THE ARCHITECTS' JOURNAL

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NEXT WEEK

recent buildings in Manchester will be reviewed by Mr. John Swarbrick, the well-known Manchester architect and writer on architectural subjects. Illustrations will be given of the most important new buildings.

The ruined Byzantine churches of Constantinople (and it is only since the revolution in Turkey that they have been accessible to any but Mohammedans) will be described in the first of a series of articles.

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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.

v. Gian Paolo Pannini (1695–1768).

A Roman Ruin.

In this magnificent ruined hall, Pannini has, from the plentiful motives of the Roman baths and basilicas which he knew so well, created what is probably quite a fictitious architectural composition. He has, however, enlivened the scene with a number of classical statues, all of which could no doubt be identified by an exhaustive search of the Roman sculpture museums. Thus, we see on the left the Torso di Belvedere, *while on the opposite side we have Lysippus'* Hermes tying his Sandal, *and* The Faun with the Infant Bacchus *of the Vatican. For all their classical get-up, the figures which examine the building and the statues with such rapt attention, are very definitely suggestive of connoisseurs and archæological dreamers of Pannini's own day; and altogether the picture offers a delightful illustration of the spirit which pervaded the artistic set of eighteenth-century Rome.* [Private collection.]

THE ARCHITECTS' JOURNAL

Wednesday, February 3, 1926

THE TROUBLES OF THE PAINTERS

The correspondence between Sir Joseph Duveen and Mr. Baldwin on the subject of British art has been the occasion of one of those Press controversies which provide opportunities to important people to give their views on art, commerce, and civilization in general. What, it may be asked, is the bearing of all this upon architecture? In the first place, one cannot help noticing that the identification of the word "art" with painting and sculpture alone seems to have been taken for granted by all the participants in this controversy, and no attempt has been made to distinguish those primary arts which are concerned with the beautification of the real world, which includes landscape, cities, and innumerable other objects in our three dimensions of space, from those secondary and representational arts which cannot flourish unless the primary ones are being properly cultivated. Complaints are made that the art of painting in particular is in a bad way, and the public is taken to task because it fails adequately to support the present generation of young painters. These latter paint, and again they paint, and nobody seems to take sufficient notice. Pathetic appeals are made on their behalf, patronage and even subsidies are invited in order that the painters should have the degree of encouragement and worldly success which are claimed as their deserts. But this is a hard world, and nobody gets anything for nothing, and if the public is not doing very much for the painters it is, perhaps, worth while to ask what the painters are doing for the public. Have many of them a desire to serve the public at all, or do they merely regard their art as a means of self-expression? In a newspaper interview a few months ago, a prominent sculptor announced that he worked to please himself, and, if one may judge from the comments which this statement evoked from some of his fellow artists, he had said a brave and a fine thing. Yet how ridiculous an architect would become were he to say that he designed to please himself! The impropriety of such a remark would be immediately recognized, because the public is accustomed to demand and to expect from architects some kind of social service. Their duty and their privilege is to minister to the needs of the community, and they are the special guardians of one particular cultural field, which belongs not to them as individuals, but to the public. It is said that our young painters do most wonderful work, and it is a shame that their pictures are not bought. It appears that they cannot speak up for themselves, but must find others to do their advocacy for them. But if they recognized that they had a social function to perform they should seek the opportunity to persuade the public that they are really useful and necessary in our present civilization. Reason is powerful, and reason conquers, so let these painters explain what their paintings are for, and how it could be to our advantage that we should buy them.

The root of the trouble is not in the perverse character of the dealers who persist in buying the works of old masters, readily saleable, in preference to the works of the present generation, many of which are so personal and eccentric that even the critics themselves cannot explain what they are all about, but in the lack of intellectuality in the painters themselves, who fail to take the lead in proving the worth of their art. In fact, the path of the artist, so far from being made too difficult, is, in the initial steps at any rate, more often made too easy. For every one young painter who receives too little praise there are a hundred who receive too much, and the arts would be far better served if the vast majority of their present practitioners were to take to other occupations. Nor is it established that the practice of the arts need be a whole-time job. In architecture particularly it is notorious that even the greatest practitioners are obliged to spend three-quarters of their day in attending to matters in which the artistic side of their natures finds no expression at all; so it can scarcely be imagined that painters and sculptors would be put to an unendurable hardship were they to derive part of their livelihood from occupations in which they could prove their capacity to do some of the ordinary work of the world. It will, perhaps, be objected that we are in favour of bringing into being a generation of amateurs who must necessarily fail to master the technique of their art; but there is nothing to prevent those painters or sculptors who show genuine talent, and who have enough personality to make others aware of their talent, from devoting a greater proportion of time to their art when its cultural value has been established. Some of the art schools serve their students ill when they lead them to suppose that a certain facility in draughtsmanship, unaccompanied by any clear apprehension of the function of draughtsmanship, should entitle them to be kept by society as privileged persons, exempt from the common labours which others have to perform.

There is one province of painting which is under the jurisdiction of the architect: that is mural painting, and, in fact, all such decorative painting for which space may be provided in the design of buildings. There can be no doubt that architects will be inclined to make liberal provision in the setting out of their wall spaces for this kind of decoration, provided they are convinced that there are artists who are willing to submit themselves to the restraints and conventions required in painting when it subordinates itself to architecture. In this fruitful collaboration, however, between architects and painters, the artist who tells us that he only paints to please himself will not be able to participate.

NEWS AND TOPICS

MR. BALDWIN'S speech on housing in Scotland at Stirling last week was distinguished for its discretion. He gave a number of statistics as to the position, many of which are already familiar to readers of THE ARCHITECTS' JOURNAL, as they were given in an article on this subject published last year. On the immediate policy with regard to steel houses, Mr. Baldwin spoke somewhat vaguely. This was wise, owing to the extremely delicate state of the negotiations at the present time between the National Scottish Housing Company, acting for the Government, and Scottish local authorities. It is understood, however, that 150 Weir houses, 100 Atholl houses, and 50 Cowieson houses are now to be built on a site, already laid out with roads and sewers, overlooking the Tay at Dundee. The bulk of the Weir houses are to be built on three sites in Edinburgh. The Glasgow Corporation persists in its opposition to providing any facilities for the erection of Weir houses in the district, but probably Atholl and Cowieson houses will be built at Clydebank. If the Government can buy land privately, Weir houses may also be put up in the Glasgow area. The remainder of the 2,000 promised are to be at Greenock. This is the present state of affairs, but the whole matter is subject to alteration. For building these houses at, say, Dundee means giving a present of State houses paid for by the taxpayers that will bring in more rates to Dundee, as the 300 houses proposed will be subject to rates as soon as they are occupied. Some objection has been raised to such a course, and, therefore, Sir John Gilmour is now proposing that the houses should only be built where the local authority is prepared to build an equivalent number of steel houses themselves. This they naturally object to do, and there may be a deadlock arising on this point.

* * *

Becontree being a hybrid or parti-coloured sort of name, invented on portmantalogue principles by some too-ingenious councillor as a foretaste of the cross-word craze, there is a certain congruity in tinting some of its houses in an octave or so of soft harmonious hues, ranging from tile-red to all-white. These tints are not applied as washes, but are obtained by incorporating colouring matter with sand and Portland cement, using as a coating of plaster. Much of the now obsolete prejudice against concrete houses having arisen from objection to its dull drab colouring, the essay towards a brighter Becontree will doubtless tend to popularize the most generally adaptable of all building materials. Mr. Topham Forrest, who is introducing these variegated houses, probably derived some useful hints on the subject while on his fruitful trip to America, for on my office table is a sumptuous booklet, with which he is no doubt familiar, entitled *Substance, Form, and Colour through Concrete*. This booklet shows a series of remarkably fine coloured and other illustrations of the Shrine of the Sacred Heart at Washington, D.C., where Murphy and Olmsted, the architects, have demonstrated the possibilities of concrete as a means of executing "details of enrichment surpassing in freedom and variety what is usually considered possible." This claim is convincingly supported by the beautiful illustrations in the booklet. It is credibly asserted that the rich colouring of the marble seen in Italian churches can be successfully imitated in concrete made with carefully selected and prepared aggregate prepared from marble fragments. Those who have inspected the actual work assure me that its great brilliancy of colouring and smoothness of texture are by no means exaggerated in the illustrations to this handsome booklet, which was issued by the Atlas Portland Cement Company of New York and elsewhere.

* * *

The leading article in the *Times* of January 29 to the effect that, in spite of the adverse decision of the London County Council, the Government should be asked to set up a Commission of Inquiry into the question of the future of Waterloo Bridge has been supported from many quarters. The conference of societies for the preservation of Waterloo Bridge have, in accordance with their recent declared intention, approached the Prime Minister on the subject. It is contended that Waterloo Bridge is a national possession, and that its fate should be decided by the national rather than by the local tribunal. Opinion, however, is divided as to whether the Commission, if appointed, should be of a purely technical character, or whether it should be empowered to investigate the larger question of the Thames and all its bridges. The suggestion of the Improvements Committee of the London Council was that the Commission should be a technical one to report on the question of underpinning the bridge. Having rejected the motion in favour of setting up this Commission, it is likely that the majority of the Council will combat with great vigour the suggestion that the general problem of traffic facilities in London should be tackled by a Commission appointed by Parliament, and thereby empowered to make proposals which are contrary to the Council's expressed desires. Should the Government decide to appoint a Commission, it is not anticipated that there will be any difficulty in delaying the demolition of the bridge until after the Commission has reported. No steps have yet been taken and a considerable time must elapse before the County Council are able to give effect to their resolution.

* * *

As an alternative to the appointment of a Commission, it has been suggested that Waterloo Bridge might be scheduled by the Office of Works as an ancient monument under the Ancient Monuments Act. One might say that this ought to have been done long ago, but, unfortunately, the practice has hitherto been not to schedule any building of a later date of construction than the year 1750. Our legislators have conceived their obligations towards architecture to be confined to the preservation of old buildings rather than beautiful buildings. In the event of Waterloo Bridge being thus scheduled the County Council could not proceed with the demolition, removal, or alteration of the bridge without giving notice to the Commissioners of Works. The latter would be able to make a Preservation Order placing the bridge under their protection. Such an Order, however, would cease to have effect after a period of eighteen months from the date on which it was made unless it had been confirmed by Parliament. And its confirmation would necessitate the introduction of a Bill into Parliament, which would be

keenly contested. On this point the Act provides that "if, while the Bill confirming any such Order is pending in either House of Parliament, a petition is presented against the Order, the Bill so far as it relates to the Order, may be referred to a Select Committee, or if the two Houses of Parliament think fit so to order, to a Joint Committee of those Houses, and the petitioners shall be allowed to appear and oppose as in the case of a private Bill." Such is the legal position, and we must find what comfort in it that we can. Perhaps for the poor condemned Waterloo Bridge there is still some slight chance of a reprieve.

