services at the Sunderland workhouse. Mr. Griffiths is consulting engineer to the Leeds Guardians, the Royal Southern Hospital, Liverpool, and also for several manufacturing firms.

TRADE NOTES

Messrs. Medway's Safety Lift Co., Ltd., of 1–2 Silax Street, Blackfriars Road, S.E.1, have appointed Messrs. Fairclough & Co., Ltd., of 11 New Station Street, Leeds (telephone Leeds 21105), as their agents for the Leeds district. All inquiries addressed to this firm will be given the closest consideration, whilst engineers will be available to give immediate attention to all repair and other work.

The British Reinforced Concrete Engineering Co., Ltd., have now moved into their new head offices at Stafford, which have been in course of construction during the past twelve months. The new works adjoining the offices are also ready for occupation, but the transfer from the present works in Manchester is being arranged to be spread over a period of two or three months, so that there will be no dislocation of business or interference with the prompt deliveries of material. The telephone number is Stafford 444, and the telegraphic address, " Brenforce, Stafford."

The current issue, No. 145, of *A Thousand and One Uses for Gas* gives an enlightening description of the scientific and hygienic manner in which the bananas are ripened on arrival in this country. There are already in use in this country some 3,500 banana ripening rooms, the white-painted interiors of which are kept clean and heated by gas burners fitted with special apparatus which automatically ensures at all times just the amount of heat which will in a few days thoroughly ripen the bananas. Copies of this illustrated magazine can be obtained free of charge on application to the Secretary, the British Commercial Gas Association, 28 Grosvenor Gardens, S.W.1.

Ruberoid at the Paris Exhibition, 1925, is the title of a booklet in which are reproduced photographs of some of the many pavilions of the International Exposition of Modern Industrial and Decorative Art of Paris, 1925, which were entirely roofed with Ruberoid. The Ruberoid Company, Ltd., by whom the book is issued, state in the introduction that " the extensive use of Ruberoid roofing on the exhibition buildings in Paris was largely due to the entire satisfaction given by the use of over sixty-five miles of Ruberoid on the buildings of the British Empire Exhibition at Wembley. Rapidity of application, adaptability to all roof surfaces, and suitability for roofs of large area, combined with its reliability were other factors which led to the selection of Ruberoid for this important work." The illustrations are excellent, and of great architectural interest.

At the present moment partly under the influence of the notable French smiths' work exhibited at the Paris Exposition des Arts Decoratifs Modernes there appears to be a far more wholesome trend in the direction of real imagination in design of wrought-iron work, and the right and proper use of material. " May we suggest," says the Birmingham Guild, Ltd., in an interesting booklet entitled *Smithcraft*, " that this desire for a greater sense of form and beauty might well be stimulated by the architectural profession by, perhaps, curtailing the quantity of wrought-iron work used on buildings and insisting on a better and more craftsmanlike treatment of grilles, balconies, balustrades, and other such work, thus giving a greater scope to the ancient cult of the blacksmith as distinct from the skill of the engineering fitter ? " The booklet gives an interesting historical survey of the craft from medieval times to the present day. The illustrations of wrought-iron work include a gate at the headquarters of the British Medical Association, designed by Sir Edwin Lutyens, R.A., and a veranda, designed by Mr. H. S. Goodhart-Rendel, both of which were executed by the firm. Other illustrations of wrought-iron work executed by the firm include a garden gate, a window guard, and a pierced grille introducing natural forms. In conclusion, the firm state : The competent blacksmiths of this country are not many, and nearly all of them are past middle age—if the ancient craft with all its fine English traditions is not gradually to die out, it must look to English architects for support and encouragement.

NEW BUILDINGS IN LEICESTER

Among the contractors and sub-contractors who executed work on the new buildings in Leicester, illustrated on pages 779 to 790, were the following :

Warehouse in Rutland Street (page 779). Messrs. Shanks & Co., Ltd., sanitary fittings; and Crittall Manufacturing Co., Ltd., casements.

The Prudential Assurance Co.'s building (page 780). General contractors, Messrs. W. Corah and Son. Messrs. Redpath, Brown & Co., Ltd., structural steel; Vulcanite, Ltd., special roofings; Luxfer Prism Syndicate, Ltd., and W. H. Heywood & Co., Ltd., patent glazing; James Gibbons, Ltd., electric light fixtures; Twyfords, Ltd., sanitary fittings; Haywards, Ltd., iron staircases; and Waygood-Otis, Ltd., lifts.

Factory for Messrs. G. Stibbe & Co. (page 782). General contractors, Messrs. Henry Herbert and Sons. Messrs. Williams, Gamon & Co. (Kaleyards) Ltd., steel casements; James Gibbons, Ltd., ironmongery.

Messrs. Adderly & Co.'s building (page 783). General contractors, Messrs. W. Moss and Sons, Ltd. Messrs. W. H. Heywood & Co., Ltd., patent glazing; Sturtevant Engineering Co., Ltd., vacuum cleaning; James Gibbons, Ltd., door furniture; Henry Hope and Sons, Ltd., casements; F. Sage & Co., Ltd., shop fittings, shop front, and furniture.

De Montfort Hall (page 785). General contractors, Messrs. Huskard, Rudkin & Co.

Factory for Messrs. Thomas Morley and Son (page 786). General contractors, Messrs. Stanger Warren.

Messrs. Alfred Mason's premises (page 787). General contractors, Messrs. Bradshaw Bros. Messrs. Empire Stone Co., Ltd., reinforced concrete and artificial stone and Siegwart beams; Ruberoid Co., special roofings; Mellowes & Co., Ltd., patent glazing.