* * *

Those who are especially concerned in architectural politics will be glad to know that the unification of the profession, which was decided upon last year, is now complete. The liquidation of the Society of Architects has reached its final stage and, according to the liquidator's report, property of the estimated value of £10,000 has been transferred to the Royal Institute of British Architects. This includes the Society's leasehold premises in Bedford Square (I give a snapshot of them in the heyday of summertime), and invested funds, part of which is earmarked for developing and maintaining scholarships, including the Victory Scholarship of £150. The Institute will further benefit by the admission of some 1,400 new members transferred from the Society, representing an increase in the Institute's revenue from subscriptions of over £4,000 per annum. Under the amalgamation scheme the Institute is carrying on the Society's educational and registration work, and has appointed Mr. C. McArthur Butler, who, as secretary, gave twenty-five years of distinguished service to the Society, to be secretary of the R.I.B.A. Registration Committee, which has in hand the promotion of a Bill in Parliament for the Statutory Registration of Architects. While the unification of the profession is a matter for rejoicing, there are many who will retain an affectionate memory of the old Society, which, during the forty-one years of its existence, did so much to promote the interests of architecture.

* * *

It is interesting to reflect that last Saturday marked the centenary of a great architectural undertaking, the Menai Suspension Bridge, which was open to the public on January 30, 1826, at 1.30 a.m., when the Royal London and Holyhead mail coach conveying the London mailbag for Dublin passed through the stone portals. But a more significant scene in the history of the bridge had taken place a little earlier in a small temporary office ashore. Just previous to the fixing of the last bar, Mr. Telford went away alone to his private office and there knelt in fervent prayer to the Giver of all good for the successful completion of this great work. The Menai Bridge, as a work of art, is deserving of greater attention and respect from architects than it has generally received. One element in the superiority of this design over most other suspension bridges lies in the fact that the iron stays which hold up the roadway are all vertical, with the result that we are spared the spectacle (so common in modern examples) of a truss composed of members cutting into each other at divers and unrelated angles. But these parallel iron stays have an effect of simplicity and repose, and as seen from the distance they form an unobtrusive texture between the suspending chains and the roadway. The catenary form is in itself a beautiful one, and as the stone piers are skilfully lightened so as to keep the ironwork in countenance, the two materials seem quite successfully wedded together.

* * *

The account of the raising of the suspension chains of the Menai Bridge shows that engineering operations on a great scale may have a dramatic interest far transcending what attaches to the processes of erecting even the most important buildings in a city. According to Telford's own statement, "On that day (25th April, 1825) at half-past two in the afternoon, about an hour before high water, the raft was cast off and floated into position between the piers where, being moored, one end of the chain which lay upon it, was joined to that which hung down the face of the Carnarvon pier, the other end was attached to ropes connected with the Anglesea side capstans, and the said ropes passed by means of blocks over the top of the pyramid of the Anglesea pier. Then the workmen who manned the capstans moved at a steady trot, and in one hour and thirty-five minutes after they commenced hoisting the chain was raised to its proper curvature and fastened to the portion of chain previously placed at the top of the Anglesea pyramid. I then ascended and satisfied myself that by this juncture had been formed a continuous and safe chain from the Carnarvon fastening in the rock to that in Anglesea. Having announced this fact, a loud and general shout of exultation arose from the workmen and the numerous spectators who had assembled to witness this novel operation." Not even the fixing of the last stone on the tallest skyscraper could provide such a thrill as this. It is noteworthy that, though Telford survived the completion of his great work by eight years, he received insufficient honour from his countrymen, his statue being only grudgingly admitted into Westminster Abbey on payment by his friends of a sum of £200.

Any doubts I had entertained, after reading Mr. Nevinson's articles in the issues of January 13 and 20, as to the extent of the sufferings likely to be inflicted upon the inhabitants of London by air attack, were dispelled by a talk with Captain Joseph Morris. Captain Morris, who served during the war in the Royal Air Force, has made an exhaustive study of the whole subject of aerial attack and defence, and is the author of the standard history of the German air raids on this country during the last war—*The German Air Raids on Great Britain, 1914–1918*). He said that the civilian population which holds out longest against demoralization by air attacks will without a doubt be victorious in the next war. This demoralization he considers to be a far greater menace than material destruction. In confirmation of this view he referred me to Air-Marshal Trenchard's pronouncement that he assessed the moral to the material effect of aerial operations in the last war as twenty to one. The effect, he continued, of raids regularly carried out would be comparable with resonance in engineering when a small force may be rhythmically applied with tremendous effect. In the last war the Germans did not grasp this fact, for their own raids upon London generally ceased when the critical moment was reached. No such mistake was made by the Allies with theirs upon the Rhine towns. These raids not only disorganized production to a serious extent, but a state of things which bordered upon widespread panic was produced, which was without a doubt an important contributory factor in the subsequent political and economic collapse.

* * *

Captain Morris, in fact, estimates that as things now stand, one to two weeks' regular raiding could easily demoralize London completely. In the last war slightly over 120 machines passed over London dropping, roughly, thirty tons of bombs. That quantity could, he said, now easily be dropped every twenty-four hours—fewer, far more quickly moving and better silenced machines would be used, so that in spite of some improvements in defence, the raiders would present infinitely more difficult targets than the old ones. The size of the bombs would be considerably larger. During the last war some of six cwt. were used : General von Hoeppner, in his book *Deutschlands Krieg in der haft*, claims that the Germans dropped one weighing a ton. Explosives in these quantities could now be dropped without difficulty. The recent developments in the destructive power of explosives are notorious, but their use is limited by considerations of weight and their effect is in any case local. But the new and deadly gases and poisons can be transported in the form of liquids or solids of low weight and small bulk. An airman of several years' war experience estimates that 500 aeroplanes could drop more than 3,000 tons of dichlorethyl sulphide on London in a week, one drop of which will disable, a few drops burn to death. This substance is a liquid which not only burns, but evaporates slowly, giving off a poisonous gas. Against this and such substances as Lewisite, an arsenic compound, gas-masks would be useless. Captain Morris is, however, more doubtful than my other informant regarding the possibility of using gas in such quantities. Questioned as to the likelihood of the appearance of pilotless, wireless-controlled bombers he was far more sceptical, as he considers that it will be a long time before they can be guided with any degree of accuracy.

The system of gyratory traffic in London is almost too efficient, since the pedestrian is virtually cut off from the island refuges in the middle of the road. Vehicles pour down Whitehall in a continuous stream, and, unless one uses the irksome and rather depressing subway, one can wait on the pavement till doomsday for an opportunity to safely cross. A light overhead bridge would seem to be the only solution, and such bridges will probably become a feature of our busiest streets. So long as their designing is not left to the gentlemen who did the lamp-posts and other street furniture there will be the chance of bringing something of grace and beauty before the eye.

* * *

The peaceful appropriation of our architectural treasures goes on, and I feel a little shaken in my old belief of there being some things that money cannot buy. Agecroft Hall, a beautiful example of a half-timbered mansion of Queen Elizabeth's time, on the banks of the River Irwell at Pendleton, has been bought by an American architect, and is to be packed up piecemeal and shipped to America for re-erection in Virginia. It is said that the purchaser, a Mr. Langley, is a descendant of the original Langleys of Agecroft Hall, a family of some note in Elizabethan days. In Rudyard Kipling's story, *The Return*, he makes an old house bring back its people from America to live as of old within its walls; but in this case the house is part of the man, and the man not at all part of the house. Agecroft Hall—its name should have been sufficient to root it for ever to the spot.

* * *

WEIR'D HOUSES.

Who steels my house—my curse on such is.
Would that his throat was in my clutches !
Much have we borne, but this too much is,
O, damn his iron robot-hutches.

PHILIP T. KENWAY, in *The New Age.*

ASTRAGAL.

ARRANGEMENTS

THURSDAY, FEBRUARY 4

At the Institution of Structural Engineers. 7.30 p.m. W. J. H. Leverton, F.R.I.B.A., on the Æsthetic Treatment of Concrete.

WEDNESDAY, FEBRUARY 10

At the Institution of Structural Engineers. (Lancashire and Cheshire Branch.) Professor A. E. Richardson, F.R.I.B.A., on the Relation of Architectural Design to Structure.

At the Edinburgh Architectural Association. 8 p.m. John A Boyd on Heating and Ventilation.

THURSDAY, FEBRUARY 11

At the Victoria and Albert Museum. 6 p.m. Mr. Bernard Rackham on Stained Glass.

At the Hotel Cecil, Strand. 7 p.m. The Annual Dinner of the Institution of Electrical Engineers.

FRIDAY, FEBRUARY 12

At the Town Planning Institute. 6 p.m. H. V. Lanchester, F.R.I.B.A., M.T.P.I., and E. R. Abbott, L.M.T.P.I., on A Development Scheme for a Town and its Surroundings, and its Relation to Regional Planning.

At the Borough Polytechnic Institute. 7.30 p.m. Annual Prize Distribution by Her Grace the Duchess of Atholl, D.B.E., M.P.

THE FLORIDA ENCHANTMENT

BY CHARLES HARRIS WHITAKER

[*In these articles the well-known Editor of the* Journal of the American Institute of Architects, *who has undertaken a special tour of the south-eastern States of America, describes the unprecedented boom in land and building that is agitating the financial interests of the whole American continent.—Editor*, A.J.]

I: STARTING SOUTHWARD

THE idea that took firm hold and perceptible form, and that has pursued me southward these many days, had its inception in the city of Philadelphia. At least it was there that I recognized it. The discovery came about through the reading of a full-page advertisement in which Philadelphians were exhorted to have faith in their own city, to spend their money within its confines, and, above all, to make their investments in Philadelphia real estate. Now, for a moment it seemed curious that some group of people were willing to pay the cost of a full-page newspaper advertisement in order to generate faith in Philadelphia. It is not unusual for vast sums of money to be spent in "booming" and "boosting" undeveloped land, but here was an old city, one of the few in the United States that has preserved what we are pleased to call our early traditions, asking fervently that its citizens have faith in it. I forget whether the group of citizens preferring the request was mentioned in the advertisement, but it is quite certain that its members were bankers and realtors. For in the United States we now have a situation so unusual and so full of strange possibilities that even we who are seldom astonished by the scale of any development occasionally hold our breaths in suspense.

The State of Florida has become the arena of a battle of giants. On that strip of peninsula, lying between the Atlantic and the Gulf of Mexico, there is being conducted an experiment in superinduced migration the like of which it would be difficult to find in any history. So vast are the sums of money being there bet upon the price of land that every other State is becoming anxious lest the drain upon its cash resources will end in an exceeding financial difficulty all round. It is as though there had been licensed a casino far vaster than Monte Carlo casino, although the eminently respectable people who are playing with unearned increments, quite careless of the fact that they are levying a gigantic tribute on future generations, would protest vociferously were it proposed that, instead of betting on land values, they should soothe their fever by the immoral pastime of watching a little ball and a revolving disc filled with coloured and numbered pockets. Yet it would be far more to the good of the future were this, rather than land gambling, to be permitted, for the unsocial, wasteful, and architecturally destructive results of land gambling are too obvious to require mention. But the socially obvious being no one's business, least of all that of the Government, passes by default.