Leicester Junior Training Corps (page 788). General contractors, Messrs. J. Chapman and Sons.

Leicester and Rutland College (page 788). Messrs. Empire Stone Co., Ltd., artificial stone staircases; Doulton & Co., Ltd., sanitary fittings; Waring and Gillow, Ltd., and Haskard MacGregor & Co., oak panelling to hall.

Central Generating Station, Leicester (page 789). General contractors, Messrs. J. Chapman and Sons, Ltd. Messrs. Empire Stone Co., Ltd., artificial stone; British Doloment Co., Ltd., patent flooring; Henry Hope and Sons, Ltd., steel casements.

Imperial Typewriting Factory (page 790). General contractors, Messrs. W. Moss and Sons. Messrs. Haywards, Ltd., iron staircases.

OBITUARY

Mr. W. Parslow

We regret to record the death of Mr. William Parslow, of Formby, at the age of eighty-four. He was a past president of the Liverpool Architectural Society.

Mr. Derwent Wood's Estate

Mr. Francis Derwent Wood, of Carlyle Square, Chelsea, the sculptor, left £10,155.

Mr. A. Gardner's Estate

Mr. Alexander Gardner, of Bath Street, Glasgow, and of Eldon Street, Greenock, architect, left personal estate in Great Britain to the value of £1,664.

THE WEEK'S BUILDING NEWS

Housing Progress at Hull

About 260 houses are to be built on the north side of the Hessle Road, near Hull.

A Girls' School for Mitcham

A secondary school for girls is to be built at Mitcham, at a cost of £37,000.

Land for Housing at Hendon

The Hendon Council proposes to buy land at Stanmore for housing purposes.

Extensions to Cranleigh Public School

Cranleigh School is being enlarged at a cost of £40,000.

Houses for Golders Green

A group of fifty-two houses is to be built on a site at Golders Green.

Plans for Houses at Overseal

Plans have been adopted by the Hartshorn and Seale Rural Council for the erection of twenty-five council houses at Overseal.

Another School for Dagenham

A new school is to be built at Dagenham. This will be the sixth school to be built in the town.

A Further Housing Scheme for Hatfield

The Hatfield Rural District Council proposes to build a further fifty-four houses in Stonecross Road.

Eighty-four Houses for Chesterton

The Chesterton Council has resolved to apply to the Ministry of Health for sanction to erect a further eighty-four houses.

Big Housing Scheme for Long Eaton

It is proposed to erect 150 houses at Long Eaton by private enterprise and to complete College Street.

An R.C. School for Denton

A Roman Catholic school is to be erected at Denton from the designs of Messrs. Foden, Hemm, and Williams.

Housing at Derby

The Derby Corporation has received sanction for loans amounting to £266,000 for the provision of houses and sites.

Big Housing Scheme for Bradford

The Ministry of Health has sanctioned the erection of a further 594 houses on the Swaine House estate at Bradford.

A New School for Fareham

The Hants Education Committee proposes to acquire a mansion at Fareham for conversion into a secondary school.

Extensions to the Uxbridge Nurses' Home

The nurses' home at the Uxbridge Poor Law Institution is to be enlarged at a cost of £14,000.

Housing at Bolsover

The Ministry of Health has approved of the erection by the Bolsover Urban District Council of thirty houses in Moorfield Lane.

Housing at Hounslow

Plans have been prepared for the erection of over fifty houses on an estate in Bulstrode Road, Hounslow.

The Reconstruction of Cannon Street Station

Cannon Street Station has been closed to traffic in order to proceed with the reconstruction and re-modelling of the platforms.

Housing Progress at Chatham

The Chatham Town Council has acquired 14½ acres of land to the south of the town, and has decided to erect 180 houses on this site.

Housing at Eastry

The Eastry District Council has applied to the Ministry of Health for sanction to the granting of a loan of £30,000 in respect of 400 houses.

Housing at Greenford

The Greenford Council proposes to build fifty houses on the Greenford Garden City estate, and has approved a proposed lay-out for 150 houses on the same estate.

A Road-Improvement Grant for Hendon

The Ministry of Transport has made a grant of £97,000 for widening Park Road, Queen's Road, and Colindeep Lane, Hendon.

Housing Progress at Salford

The Salford City Council has decided to apply to the Minister of Health for approval of the erection of forty-two houses on the Weaste housing estate at a cost of £23,400.

A Leeds Estate

A proposal to buy the Elmete Hall estate of about 51 acres, on the west side of Elmete Lane, Roundhay, for £23,000 is contemplated by the Leeds City Council.

Housing Progress at Worthing

Plans for ninety-two houses and eleven other buildings, representing a total estimated cost of £63,985, have been passed recently by the Worthing Corporation.

Housing at Dursley

The Dursley Rural District Council has decided to proceed with the building of thirty-six houses at Coaley and Kingswood as a first instalment of a scheme for the erection of 100 houses.

Bethnal Green Hospital Improvements

The Governors of the Queen's Hospital for Children, in Hackney Road, announce that an expenditure of £100,000 will be necessary to carry out alterations and enlargements.

A New School for Bromley

The Bromley Education Committee proposes to apply for a loan of £40,700 to enable a start to be made with the erection of the new "Burnt Ash" school on the L.C.C. housing estate.

Building Developments at Halifax

Plans of eighteen houses and six pairs of bungalows at Nursery Lane, eight pairs of semi-detached bungalows in Pye Nest, six houses in Churn Lane, and six other houses have been submitted to the Halifax Town Council.