But the idea I have mentioned, and to which I am quickly coming, had its next stimulation in Washington. There from a newspaper I culled the following:

"To help sell Washington to Washingtonians is the idea that will enter largely into the plans of the Advertising Club of Washington, according to John Poole, president of the Federal American Bank, who heads the organization."

It requires little perception to discover the relation of advertising to banking, and of the joint and mutual interest in saving Washington from the same fate that disturbed Philadelphians to the point of a full-page advertisement. If further evidence were needed to understand the Washington state of mind, or, at least, that mind which concerns itself with real estate values, let us consider the following leader from another Washington newspaper:

It is interesting to note the manner in which history repeats itself. An incident has just been brought to light in the discovery of plans for a great boulevard from Washington to Mount Vernon, surveyed in 1890, and in the proposed use of the highway when it is constructed.

For many miles, outside Rome, stretches the greatest boulevard of antiquity—a wonderful road that has survived the onslaughts of time and weather to the present day. The Romans were wonderful builders: their aqueducts even now stride across Africa and Spain, their ruined theatres may be discerned even in Great Britain. No feat of engineering they performed, however, was more notable than the construction of the Appian Way, "Queen of Roads," as they themselves styled it. Even to-day there are considerable sections of the original paving still in use.

The most interesting thing about the Appian Way from our present point of view, however, is the fact that near Rome it was lined with tombs and memorials of famous Roman families, notably the Scipios. The tombs have endured, like the road, and they may be seen to-day by tourists in Italy.

Our proposed Mount Vernon highway, which will be seventeen miles long, from the Capitol across the Potomac over the Arlington Bridge, will be an Appian Way in America, according to present plans. Space along the boulevard will be apportioned to the States in order that they may erect memorials to their great sons.

The Roman Empire, in its day, was the greatest nation in the world. Rome, the city, became the metropolis of the ancient world; it won and has retained the title, "The Eternal City."

To-day ours is the greatest nation in the world, and Washington may rightly hope to hold a position in the world as proud as that of ancient Rome. We have reason to believe, too, that our civilization will not perish as did that of antiquity.

Here is a striking instance of history repeating itself, and a striking exemplification of the great and growing importance of our beautiful capital. It will not be surprising, now that our country has reached a world position comparable with that of the Roman Empire, if it experiences a flowering of art and literature comparable to that of the Augustan Age. The beginnings already are appearing in such magnificent projects as this great boulevard from the Capitol to Mount Vernon.

One may pass lightly over the incongruity of an Appian Way to connect the Capitol of the great experiment in democracy with the home of the great president. Even though the Capitol has some relationship with many a building that arose during the reigns of kings and emperors, the simplicity of Mount Vernon, even as that of the White House, is emphatically symbolic, in the mind of every good American, of a wish clearly to proclaim our despite, in the day when it was built, of the European ritual and pageantry that surrounded the monarchical form of government. But if we smile at the incongruity, let us remember that only a robust imperialism, largely unconscious, could have inspired the leader devoted to the idea of an Appian Way for Washington. The real purpose is, of course, to say to people with money and leisure: "Do not go to Florida and spend your money where *hoi polloi* will flourish in vulgarity, but buy land rather along the Appian Way. Buy it, too, with the assurance that it will be a safe investment, for in spite of the fact that history may be repeating itself in the plan of an Appian Way for Washington, we have reason to believe that it will not *wholly* repeat itself to the extent of seeing us go where the builders of the real Appian Way went." What humbug!

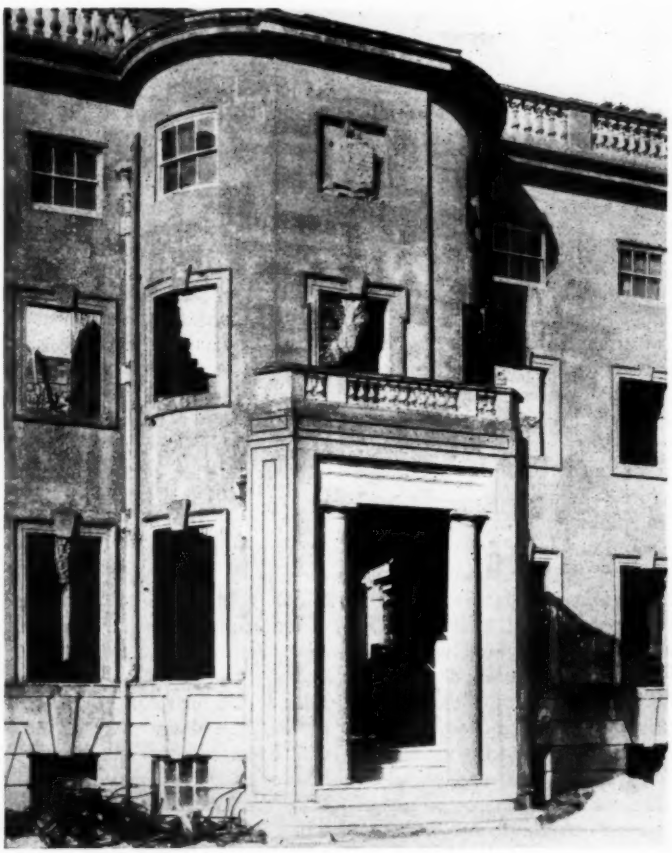
(*To be continued.*)

SOME ASPECTS OF THE SOANE IDEA

BY ARTHUR T. BOLTON, F.S.A.

THERE is a story current of a young musician, desirous of joining a famous jazz band, being repulsed with the remark that he could not be admitted unless he could play Bach and Beethoven. Sir John Soane has been hailed as the "first modernist," probably without a very clear idea of his classical antecedents. As a student he won the approval of that old Roman, Sir William Chambers, and on his travels he laboured in the classic field with a zeal and enthusiasm that left a memory in Rome. John Soane, Junr., writing home in 1819, refers to the labours of Taylor and Cresy as greater than those of any other student since Soane's time. Before Soane ventured to lecture on architecture at the Royal Academy he spent three years on a survey of antecedent literature, and filled masses of foolscap with "extracts" from the standard authors, Latin, Italian, French, and English.

Equipped in this way he was well able to deal with the youthful assumption of students in a dry, but effective, manner. When, in 1827, George Wightwick presented himself with his portfolio of Roman sketches, Soane, seeing one of the Pantheon portico, remarked: "Ah! very pretty, did you happen to notice whether the intercolumniations were equal?" Wightwick, taken aback, hesitated to reply. "Ah!" said Soane, "it does not matter, I see you do not know." Of course, he knew himself, because he had measured the whole building, and his plan shows the discrepancies he was referring to. What he had in mind, no doubt, was the possible bearing of the fact on the true date and origin of the building, and he was testing the student to gauge the extent of his powers of observation. I think that behind the official caution that marked Soane's utterance on the problem of ancient architecture he really held in solution views not unlike those which we have now reached after a century of further research. This is probably the reason why his domestic classic is so interesting; there lies behind it a complete knowledge of the subject which set free his mind from the pedantry that seeks refuge in rules. The little porch (1815) in Somerset now published was, like all Soane's work, not evolved at once. The problem was a difficult one. He had not built the house, and this is probably the reason why Mells Park House does not appear in the official list of his works. James Spiller, architect and surveyor, had carried the work to the stage of internal plastering when the client, to enable the men to get on, gave them instructions for the cornices. Spiller thereupon resigned in a pet, and in this difficulty a relative of the client, who had met Soane in Rome in 1779, wrote to him, and, on the grounds of old friendship, asked him to take up and complete the work. Soane knew Spiller and had employed him as a surveyor, and the matter was no doubt arranged between them. Soane's first idea was a frontispiece of two stories, forming a centre between the two bay windows. This was gradually reduced in scale until the present porch design was arrived at. The work was being done by estate workmen, and went on for many years (1810-15) as money allowed. There was some characteristic interior work, but it has all vanished in a fire which has made a burnt-out ruin of the house. Such drawings as exist are very incomplete, as so much was settled by Soane on the spot. He sometimes spent two or three days on his visits. The client wrote every week a long report letter on the work in progress, creating a mass of correspondence. Soane, contrary to the general idea, had a great fund of patience, but it is the reactions of his occasional irritability that have been best remembered.



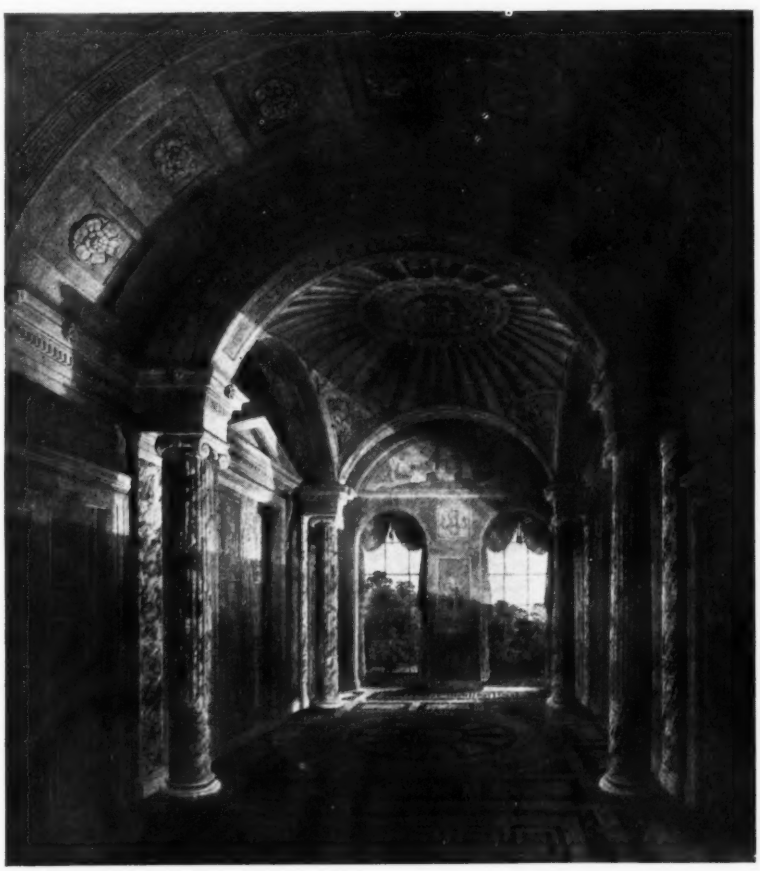
An entrance porch in Somerset (1815), by Sir John Soane

At the end one of those curious and baffling problems that beset actual practice suddenly arose. Soane rendered his usual account of an inclusive 5 per cent. on his estimate of value of £8,000. The client replied, with restrained indignation, that he was sure it could not exceed £4,000. Neither, of course, knew the real figure, owing to the use of estate labour and material. On the face of it Soane would be best able to judge,

and he was, in fact, a great expert in prices and values. He did nothing, and the matter was left for some years, and seems ultimately to have been settled in Soane's favour through the friendly mediation of a solicitor in Bath. Sir John Soane carried on the courtesy of the pre-revolutionary world in his accounts with clients. He once explained to a client that he never sent in his accounts unless he was asked, or unless he heard that some other architect was being employed, the latter point being taken as a hint that his services were dispensed with. After his retirement in 1833 he gave attention to them, some being of twenty-years standing, and I very much doubt if one evasive lady client ever paid at all.

Turning to the examples given here of internal work, the staircase of Sir John Soane's house was built in 1812. It is remarkable in plan as, owing to a raking line of the party wall,

it is an irregular figure with rounded ends of different diameters. Like all circular or oval staircases it is a compromise between the objection of one unbroken flight from floor to floor and the danger from unexpected landings. There is a sound reason in the English tradition for a square-framed staircase, which seems, judging by our students' school and prize designs, in some danger of being forgotten. To come down the Soane staircase with full hands reveals this, as, unless you can see the step lines, the intervention of the landing is a positive danger. It seems probable that the walls when first built were painted in some shade of stone-colour like those of the earlier Soane house (1792) next door. Sundry internal alterations were made to the house in 1822, and it is possible that the staircase was then marbled in giallo antico, the hall being in porphyry-colour.



Above, a view of the staircase from the landing between the first and second floors in Sir John Soane's Museum (1812). Below, the interior of an Ionic vestibule (from a coloured drawing).

There is a fine example of a waiting-hall in the Chambre des Députés at Paris, marbled in large blocks on polished plaster so that it is difficult to decide whether the walls are of Scagliola or only painted. This is one of the buildings which interested Soane on his visit to Paris in September 1819, and it is possible that he may have had it in mind. About thirty years ago the staircase was painted green, much against the will of the painters employed, one of whom survives. The original pattern, however, was found on two doors, which had been reused, reversed ; and also on the back of the recess in which the grandfather's clock stands, as the clock had not been moved. The present marbling in blocks therefore is as close as it is possible to make it to the original. The effect on the staircase has been to bring out its architectural lines, and give some warmth of colour in place of a dreary waste of faded green. Fifteen years of the plain colour was a limit, and for the last fifteen years the staircase has looked dingy and shabby in appearance. Seventy years, however, of the marbling had not exhausted its effect. In fact, for town and public wear, the advantage lies wholly with the varnished marbling. The whole staircase has been done by one man, and the variety introduced prevents that monotonous effect which resulted from the once common use of marbled papers. The skirting is after Egyptian green, and mahogany graining has been used for the upper deal doors and sashes.

The mausoleum, Dulwich Gallery.

The Ionic vestibule (page 205) is from a coloured diagram, and might have been carried out in marble for the columns, skirtings, and exposed parts, with marbling for the general wall surfaces. There are certain drawbacks to the use of actual marble linings in houses, well known to those who have had experience of them. For one thing, really harmonious marble surfaces are largely the result of a long-time exposure. In St. Mark's, Venice, the marble has acquired a washed-out brown tone which reminds one of the inside colour of an old tea chest. Much modern marble lining has a "sausage shop" appearance, which has brought marble into disrepute. In the brief time limits of modern life there is an advantage in a marbled effect which can be as discreet and well regulated as the architect desires. A veteran artist, being asked if he would object to marbling, replied, "not at all, it is broken colour." Prejudices must be left to die out. The case is covered by Sir J. Reynolds's dictum to the effect that the artist is not to be defrauded of his materials by specious arguments.

The remaining example is a photographic attempt to give something of the interior effect of the Dulwich Mausoleum. The effect can be better realized from the Soane published drawings, as this ingenious and daring interior is almost impossible in photography. The idea of the Mausoleum arose from the utilization, at a cost of only £600, of an old stable building at Sir Francis Bourgeois's house in Charlotte Street, and that interior, now destroyed, was so successful that it was desired to have it repeated at Dulwich, in 1812-14, as an annexe to the Art Gallery. There were to be two sarcophagi, for which a sort of chancel was provided, and to this was united a circular Greek Doric nave for the attendance. Soane had no money to spare, and had to content himself with a plain stone colour, warmed by amber flash-glass in the lantern, otherwise he could probably have treated it in colour. The Mausoleum is quite unique and a little masterpiece of the Soane idea. He was attached to it and aggrieved that it was, as it were, cut off from the general circulation of the Art Gallery. It seems soon, in fact, to have been regarded as rather an embarrassment. The order has now lost its podium of two steps by the boarding over of the sunk floor space of the central area.

Will some of our memorial chapels hereafter experience the same fate ? What we, as a people, are capable of in the way of irreverence in our graves and memorials of the dead was brought home to the writer by a visit to a London graveyard with a Frenchman. He was astounded at the use to which the old tombstones had been put, and simply could not understand that they had been the actual headstones of graves. Soane, in 1819, took a special interest in the cemetery of Père la Chaise, of which he had several views made showing the separate chapels and tombstones in their general grouping.

His visit lasted six weeks, and he had with him one of his pupils, Henry Parke. A fine series of studies was made for the illustration of his R.A. lectures. He rather passed over the Louvre and Tuileries, and interested himself in the later work, particularly the interior of the Pantheon. This was fully measured and magnificently represented in an interior view measuring 4 ft. by 2 ft. The old School of Medicine and one or two palatial houses, which probably no longer exist, were also illustrated.

The fountains, railings, lamp-posts, and similar features, Soane also held up as examples in contrast with those of London at that time. Interest in the career of Napoleon caused him to make pilgrimages to St. Cloud and Malmaison. A good deal of time was given to book hunting on the Quais and in the book-shops. As Soane was then sixty-six, he must have been an inspiring example of energy and zeal to his pupils, assistants, and the R.A. students.

Later on he sent Parke on his travels to Italy, giving him £100 a year for three years; the journey extended to Egypt and Nubia. After Basin, Parke was the most distinguished pupil. Unfortunately he died in 1835, two years before his veteran master.

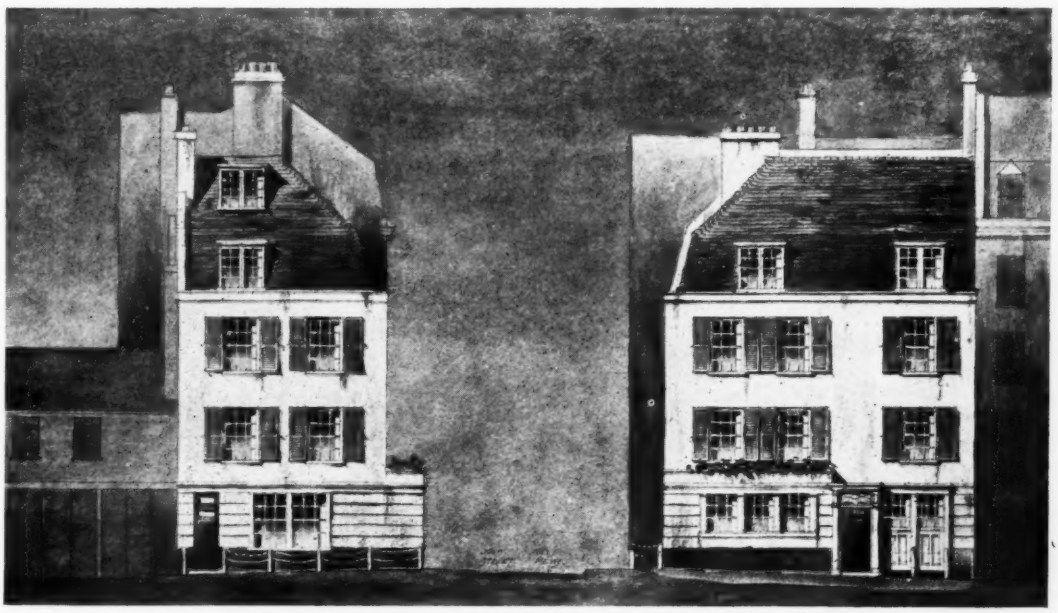
CURRENT
ARCHITECTURE
SECTION

NEW WINE IN OLD BOTTLES

ADAPTING AND CONVERTING OLD PREMISES

EVERY year the would-be resident in the West End of London is finding it more difficult to obtain a home, be it a complete house, maisonette, flat, attic, or even a one-time stable. Would-be residents, whom one may reasonably classify as belonging to the employer or propertied class, require as a rule to live at an address sufficiently appropriate to their social or professional standing, and at a reasonable cost. Although the residential area of London covers many miles, the district possible for this class of tenant is distinctly limited. The limits of such areas are generally more or less determined by the social reputation of the various fine squares and terraces, which are our legacies from the eighteenth and early nineteenth centuries. In most cases these terrace buildings, apart from affording some very fine civic effects, are mere masks to networks of small streets, containing mews, small shops, and rows of small residences. The numbers of these terrace houses are limited, and with the difficulties of expanding housing accommodation by rebuilding such premises, society to-day has been forced to recognize these back streets as containing property possible to dwell in. These areas will now depend on the terraces in front of them for the upkeep of their social reputation. It is obvious, when one comes to think of it, that such a way of increasing the capacity of the fashionable residential areas is wrong, and serious consequences are arising which will, no doubt, be felt more heavily as time goes on.

The terrace houses already referred to were built by, and for, past generations, and for those reasons many a one that is at present vacant is totally unsuitable, as it stands, as a dwelling-house for the property class to-day. They lack modern sanitation, lifts, hot water, electric light, and adequate servants' quarters. Those that are occupied have for the main part been modernized, and the lessees have not incurred such heavy expenditure as was necessary without purchasing long leases. The existence of such leases,



The reconstruction of No. 6 John Street, Mayfair, by Arthur J. Davis, for himself. Above, the old premises. Below, a drawing of the reconstruction.