Extensions to a London Hospital

A sum of £100,000 is needed by the British Hospital for Mothers and Babies at Samuel Street, S.E.18, to provide for the building of a new wing, accommodating wards, operating theatres, lecture theatre, staff quarters, etc., and a block for students.

Building Progress at York

The York Education Committee has agreed to draft plans for a new elementary school on the Tank Hall estate. A new scheme has also been prepared for extending the fever hospital and the Fairfield sanatorium, the estimated cost being £32,000, and it is recommended that tenders be invited.

Building Plans at Wimbledon

The Wimbledon Town Council proposes to erect sixty-nine houses on the Durnsford Road site. A Baptist church is to be erected in Haydon's Road, plans having been lodged with the Corporation by Mr. W. Hayne, and the borough engineer has prepared plans for pavilions to be erected in Cottenham and Durnsford Road recreation grounds.

Maidstone's Housing-Subsidy Success

The Maidstone Town Council has been adding £25 to the Government subsidy of £75 per house to encourage local building. The plan has been so successful that the Council has now decided that there is no need for them to continue their own subsidy. Five hundred additional houses are to be erected during the next eighteen months.

School Developments for Manchester

The Education Committee of the Manchester City Council has approved of the acquisition of about one-and-a-quarter acres of land at Cavendish Road, Chorlton-cum-Hardy, adjacent to the Chorlton High School for Boys, to improve and enlarge the site: 20·2 acres at Princess Road and Wilbraham Road for a secondary school and playing-fields; 8,805 sq. yds. at Barlow Road, Levenshulme, adjoining the Chapel Street municipal school, for the purpose of school extension, and about 4½ acres at New Moston, to extend the site of the New Moston municipal school.

READERS' QUERIES

LATERAL EARTH PRESSURE ON A BUILDING

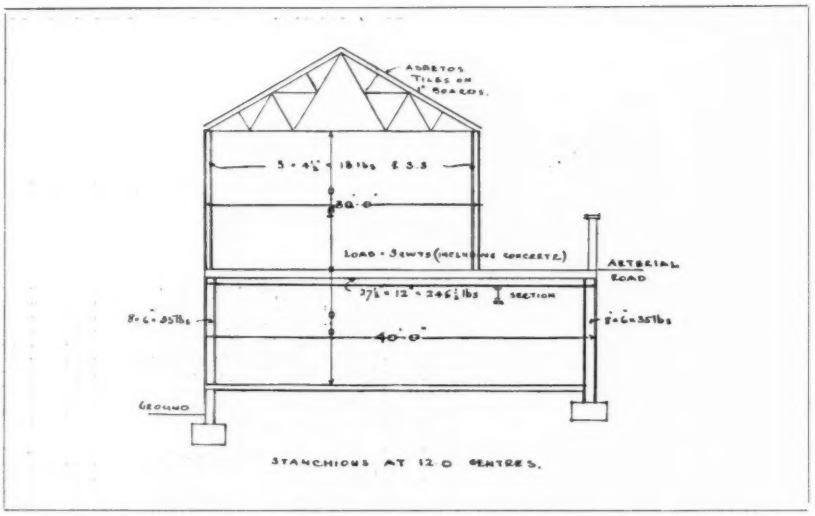
Subscriber writes: "Is it practical, for reasons of economy, to design a concrete slab between the stanchions, shown on the accompanying section, to take the thrust of the earth, on the right-hand side of the building, and transfer the pressure to the stanchions, instead of building an independent retaining wall?"

It is certainly practical, in the interests of economy, to utilize the strength of the stanchions against the overturning action applied by the lateral pressure of the retained earth. The most economical results will be obtained by considering the whole of the ground story of the building as a rigid box, of which one vertical side is subjected to earth pressure. Under this arrangement all parts of the box receive stress, and mutually support one another by adequate connection at the edges and corners. It will be necessary to design the connections between the parts of the building to fit it for combined action of a similar character.

1. The concrete panels supporting the earth pressure must be strong enough to receive and transmit it to the stanchions. They may either be suitably reinforced to act as vertical slabs in tension, or they may be made as segmental horizontal arches with a rise of 2 ft. and a thickness of 18 in. transmitting thrusts in compression from the earth to the stanchions.

2. The stanchions must be stiff enough to resist bending in response to the pressure applied by the concrete panels. They will depend for stability against overturning upon (*a*) their hold in the ground and in their own concrete foundations; (*b*) upon the lateral support they receive from the girders and floor slab forming the first floor; (*c*) also (and chiefly) upon the buttressing action of the end walls of the building, and of any other walls at right angles to the face of the retained earth. All junctions between the stanchions and the first floor beams should be made with large brackets to maintain rectangular connection. Concrete foundations should be large and deep, and should entirely surround the stanchion bases.

The Editor welcomes readers' enquiries on all matters connected, directly or indirectly, with architectural practice. These enquiries are dealt with by a board of experts, to which additions are constantly being made as, and when, need arises. The two latest recruits are specialists on finance and inventions respectively. No charge is made to readers for this expert service. The only thing we ask is that diagrams should be clearly and legibly drawn out and lettered in black ink.—Ed. A.J.



3. The ground and first floor slabs must be made strong enough to withstand pressures received on their edges, and to transmit them safely to all walls or piers capable of abutting them. If necessary they must be specially reinforced with a view to throwing the stresses into the end walls of the building.