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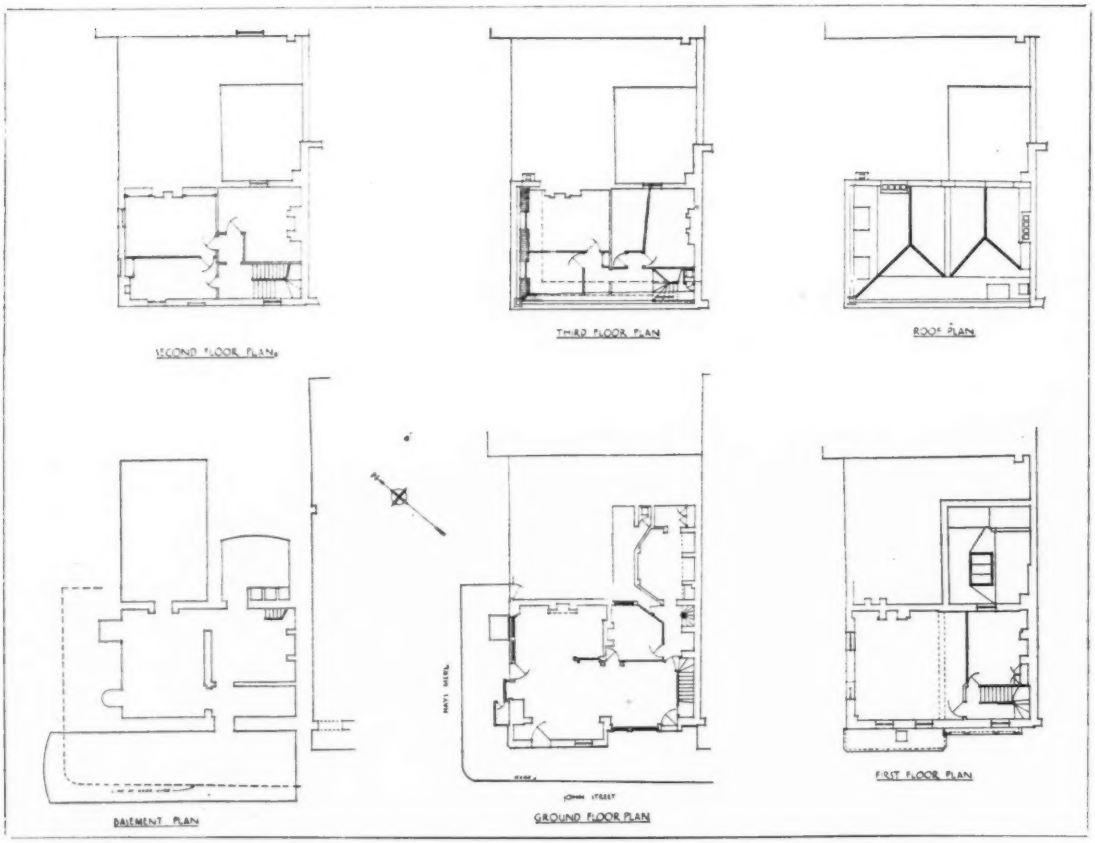
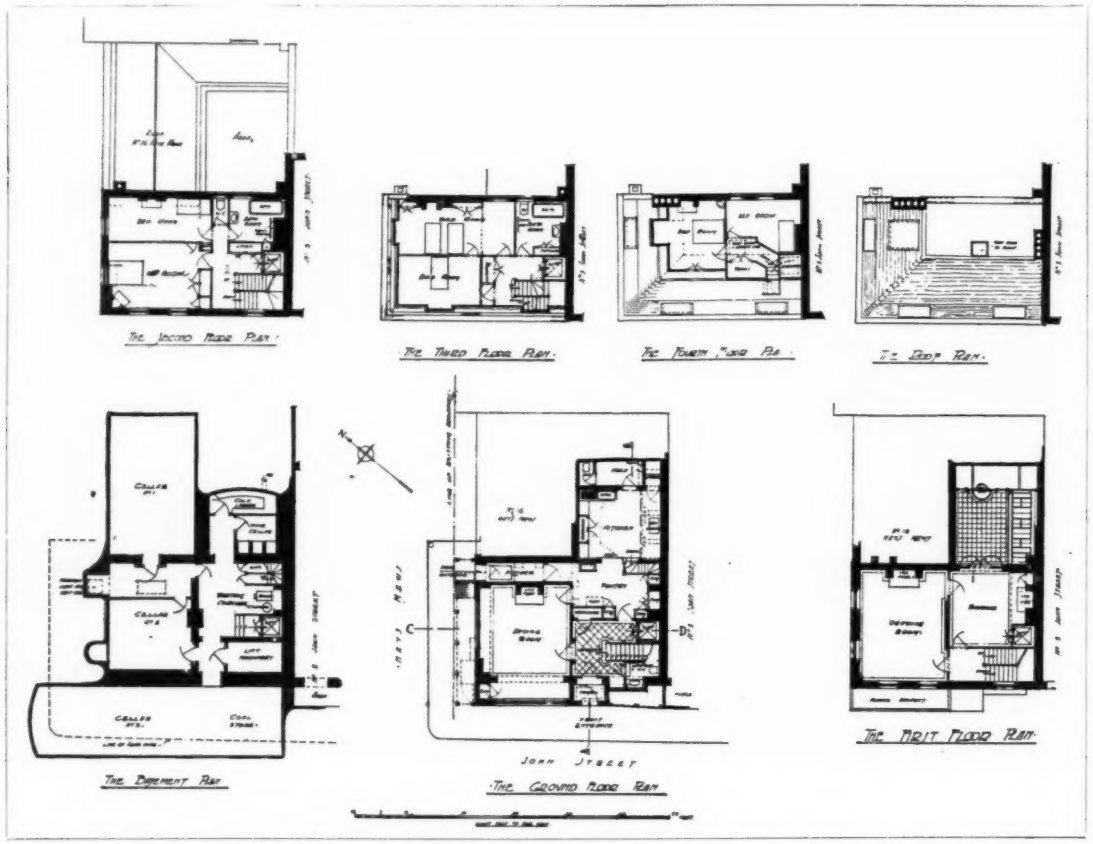




No. 6 John Street, Mayfair. Above, a survey of the existing premises. Below, plans of the reconstruction.

therefore, will preclude for years the rebuilding of these terrace houses on any big frontage. Large frontages would make possible increased housing capacity by providing units similar to the American apartment block. That the

No. 6 John Street, Mayfair: a view of the reconstructed façades.

American apartment block is what is called for in the West End of London is undoubtedly proved by the foreshadowed success of the Devonshire House scheme.

One notices, of course, here and there in Mayfair a small number of blocks of flats being built. Two blocks are now being erected in Grosvenor Square itself, but, owing to the limitation of site, the buildings can hardly be considered part of any far-reaching scheme. Length of frontage, however, would be by no means essential for such apartment blocks, if depth of site were possible. Here action is curtailed by the conversion of the back streets, at present mews, shops, and small property into makeshift residences. These are having so much capital expended on them to make them possible, that freehold

and long leases have been in most cases purchased. The rebuilding, therefore, of London's West End areas on any far-seeing plan cannot be possible for years and years to come. Although the propertied class may consider their housing problem to-day more or less settled by the course that has been pursued, the next generation will find the situation extremely serious.

The London architect deserves praise for the wonderful results he has achieved by remodelling unsuitable property and making it possible for the class of residence required. He must also be prepared to take some blame. By using his ingenuity he has made such conversions possible and so incurred a demand for them, but in doing so he has put the last nail in the coffin of these much - desired rebuilding schemes. When one thinks of the latter half of the last century one recalls the architects' many opportunities for building town houses, both large and small. We to-day have little chance of such work in comparison. The fact that building sites are nearly invariably already occupied by a building of some commercial value tends to eliminate altogether building completely *de novo*.

From this cause a new and highly-developed branch of service has been developed by the town architect. In the nineteenth century, additions, rather than alterations, were attempted by the architect, as many a London garden now covered can testify. For that matter many a country house informs us, in no reticent manner, or its alterations several decades ago. These additions were usually made with a view to adding to the importance of the entertaining facilities of the house rather than to its convenience, and in very few cases did the architect trouble æsthetically to bind the new work to the old. We have a clear example of this in the large ballroom added to Grosvenor House. Its architectural treatment in relation to the house itself is a piece of incongruity few architects to-day would allow themselves.

The installation of baths came about gradually from about 1850 onwards. The introduction of sanitary convenience, however, was probably not handled by the architect himself. The deplorable way in which bathroom additions were made is everywhere in

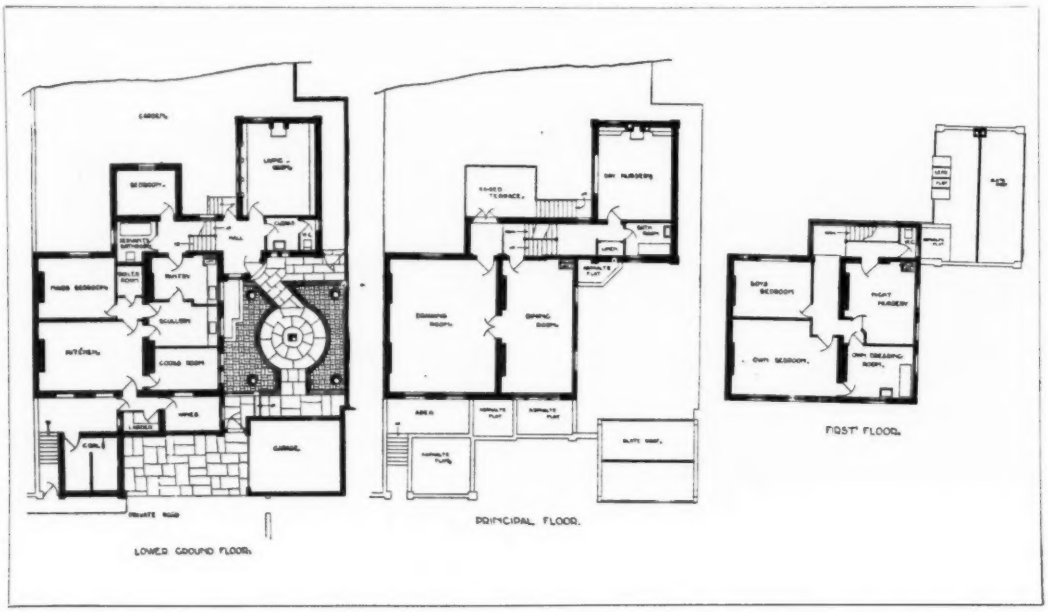
No. 6 John Street, Mayfair. Above, the dining-room. Below, the staircase.

No. 6 John Street, Mayfair. Above (left), a corner of the boudoir, and (right) a corner of the drawing-room. Below, the roof garden.

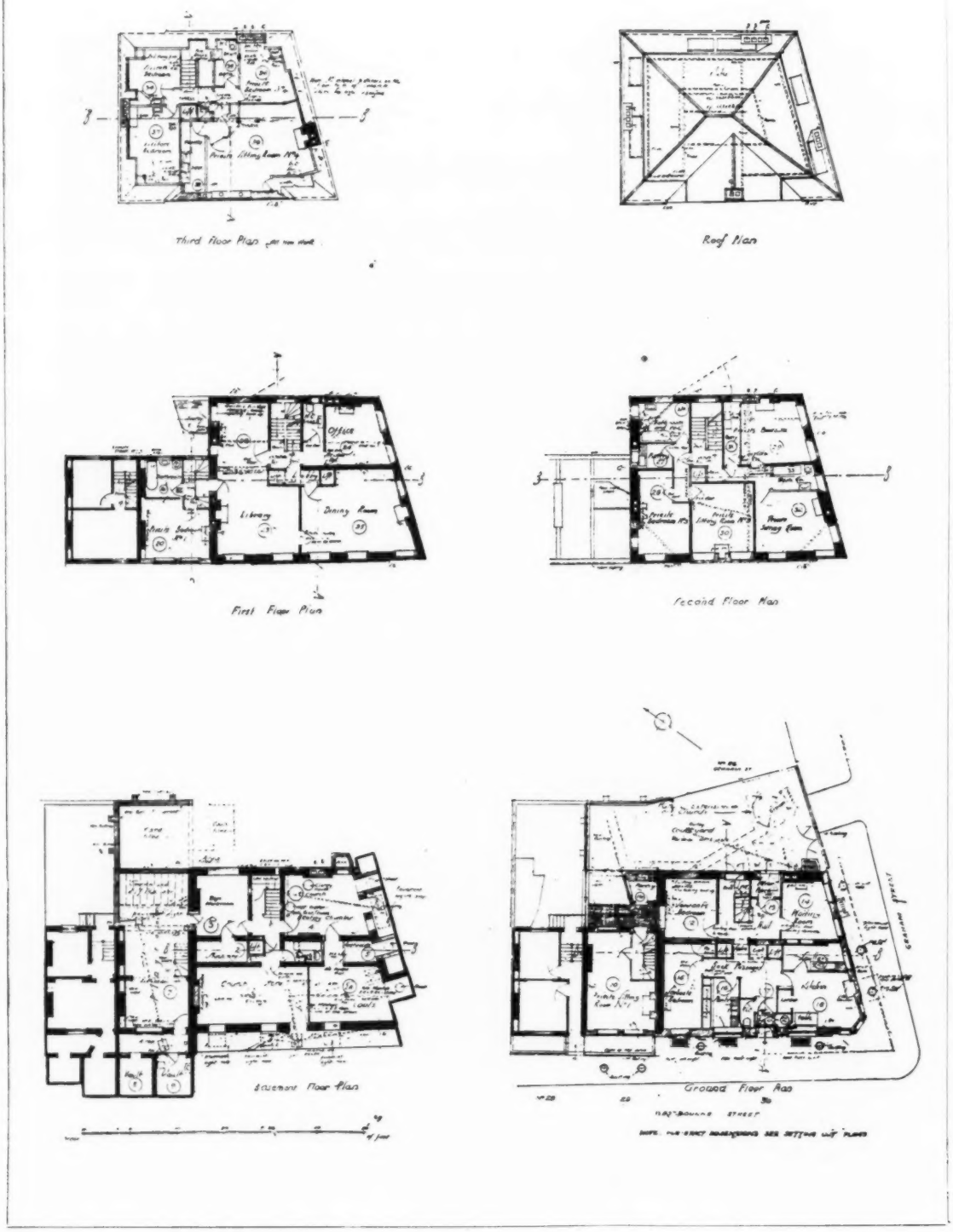
Thurloe Lodge, South Kensington, reconstructed by Deane and Braddell. The courtyard, showing the brick-paved garden and the new front door.

evidence. It is hardly possible to look at the back of a London street without seeing at least one box-like projection on brackets, which at that time was considered a suitable solution of the problem.

The different way of handling such a problem to-day has quite possibly grown out of the small house problem. The planning and equipment of the small house has become a new and exact science. From its study, architects have learnt to utilize to the best advantage very small dimensions of space. One cannot but feel that the

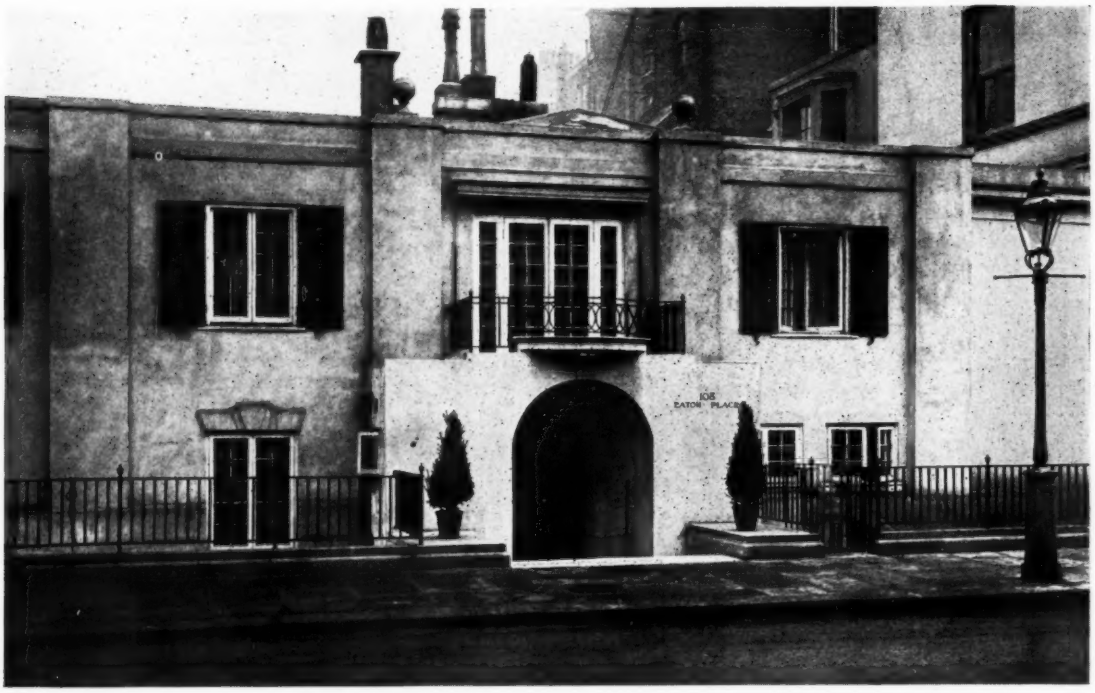


Thurloe Lodge, South Kensington. Above, Mr. Nigel Playfair's own room. Below, the dining-room.

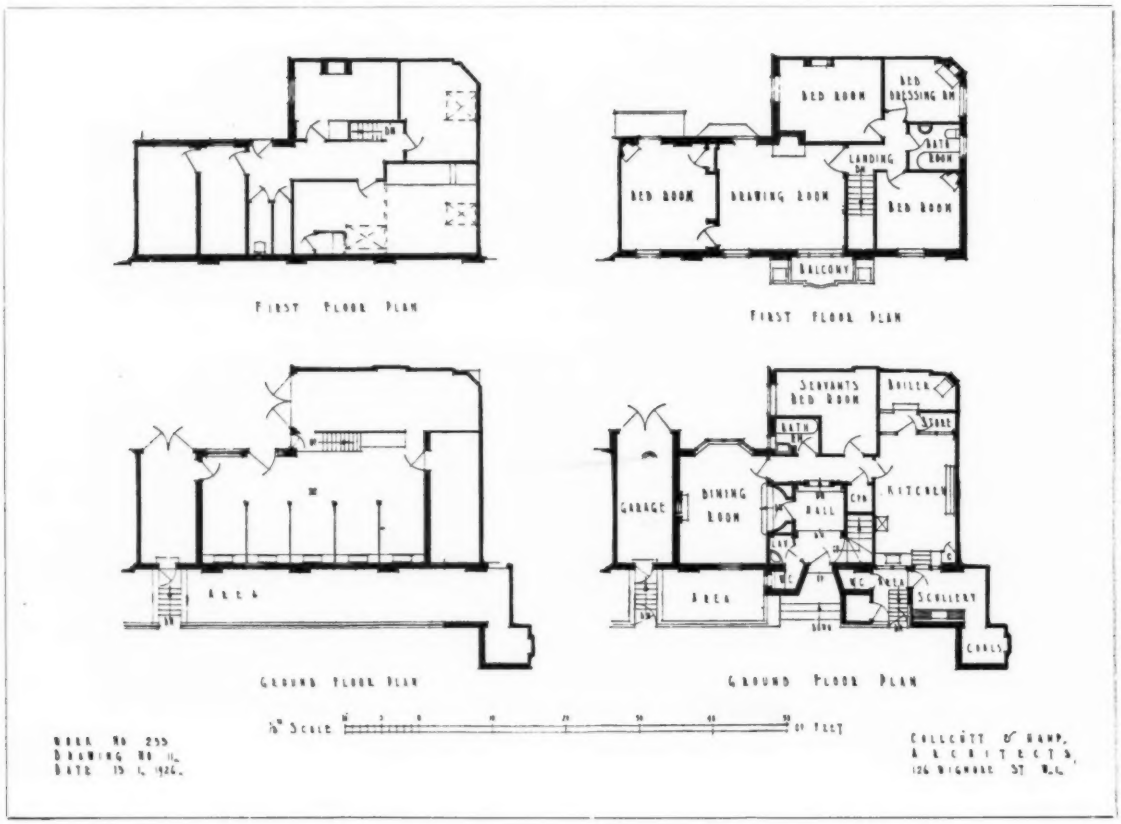


Alterations to St. Mary's Presbytery, Pimlico, by H. S. Goodhart-Rendel. The elevation to Westbourne Street.

Alterations to St. Mary's Presbytery, Pimlico. The elevation to Westbourne Street.



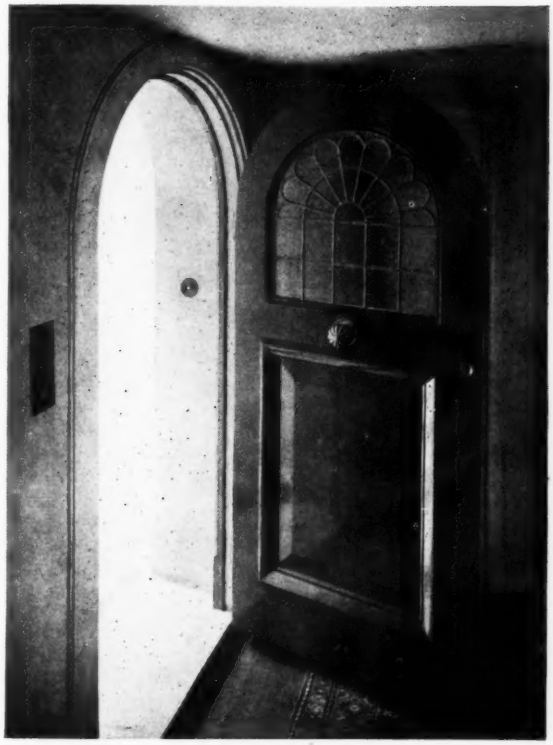
No. 108 Eaton Place, S.W., reconstructed by A. B. Llewelyn Roberts (Collcutt and Hamp) : The main elevation.



many ingenious solutions found for converting town property into modern and convenient residences are really due to this science of space value. Quite apart from problems of planning, these alterations and reconstructions are fraught with all kinds of difficulties. They call on all the architect's resources to solve the technical, legal, and economic problems involved; taking into consideration, for instance, the London Building Act in relation to heights of rooms, construction of walls, ventilation, and sanitation. It is rare to-day to be entrusted with premises for alterations which have not some features contrary to the Building Acts in force. One may say, generally, that such features are usually left alone and allowed to continue to serve the same purpose as before, provided always that they are considered good enough by the architect and his client, and that they are desirable ones to retain. If not, the architect must proceed warily with them. Disturbance very often means a very large liability for cost. For instance, such a trivial act as the renewal even of a w.c. pedestal may call for extensive drainage reconstruction on the part of the sanitary authorities, let alone the possibilities of constructing ventilating lobbies, etc.