4. The end walls of the building must be designed to act in conjunction with the rest, and must be provided with foundations capable of standing sliding action as well as weight. If the subsoil is greasy clay, the foundations must be stepped to obtain lateral resistance.

The earth pressure must be carefully calculated, and the several parts of the building must be made amply strong, since vibration on the road and heavy loads passing along it will be almost certain to develop all the sliding action of the retained earth. Metal in a permanent retaining wall must be well protected from moisture by a rich waterproofed concrete, and plenty of it, and all re-entrant angles between walls and ceilings should be liberally splayed to make the most of the connection. Reinforcement must be effectively continuous around all junctions. W. H.

THE ERECTION OF A GARAGE

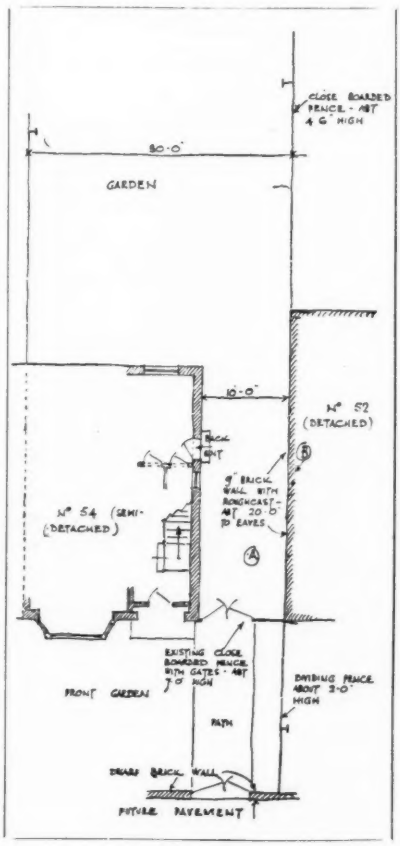
V writes: "The accompanying rough sketch of my house (No. 54) shows its relation to the adjoining house (No. 52). The party fence on the right is mine, and butts against the external wall of No. 52. I wish to erect a shed or small garage (wood framed) somewhere in the space marked A on the plan; if possible, against wall B, belonging to No. 52.

1. Can I do so without first obtaining the consent of the owner of No. 52?

2. Does the fact that my party fence stops against his outside wall affect the matter? There are no door or window openings in wall B on either floor.

3. Assuming that I could erect the proposed structure against the wall, without actually framing into it, does this give me a free hand?"

1: I see no objection to the erection by you of a shed or small garage upon your own property, but you must either obtain the consent of the owner of the neighbouring property to, or refrain from, any actual attachment of your shed to his wall. Trespass may be of the slightest character to become actionable; see Brice's *The Law Relating to the Architect*, page 28. 2: No. 3: We can give no further answer than is contained above. We advise you to consult an architect. S. J. S.



RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₁	Abergavenny	Do.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W.Counties	1 8	1 3½
A₃	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W.Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W.Counties	1 8	1 3½
B₃	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W.Counties	1 8	1 3½
A₃	Atherstone	Mid. Counties	1 6½	1 2
B₃	Aylesbury ..	S. Counties	1 4½	1 0½
B	BATH ..	S.W.Counties	1 6	1 1½
B₃	Banbury ..	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W.Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₃	Basingstoke	S.W. Counties	1 4½	1 0½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₃	Bewdley ..	Mid.Counties	1 6½	1 2
B₃	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W.Counties	†1 9	1 3½
A	Birmingham	Mid. Counties	1 8	1 3½
A	Bishop Auckland	N.E. Coast	1 8	1 3½
A	Blackburn	N.W.Counties	1 8	1 3½
A	Blackpool	N.W.Counties	1 8	1 3½
A	Blyth ..	N.E. Coast	1 8	1 3½
B₃	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W.Counties	1 8	1 3½
A₃	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
A	Bradford ..	Yorkshire	1 8	1 3½
A₃	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse ..	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₃	Brixham ..	S.W. Counties	1 4½	1 0½
A₃	Bromsgrove	Mid. Counties	1 6½	1 2
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W.Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W.Counties	1 8	1 3½
A₃	Buxton ..	N.W.Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₃	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W.Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon ..	N.W.Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford ..	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
B	Cheltenham	S.W. Counties	1 6	1 1½
A	Chester ..	N.W.Counties	1 8	1 3½
A	Chesterfield	Mid Counties	‡1 8	1 3½
B₃	Chichester ..	S. Counties	1 4½	1 0½
A	Chorley ..	N.W.Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W.Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W.Counties	1 8	1 3½
B₁	Colwyn Bay	N.W.Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₃	Crewe ..	N.W.Counties	1 6½	1 2
A₃	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W.Counties	1 8	1 3½
B₃	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W.Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster ..	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W.Counties	1 4	1 0½
A₃	Driffield ..	Yorks	1 6½	1 2
A₃	Droitwich ..	Mid. Counties	1 6½	1 2
A₂	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₃	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W.Counties	1 8	1 3½
B₃	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W.Counties	1 8	1 3½
B₂	Frome ..	S.W.Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester ..	S.W.Counties	1 6	1 1½
A₃	Goole ..	Yorkshire	1 7	1 2½
B₁	Gosport ..	S. Counties	1 5½	1 1½
A₃	Grantham ..	Mid. Counties	1 6½	1 2
A₂	Gravesend ..	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A₁	Hanley ..	Mid. Counties	1 7½	1 2½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₃	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S.W.Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W.Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

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

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₂	Kendal ..	N.W. Counties	1 5	1 1
B₂	Keswick ..	N.W.Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A₃	Kidderminster	Mid. Counties	1 6½	1 2
B₂	King's Lynn	E. Counties	1 5	1 1
A₁	LANCASTER	N.W.Counties	1 7½	1 2
A₃	Leamington	Mid. Counties	1 6½	1 2½
A	Leeds ..	Yorkshire	1 8	1 3½
A	Leek ..	Mid. Counties	1 8	1 3½
A	Leicester ..	Mid. Counties	1 8	1 3½
A	Leigh ..	N.W. Counties	1 8	1 3½
B₃	Lewes ..	S. Counties	1 4½	1 0½
A₃	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W.Counties	†1 9	1 3½
B	Llandudno	N.W.Counties	1 6	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12–15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W.Counties	1 7½	1 2½
B	Maldstone ..	S. Counties	1 5½	1 1½
A₃	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₃	Margate ..	S. Counties	1 4½	1 0½
A₃	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₃	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₃	NANTWICH	N.W.Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E.Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
B	Norwich ..	E. Counties	1 6	1 1½
A	Nottingham	Mid. Counties	1 8	1 3½
A	Nuneaton ..	Mid. Counties	1 8	1 3½
B	OAKHAM ..	Mid. Counties	1 5½	1 1½
A	Oldham ..	N.W.Counties	1 8	1 3½
A₃	Oswestry ..	Mid. Counties	1 6½	1 2
B	Oxford ..	S. Counties	1 6	1 1½
A	PAISLEY ..	Scotland	*1 8	1 3½
C	Pembroke	S. Wales & M.	1 4½	1 0½
A	Perth ..	Scotland	*1 8	1 3
A₃	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	¶1 8	1 3½
A	Pontefract ..	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W.Counties	1 8	1 3½
A	QUEENSFERRY	N.W.Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₃	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₃	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W.Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W.Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₃	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₃	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens ..	N.W.Counties	1 8	1 3½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₃	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	S. Counties	1 6	1 1½
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W.Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport	N.W.Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W.Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W.Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W.Counties	1 7	1 2½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₂	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W.Counties	1 8	1 3½
A₃	Warwick ..	Mid. Counties	1 6½	1 2
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₃	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W.Counties	1 8	1 3½
A	Wigan ..	N.W.Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₃	Worcester ..	Mid. Counties	1 6½	1 2
A	Worksop ..	Yorkshire	1 8	1 3½
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

* Plasterers, 1*s.* 9*d.*

† Carpenters and Painters, 1*s.* 8½*d.*

‡ Plumbers, 1*s.* 9*d.*

§ Painters, 1*s.* 6*d.*

‖ Carpenters and Plasterers, 1*s.* 8½*d.*

¶ Painters, 1*s.* 7*d.*

PRICES CURRENT

EXCAVATOR AND CONCRETOR

EXCAVATOR, 1s. 4½d. *per hour;* LABOURER, 1s. 4½d. *per hour;* NAVVY, 1s. 4½d. *per hour;* TIMBERMAN, 1s. 6d. *per hour;* SCAFFOLDER, 1s. 5½d. *per hour;* WATCHMAN, 7s. 6d. *per shift.*

Broken brick or stone, 2 in., per yd.	£0	11	6
Thames ballast, per yd.	0	13	0
Pit gravel, per yd.	0	18	0
Pit sand, per yd.	0	14	6
Washed sand	0	16	6

Screened ballast or gravel, add 10 per cent. per yd.
Clinker, breeze, etc., prices according to locality.

Portland cement, per ton	£2	19	0
Lias lime, per ton	2	10	0

Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.
Transport hire per day:

Cart and horse	£1	3	0	*Trailer*	£0	15	0
3-ton motor lorry	3	15	0	*Steam roller*	4	5	0
Steam lorry, 5-ton	4	0	0	*Water cart*	1	5	0

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube . 0 3 0
Exceeding 6 ft., but under 12 ft., add 30 per cent.
In stiff clay, add 30 per cent.
In underpinning, add 100 per cent.
In rock, including blasting, add 225 per cent.
If basketed out, add 80 per cent. to 150 per cent.
Headings, including timbering, add 400 per cent.

RETURN, fill, and ram, ordinary earth, per yd.	£0	2	4
SPREAD and level, including wheeling, per yd.	0	2	4
PLANKING, per ft. sup.	0	0	5

DO. over 10 ft. deep, add for each 5 ft. depth 30 per cent.

HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	£0	2	1
DO. 6 in. thick, per yd. sup.	0	2	10
PUDDLING, per yd. cube	1	10	0
CEMENT CONCRETE, 4-2-1, per yd. cube	2	3	0
DO. 6-2-1, per yd. cube.	1	18	0

DO. in upper floors, add 15 per cent.
DO. in reinforced-concrete work, add 20 per cent.
DO. in underpinning, add 60 per cent.