The first action on the part of the architect handling alteration work is to have an accurate survey made of the premises. The accuracy of this survey cannot be too much stressed if trouble is to be avoided later on. The survey should include tests as to the levels of the ceilings in rooms which will receive decoration. Frequently these are far from level, and if fibrous plaster cornices are to be used, satisfaction in adjustment is by no means easy to attain.

No. 108 Eaton Place, S.W. Above, the entrance door. Below, the hall.



With the ceiling levels in his possession the architect can design his cornice members so that they are capable of adjustment.

Having completed the survey and proceeded to make sketches, a serious difficulty may be encountered in enabling the client to visualize the alterations proposed. From sketches for an entirely new building a client is able to get a good idea of what is proposed, but where alterations to an existing building are concerned, a client is very often apt to jump to wrong conclusions as to the materialization of a scheme. If the architect would guard himself, he should take great pains to ensure that his proposals and all they mean are understood completely by the client.

Of all builder's work with which the architect has to deal, alterations are, perhaps, the most difficult so far as contract and price are concerned. Even if the work is extensive and relates to important premises, a bill of quantities can hardly cover everything, though supplementary spot prices be embodied. Then again, owing to so many unforeseen contingencies which may arise through ignorance as to the construction and strength of the existing work, certain daywork items are almost unavoidable.

The easy-going method of a "profit on cost" contract is frequently suggested by the contractor. There is no blame to him for such a suggestion, since he cannot be expected to commit himself to firm prices in ignorance. This system, however, leaves a great deal of uncertainty as to the final cost, and the ultimate result may sever all good feelings between the architect and his client, if nothing worse happens. Probably the best system is to draw up a bill of prices, with or without the aid of a quantity surveyor, wherein each item of work is estimated by the contractor, and wherein unavoidable certain items can be left open for

daywork pricing. This system provides a fairly clear method for adjusting variations on completion of the work. Items which are eventually omitted can be credited without dispute, and additional items can possibly be assessed *pro rata*.

Illustrated in this issue are four examples of reconstruction work, each of which presented entirely different problems. There is not space here to write of problem and solution at any length, but any architect of experience in alteration work will agree that criticism of such work can in fairness go very little distance without knowing the limitations of the site, the cost, and the requirements that were involved.

In each example it is obvious a good deal more than adaptation has been achieved. A complete conversion has taken place in each case; a conversion which is not only physical, but spiritual also. Probably the most interesting example for the reader is Mr. Arthur J. Davis's own residence. A most ingenious sense of space has been achieved on what amounts to a comparatively small site, and though the plan has been arranged on pleasantly-formal lines, the architect has happily restrained himself from too much pretentiousness. This question of pretension is a very important one when reconstructing premises. It has to be taken into account that if a property is situated in a street of good reputation it can bear a more imposing character than one sandwiched in between stables and buildings of such modest pretension.

It is very difficult to do justice by photographs to all the thought and skill expended by the architect on reconstruction work. He has to be satisfied as a rule if he does no more than please his client, and the success he has achieved more often than not never reaches the outside world. This class of work, as has been suggested, calls for some of the highest qualities on the part of the architect, and great efficiency. Yet one cannot but regret that so much new wine should be put into old bottles, and that the attendant risks are so serious.

G. GREY WORNUM.

Following are the names of the contractors and sub-contractors for the buildings illustrated on the preceding pages:

No. 6 John Street, W.1. Contractors: Holloway Bros. (London), Ltd.; sub-contractors: Ames and Finnis, bricks and tiles; John Blaikie and Sons, Ltd., heating installation, drainage, and plumbing; H. Pontifex and Sons, Ltd., sanitary fittings; Bagues, Ltd., electric fittings; Higgins and Griffiths, electrical installations; H. Heathman, fire-escape ladder; Lenygon and Morant, decorations; Leyland and Birmingham Rubber Co., Ltd., rubber flooring; Luxfer Co., Ltd., pavement light and glazing bars; N. F. Ramsay, Ltd., door furniture; P. Turpin, decorative work; Vitrolite Co., Ltd., vitrolite lining to bathroom; J. Whitehead and Sons, marble work; Waygood-Otis, Ltd., electric passenger lift.

Thurloe Lodge, South Kensington, for Mr. Nigel Playfair. General contractors: Gray and Sons, of Chelsea; sub-contractors: G. Jacksons and Sons, Ltd., decorative plaster; Southampton Joinery Co., joinery; A. Busset & Co., textiles and furniture.

St. Mary's Presbytery, Pimlico. General contractors: L. and W. Whitehead, Ltd.; general foreman, Mr. Holland.

No. 108 Eaton Place, S.W. General contractors: R. Cowper and Son, Richmond; general foreman: G. Russell; sub-contractors: Vertigan & Co., parquet flooring; Comyn Ching & Co., central heating and hot water; Chas. Smith, Sons & Co., door and window furniture; R. Cowper and Son, electric wiring plumbing; Doulton & Co., sanitary fittings.

No. 108 Eaton Place, S.W. Above, the steps from the dining-room. Below, the drawing-room.

THE COMPETITORS' CLUB

FROM THE OTHER SIDE.

William Jones, the proprietor of the Cosmopolite Stores, discusses his building programme with his legal adviser, Richard Brown.

W. J.: Now about my new block at Dalesford; have you been through those papers I sent you?

R. B.: Yes, they seem to be all in order, and I am carrying on; but I don't quite understand what you mean to do about the building, and why you included that printed circular issued by the Architects' Institute.

W. J.: Oh, but I told you there are no architects of any great account round Dalesford, and I thought I would try a competition, and the man who did the Portsmouth job gave me that paper.

R. B.: Did you read it?

W. J.: No; I hadn't time, so I sent it straight on to you; can you give me the gist of it?

R. B.: Oh, yes, it's simple enough. It says that if you want the profession to compete you explain what you require, fix the premiums, then engage an architect to decide which are the best, and——

W. J.: Hold hard; then I don't settle which are the best?

R. B.: Oh, no. Moreover, you employ the man that is put first in the competition as your architect.

W. J.: What nonsense! Do you mean to say that I can't choose the man I want, and may have to take a plan I don't like?

R. B.: You must take the man placed first. Their idea seems to be that no one but an architect can properly judge the merits of the designs, and they tie you up pretty tight on this point, as practically no one can go in on any other terms.

W. J.: I call that a scandalous piece of trades' unionism.

R. B.: Well, you know there is something to be said for it. Would we ever go to court if our judges knew nothing of the law? it would be a mere gamble.

W. J.: That's quite different. It seems to me that as I am paying the piper I ought to have what I like, and not what somebody else likes.

R. B.: But the difficulty is that the architects look at it differently; they are not prepared to gamble on your taste, and only accept a judgment from one of their own people. You see, he must be able to strike the balance more accurately than you can.

W. J.: That's not how I look at it. When I take my little yacht out of the Hamble I don't let my paid hand sail it round to Christchurch, though he would do it better. It's my boat, and I want to steer, even though I do lose a tide in doing so. This would be my competition.

R. B.: Well, it can't be done, that's all. You may prefer to lose a tide, to take the second or third best design, but the men who put in the work won't stand for it.

W. J.: Do you really mean it? There are plenty of people keen enough on a job like this; surely there must be a way of getting round these trade regulations?

R. B.: Not if you have a competition. Surely you can find a man up to the job.

W. J.: Well, I have tried two, as you know; neither gave me quite what I wanted; didn't break away from the stock thing. I should like my next shot to be rather sensational. Now, if I had a competition——

R. B.: Perhaps your adjudicator might not like sensational things, so you would be no better off.

W. J.: Exactly, that's why I must settle it myself.

R. B.: Well, as I told you, you can't.

W. J.: But there must be some way out; haven't you found any loophole?

R. B.: Well, I have heard of one or two cases, but that was some time back; let me think a moment. After all, supposing you engage a man and don't like his design you can pay him off and start again.

W. J.: Yes, and lose a month or more; couldn't I get several at once, and choose the one I like best?

R. B.: Yes, but that's a competition again; no it isn't—I see—if you remunerate each for his design you are merely employing him; but it must be clear that you are paying him for his work. Perhaps it will cost you a bit more, but not so very much; then you will be free to throw over the lot if no one suits you.

W. J.: No, I shouldn't want to do that. I couldn't afford to lose the time. How could I pick out likely men? I might get a lot of duds.

R. B.: I'll think that out; but I warn you, you must go carefully. I had better draw up your terms, which should make it quite clear that the men are remunerated for what they are doing, and that you are not committed to them beyond a certain point, or it will be looked at as a competition, and there'll be the very deuce to pay.

W. J.: All right; but about the men?

R. B.: What do you say to this: Advertise for architects to send illustrations and particulars of their designs and executed works. Go through these and pick out the ones you think most promising, then make a few inquiries about these, and you ought to have a fairly sound list. In fact, you might find one just right, which would save you all further bother.

W. J.: But isn't there any snag about this? Won't the Architects' Institute step in and say they mustn't answer advertisements?

R. B.: No, I have never heard of anything of that sort. I don't think they can do anything on those lines.

W. J.: Then that seems a practical solution, but it cuts out some I had hoped to get into a competition—bright youngsters, up to date, who might do something quite new and original that would suit my sort of show. I should like to have the chance of picking out a design of that kind in a competition; but you say I can't.

R. B.: Well, you might get it if you found an adjudicator to sympathize with your point of view; but you would have to get hold of him first, so that he could make his award on your lines. You would still be taking a chance, as the decision is his and not yours.

W. J.: No, I couldn't stand for that; we shall have to go your way to work, but I must say it seems to me an infernal shame.

R. B.: That's how it may seem to you; but, at any rate, you will be safe enough on the alternative lines we have worked out, and you will probably do quite well.

SENESCHAL.

New readers will be interested to learn that this page is set aside each week for a causerie on competitions, old and new. The author, a well-known architect, who has been successful in a number of major competitions, writes under the nom de plume *of* SENESCHAL. *He will keep a watchful eye on current events in the competition world. His remarks will not be timed, as some so often are, to follow the announcement of the result.*—EDITOR A. J.

The Competition Calendar appears on page 225.