LIAS LIME CONCRETE, per yd. cube	£1	16	0
BREEZE CONCRETE, per yd. cube	1	7	0
DO. in lintols, etc., per ft. cube	0	1	6

DRAINER

LABOURER, 1s. 4½d. *per hour;* TIMBERMAN, 1s. 6d. *per hour;* BRICKLAYER, 1s. 9½d. *per hour;* PLUMBER, 1s. 9½d. *per hour;* WATCHMAN, 7s. 6d. *per shift.*

Stoneware pipes, tested quality, 4 in., per yd.	£0	1	3
DO. 6 *in., per yd.*	0	2	8
DO. 9 *in., per yd.*	0	3	6
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0	6	9
DO. 6 *in., per yd.*	0	9	2
Portland cement and sand, see "Excavator" above.			
Lead for caulking, per cwt.	£2	5	6
Gaskin, per lb.	0	0	5½

STONEWARE DRAINS, jointed in cement, tested pipes, 4 in., per ft.	0	4	3
DO. 6 in., per ft.	0	5	0
DO. 9 in., per ft.	0	7	9
CAST-IRON DRAINS, jointed in lead, 4 in., per ft.	0	9	0
DO. 6 in., per ft.	0	11	0

Note.—These prices include digging and filling for normal depths, and are average prices.
Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

BRICKLAYER, 1s. 9½d. *per hour;* LABOURER, 1s. 4½d. *per hour;* SCAFFOLDER, 1s. 5½d. *per hour.*

London stocks, per M.	£4	19	0
Flettons, per M.	3	0	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	21	10	0
DO. *headers, per M.*	21	0	0
Colours, extra, per M.	£5	10	0
Seconds, less, per M.	1	0	0

Cement and sand, see "Excavator" above.

Lime, grey stone, per ton	£2	12	0
Mixed lime mortar, per yd.	1	6	0
Damp course, in rolls of 4½ in., per roll	0	2	6
DO. 9 *in. per roll*	0	4	9
DO. 14 *in. per roll.*	0	7	6
DO. 18 *in. per roll*	0	9	6

BRICKWORK in stone lime mortar, Flettons or equal, per rod	33	0	0
DO. in cement do., per rod	36	0	0

DO. in stocks, add 25 per cent. per rod.
DO. in blues, add 100 per cent. per rod.
DO. circular on plan, add 12½ per cent. per rod.

FACINGS, FAIR, per ft. sup. extra	£0	0	2
DO. Red Rubbers, gauged and set in putty, per ft. extra	0	4	6
DO. salt, white or ivory glazed, per ft. sup. extra	0	5	6
TUCK POINTING, per ft. sup. extra	0	0	10
WEATHER POINTING, per ft. sup. extra	0	0	3
GRANOLITHIC PAVING, 1 in., per yd. sup.	0	5	0
DO. 1½ in., per yd. sup..	0	6	0
DO. 2 in., per yd. sup.	0	7	0
BITUMINOUS DAMP COURSE, ex rolls, per ft. sup.	0	0	7
ASPHALT (MASTIC) DAMP COURSE, ½ in., per yd. sup.	0	8	0
DO. vertical, per yd. sup.	0	11	0
SLATE DAMP COURSE, per ft. sup.	0	0	10
ASPHALT ROOFING (MASTIC) in two thicknesses, ½ in., per yd	0	8	6
DO. SKIRTING, 6 in.	0	0	11
BREEZE PARTITION BLOCKS, set in Cement, 1½ in. per yd. sup.	0	5	3
DO. DO. 3 in.	0	6	6

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. 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.

MASON

MASON, 1s. 9½d. *per hour;* DO. *fixer,* 1s. 10½d. *per hour;* LABOURER, 1s. 4½d. *per hour;* SCAFFOLDER, 1s. 5½d. *per hour.*

Portland Stone:			
Whitbed, per ft. cube	£0	4	4
Basebed, per ft. cube	0	4	7
Bath stone, per ft. cube	0	2	9½

Usual trade extras for large blocks.

York paving, av. 2½ in., per yd. super.	0	6	6
York templates sawn, per ft. cube	0	6	9
Slate shelves, rubbed, 1 in., per ft. sup.	0	2	6

Cement and sand, see "Excavator," etc., above.

HOISTING and setting stone, per ft. cube	£0	2	2

DO. for every 10 ft. above 30 ft., add 15 per cent.

PLAIN face Portland basis, per ft. sup.	£0	2	8
DO. circular, per ft. sup.	0	4	0
SUNK FACE, per ft. sup.	0	3	9
DO. circular, per ft. sup.	0	4	10
JOINTS, arch, per ft. sup.	0	2	6
DO. sunk, per ft. sup.	0	2	7
DO. DO. circular, per ft. sup..	0	4	6
CIRCULAR-CIRCULAR work, per ft. sup.	1	2	0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0	1	1
DO. circular, do. per ft. run	0	1	4
HALF SAWING, per ft. sup.	£0	1	0

Add to the foregoing prices if in York stone 35 per cent.
DO. Mansfield, 12½ per cent.
Deduct for Bath, 33⅓ per cent.
DO. for Chilmark, 5 per cent.

SETTING 1 in. slate shelving in cement, per ft. sup.	£0	0	6
RUBBED round nosing to do., per ft. lin.	0	0	6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1	9	0
YORK SILLS, W. & T., ft. cub. fixed.	1	13	0

SLATER AND TILER

SLATER, 1s. 9½d. *per hour;* TILER, 1s. 9½d. *per hour;* SCAFFOLDER, 1s. 5½d. *per hour;* LABOURER, 1s. 4½d. *per hour.*

N.B.—Tiling is often executed as piecework.

Slates, 1st quality, per M:			
Portmadoc Ladies	£14	0	0
Countess	27	0	0
Duchess	32	0	0
Clips, lead, per lb.	0	0	4
Clips, copper, per lb.	0	2	0
Nails, compo, per cwt.	1	6	0
Nails, copper, per lb.	0	1	10

Cement and sand, see EXCAVATOR, *etc., above.*

Hand-made tiles, per M.	£5	18	0
Machine-made tiles, per M.	5	8	0
Westmorland slates, large, per ton	9	0	0
DO. *Peggies, per ton*	7	5	0

SLATING, 3 in. gauge, compo nails, Portmadoc or equal:

Ladies, per square	£4	0	0
Countess, per square	4	5	0
Duchess, per square	4	10	0
WESTMORLAND, in diminishing courses, per square	6	5	0
CORNISH DO., per square	6	3	0
Add, if vertical, per square approx.	0	13	0
Add, if with copper nails, per square approx.	0	2	6
Double course at eaves, per ft. approx.	0	1	0
TILING, 4 in. gauge, every 4th course nailed, in hand-made tiles, average per square	5	6	0
DO., machine-made DO., per square	4	17	0

Vertical Tiling, including pointing, add 18*s.* 0*d.* per square.

FIXING lead soakers, per dozen	£0	0	10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square	0	10	0
LABOUR only in laying slates, but including nails, per square	1	0	0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

CARPENTER, 1s 9½d. *per hour;* JOINER, 1s. 9½d. *per hour;* LABOURER, 1s. 4½d. *per hour.*

Timber, average prices at Docks, London Standard. Scandinavian, etc. (equal to 2nds):

7×3, per std.	£23	0	0
11×4, per std.	33	0	0

Memel or Equal. Slightly less than foregoing.

Flooring, P.E., 1-in., per sq.	£1	5	0
DO. *T. and G., 1 in., per sq.*	1	5	0
Planed Boards, 1 in.×11 in., per std.	33	0	0
Wainscot oak, per ft. sup. of 1 in.	0	2	0
Mahogany, per ft. sup. of 1 in.	0	2	0
DO. *Cuba, per ft. sup. of 1 in.*	0	3	0
Teak, per ft. sup. of 1 in..	0	3	0
DO., *ft. cube*	0	15	0
FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0	5	9
DO. framed in floors, roofs, etc., per ft. cube	0	6	3
DO., framed in trusses, etc., including ironwork, per ft. cube	0	7	3
PITCH PINE, add 33⅓ per cent.			
FIXING only boarding in floors, roofs, etc., per sq.	0	13	6
SARKING FELT laid, 1-ply, per yd.	0	1	6
DO., 3-ply, per yd.	0	1	9
CENTERING for concrete, etc., including horsing and striking, per sq.	3	10	0
SLATE BATTENING, per sq.	0	18	6

PRICES CURRENT; *continued.*

CARPENTER AND JOINER; *continued.*

DEAL GUTTER BOARD, 1 in., on firring, per sq.	£3	5	0
MOULDED CASEMENTS, 1¼ in., in 4 sqs., glazing beads and hung, per ft. sup.	0	3	0
DO., DO., 2 in., per ft. sup.	0	3	3
DEAL cased frames, oak sills, 2 in. d.h. sashes, brass-faced pulleys, etc., per ft. sup.	0	4	0
DOORS, 4 pan. sq. b.s., 2 in., per ft. sup.	0	3	6
DO., DO., DO., 1¼ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1¼ in., per ft. sup.	0	3	3
If in oak multiply 3 times.			
If in mahogany multiply 3 times.			
If in teak multiply 3 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone:			
Deal, 1 in., per yd. sup., average	0	10	0
DO., 1¼ in., per yd., sup., average	0	12	0
DO., DO., 1¼ in. maple blocks	0	15	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1¼ in. tread, fixed, per ft. sup.	0	3	6
2 in. deal strings, fixed, per ft. sup.	0	3	9

PLUMBER

PLUMBER, 1s. 9½d. *per hour*; MATE OR LABOURER, 1s. 4½d. *per hour.*

Lead, milled sheet, per cwt.	£2	3	0
DO. *drawn pipes, per cwt.*	2	4	6
DO. *soil pipe, per cwt.*	2	8	0
DO. *scrap, per cwt.*	1	9	6
Copper, sheet, per lb.	0	1	1
Solder, plumber's, per lb.	0	1	2
DO. *fine, per lb.*	0	1	5
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	1
DO. *4 in. per yd.*	0	5	0
R.W.P., 2½ in., per yd.	0	2	0
DO. *3 in., per yd.*	0	2	5
DO. *4 in., per yd.*	0	3	3
Gutter, 4 in. H.R., per yd.	0	1	5
DO. *4 in. O.G., per yd.*	0	1	9
MILLED LEAD and labour in gutters, flashings, etc.	3	10	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	1
DO. ¾ in., per ft.	0	2	5
DO. 1 in., per ft.	0	3	3
DO. 1¼ in., per ft.	0	4	6
LEAD WASTE OR SOIL, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
CAST-IRON R.W. PIPE, at 24 lb. per length, jointed in red lead, 2½ in., per ft.	0	2	5
DO. 3 in., per ft.	0	2	10
DO. 4 in., per ft.	0	3	3
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	7
DO. O.G. 4 in., per ft.	0	2	10
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	7	0
DO. 3 in., per ft.	0	6	0
Fixing only:			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS only, with all joints	1	18	0
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

PLASTERER, 1s. 9½d. *per hour (plus allowances in London only)*; LABOURER, 1s. 4½d. *per hour.*

Chalk lime, per ton	£2	12	6
Hair, per cwt.	0	18	0
Sand and cement see EXCAVATOR, *etc., above.*			
Lime putty, per cwt.	£0	2	8
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	4
Keene's cement, per ton	5	15	0
Sirapite, per ton	3	10	0
DO. *fine, per ton*	3	18	0
Plaster, per ton	3	0	0
DO. *per ton*	3	12	6
DO. *fine, per ton*	5	12	0
Thistle plaster, per ton	£3	9	0
Lath nails per lb.	0	0	4
LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ½ in., per yd.	0	2	4
DO. vertical, per yd.	0	2	7
RENDER, on brickwork, 1 to 3, per yd.	0	2	7
RENDER in Portland and set in fine stuff, per yd.	0	3	3
RENDER, float, and set, trowelled, per yd.	0	2	9
RENDER and set in Sirapite, per yd.	0	2	5
DO. in Thistle plaster, per yd.	0	2	5
EXTRA, if on but not including lathing, any of foregoing, per yd.	0	0	5
EXTRA, if on ceilings, per yd.	0	0	5
ANGLES, rounded Keene's on Portland, per ft. lin.	0	0	6
PLAIN CORNICES, in plaster, per inch girth, including dubbing out, etc., per ft. lin.	0	0	5
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1s. 8½d. *per hour.*

Glass: 4ths in crates:			
Clear, 21 oz.	£0	0	5
DO. 26 oz.	0	0	6
Cathedral white, per ft.	0	0	5½
Polished plate, British ⅛ in., up to 2 ft. sup.	0	2	5
DO. *3ft. sup.*	0	3	2
DO. *7 ft. sup.*	0	3	9
DO. *25 ft. sup.*	0	4	3
DO. *100 ft. sup.*	0	5	1
Rough plate, ¼ in.	0	0	5½
DO. *¼ in., per ft.*	0	0	6
Linseed oil putty, per cwt.	0	16	0
GLAZING in putty, clear sheet, 21 oz.	0	0	10
DO. 26 oz.	0	0	11
GLAZING in beads, 21 oz., per ft.	0	1	0
DO. 26 oz., per ft.	0	1	3
Small sizes slightly less (under 3 ft. sup.).			
Patent glazing in rough plate, normal span. 1s. 5d. to 2s. per ft.			
LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, and up, per ft. sup.	£0	3	6
Glazing only, polished plate, 6½d. to 8d. per ft. according to size.			

DECORATOR

PAINTER, 1s. 8½d. *per hour*; LABOURER, 1s. 4½d. *per hour*; FRENCH POLISHER, 1s. 9d. *per hour*; PAPERHANGER, 1s. 8½d. *per hour.*

Genuine white lead, per cwt.	£3	5	0
Linseed oil, raw, per gall.	0	4	0
DO., *boiled, per gall.*	0	4	3
Turpentine, per gall.	0	6	6
Liquid driers, per gall.	0	9	6
Knotting, per gall.	1	5	0
Distemper, washable, in ordinary colours, per cwt., and up	2	0	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4
Single gold leaf (transferable), per book	0	1	10
Varnish copal, per gall. and up	0	18	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	1	0	0
French polish, per gall.	0	19	0
Ready mixed paints, per gall. and up	0	10	6
LIME WHITING, per yd. sup.	0	0	3
WASH, stop, and whiten, per yd. sup.	0	0	6
DO., and 2 coats distemper with proprietary distemper, per yd. sup.	0	0	9
KNOT, stop, and prime, per yd. sup.	0	0	7
PLAIN PAINTING, including mouldings, and on plaster or joinery, 1st coat, per yd. sup.	0	0	10
DO., subsequent coats, per yd. sup.	0	0	9
DO., enamel coat, per yd. sup.	0	1	2½
BRUSH-GRAIN, and 2 coats varnish, per yd. sup.	0	3	8
FIGURED DO., DO., per yd. sup.	£0	5	6
FRENCH POLISHING, per ft. sup.	0	1	2
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

SMITH

SMITH *weekly rate equals* 1s. 9½d. *per hour*; MATE, *do.* 1s. 4d. *per hour*; ERECTOR, 1s. 9½d. *per hour*; FITTER, 1s. 9½d. *per hour*; LABOURER, 1s. 4d. *per hour.*

Mild steel in British standard sections, per ton	£12	10	0
Sheet steel:			
Flat sheets, black, per ton	19	0	0
Do., Galvd., per ton	23	0	0
Corrugated sheets, galvd., per ton	23	0	0
Driving screws, galvd., per grs.	0	1	10
Washers, galvd., per grs.	0	1	1
Bolts and nuts, per cwt. and up	1	18	0
MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO., in small sections as reinforcement, per ton	16	10	0
DO., in compounds, per ton	17	0	0
DO., in bar or rod reinforcement, per ton	20	0	0
WROT. IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO., in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

SUNDRIES

Fibre or wood pulp boardings, according to quality and quantity.			
The measured work price is on the same basis . . . per ft. sup.	£0	0	2½
FIBRE BOARDINGS, fixed on, but not including studs or grounds, per ft. sup.	0	0	6
Plaster board, per yd. sup. from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	17	0	0
DO., *red*	19	0	0
ASBESTOS COMPOSITION FLOORING: Laid in two coats, average ¾ in. thick, in plain colour, per yd. sup.	0	7	0
DO., ½ in. thick, suitable for domestic work, unpolished, per yd.	0	6	6
Metal casements for wood frames, domestic sizes, per ft. sup.	0	1	6
DO., *in metal frames, per ft. sup.*	0	1	9
HANGING only metal casement in, but not including wood frames, each	0	2	10
BUILDING in metal casement frames, per ft. sup.	0	0	7
Waterproofing compounds for cement. Add about 75 per cent. to 100 per cent. to the cost of cement used.			
Plywood			
3 m/m alder, per ft. sup.	0	0	2
4½ m/m amer. white, per ft. sup.	0	0	3¾
¾ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½