THE MODERN BATHROOM

BY WILLIAM W. WOOD

I—THE PLAN

We look to the famous tomb of Khnemhotep at Beni-Hasân for the prototype of the Greek Doric column, but whilst we can undoubtedly look to ancient Egypt, or even earlier, for the origin of bathing, I think I am right in saying it is in Greece that we first find baths. The palæstra probably gave the Romans the idea of building their thermæ. We, however, are more concerned at the moment with the private bath than with the communal bathing establishment. Englishmen, curiously enough, give themselves pride of place in matters of personal cleanliness, but although there were, indeed, "lavatories" in the twelfth-century Benedictine monastery, built in two stories, the upper connected to the monks' dormitory by a bridge, as described by Mr. Quennell; it was not until the thirteenth century that a Spanish woman, Eleanor of Castile, the wife of Edward I, introduced the bath into England. At this period of our history the modern cloakroom, taking the form of "washing and lavatory accommodation," was provided in a compartment entered from the drawing-room!

Whether the Moors were inspired by the example of the Spaniards, or whether the Spaniards learnt from the Moors, is a matter of no immediate interest, but in the first half of the fourteenth century the conquerors of Spain were building baths in their palaces, as is instanced by those near the Hall of the Two Sisters, at the Alhambra, which Fergusson describes as "beautiful in some respects, and appropriately adorned, but scarcely worthy of such a palace." In every town they held in Spain the Moors left traces of baths—vaulted buildings having octagonal domes supported on pillars.

Descending from a terrace of Buckingham House, built in 1705 on the site of the present Palace, which gave a view of "a meadow full of cattle" from a parterre, a small garden opened, with a fountain in the middle and greenhouses at the sides, one having "a convenient bathing apartment."

But in France, in the first half of the seventeenth century, we find Madame de Rambouillet realizing that a bathroom is more convenient near the bedrooms than in a separate building at the far end of the garden. We of this rather more enlightened era ought to be very thankful to this great lady, who thus, and in other ways, revolutionized house planning.

To be near the bedrooms is, indeed, the keynote of good bathroom planning, and ease of accessibility is equally important in small houses, where one bath must do duty for the occupants of more than one bedroom. Thirdly, the bathroom should be so placed in the scheme of things as to be capable of having an east window.

The door should open into the room so as to conceal the bather.

Probably the ideal situation for the bath itself is in the centre of the room, with steps leading down into it. This is, of course, expensive, and means that either the bathroom must be on the ground floor, or else the room immediately below it must have a partially false ceiling. The alternative is to have an ordinary cast-iron or fireclay bath in the centre of the room, preferably low, with the trap sunk in the floor.

In the smaller type of bathroom neither of these arrangements are feasible, and, consequently, what might be called the 10 ft. by 6 ft. bathroom has been evolved. A parallel-sided bath is used, and is placed across the 6 ft. end of the room, the exposed side being in marble or porcelain-enamelled iron. An ingenious idea is to form the bath end of the room into an alcove, with its own window and ceiling vent. These, helped by the pocket formed by the screen wall, remove the majority of the steam without it penetrating to the remainder of the apartment. The treatment, too, is capable of adding a certain dignity and "tidiness" to the bathroom.

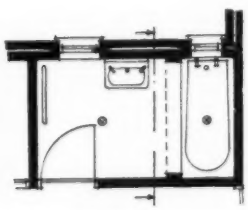
Sometimes the plan will not permit of this arrangement; in these cases the bath should have one side and an end to the wall, with an end and a side exposed.

When it is desired, or necessary, to have a w.c. in the bathing apartment, an interesting symmetrical scheme is obtained by placing the bath between tile partitions, with a recess for the w.c. and another for the shower. To preserve the symmetry the water may be discharged into the bath through a centrally-placed ornamental motif, the supplies of hot and cold water being controlled by a mixing valve.

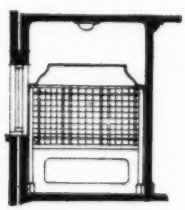
In hot countries the shower is much more popular than it is in these Isles, and the plan of the lavatory suite in a flat in which I once lived in Alexandria may prove of interest. Opening out of the bedroom corridor was a tiny lobby, with doors on three sides. The centre two lead into the w.c.s, whilst the bathrooms were either side. The floor of the shower bath sloped to a gully in the centre.

A lavatory basin is usually fixed about 2 ft. 8 in. above floor level, measured to the front lip of the basin. If there is to be a window behind it, this height, plus the difference in height between the front and back of the basin, should be borne in mind when determining the height of the window "board," and when working out the wall tiling.

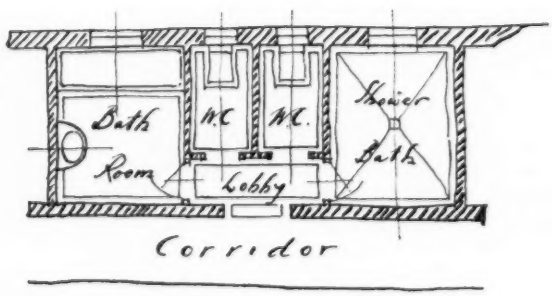
It is considered by some as extremely dangerous to put a window—unless high up in the wall—above the side of a bath, as there is always the possibility of slipping and putting one's hand through the glass. Wired glass may, however, be resorted to in cases where a window in this position is unavoidable.



PLAN.

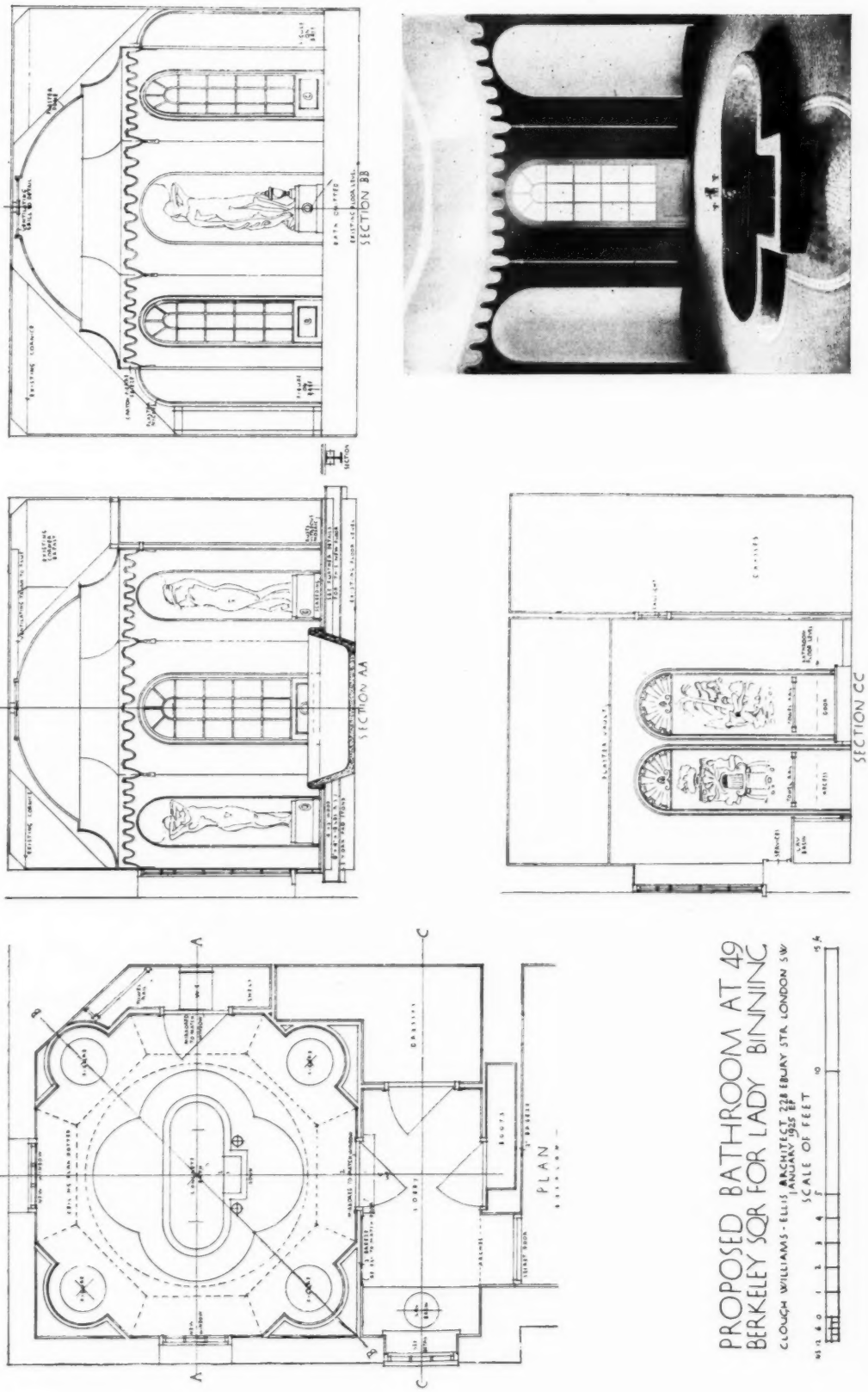


SECTION.



Above, plan and section of a bathroom in a house in Christchurch Road, Bournemouth, by Percy V. Burnett. Below, a lavatory suite in a flat in Alexandria.

(To be continued.)



A bathroom, by Clough Williams-Ellis.

CORRESPONDENCE

"THE SUPERFLUOUS ARCHITECT"

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—As Mr. Eric Gill's interesting and highly-provocative letter will in all probability stimulate some other controversialists to reply to his several points in the pages of the JOURNAL, I shall confine myself to expressing my sincere regret that the printed form of the leading article entitled "The Superfluous Architect" contained misquotations from his words. Mr. Gill has now, at any rate, supplied a valuable supplement to his original article, so that his argumentative position is very clearly set forth.

YOUR LEADER WRITER.

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Mr. Gill is a sculptor whose work I admire to distraction, and his long letter is one of those protests which I suppose all of us feel inclined to make sometime or another in our lives against modern conditions: why can't we live in the good old days? Ruskin and Morris protested similarly in their day, but were they not comparatively well off if they only had to complain of standard firegrates when we must put up with standard houses? Mr. Gill, I know, would like to wipe out steam, electricity, wireless, machinery, motor-cars, mass-production, overpopulation, cinemas, and artificial silk, and go back to those fondly-imagined good old days when everything was done for the love of the thing, when there were no servile workmen, and no architects, and when cathedrals sprang into the air under the dreamy ministrations of entranced peasants.

But I fear that building operations were never carried out in this way, and least of all those hard-headed solutions of mathematical problems, the medieval cathedrals. It is true there was no contractor in the modern sense; at the same time he was not due to any conditions created by the Renaissance,[1] but to those of the nineteenth century. But the architect was there, as much in the year 1200 as in the year 1700; and the workman was, in Ruskin's and Mr. Gill's sense, servile; for he had to do just what he was told (not only to carry out instructions, but follow precise, full-sized details). How many hundred yards of mouldings, all exactly similar, are there, for example, in Salisbury Cathedral—how many slavishly repeated enrichments? Has Mr. Gill ever thought of the comparison between the dog-tooth ornament and the dentil, or the ball-flower and the egg and tongue?

Mr. Gill frankly admires the plainest buildings. I do not blame him for that, but he must remember that the plainer the building the more "servile" (in his sense) the workman's job. But it is rather selfish to quarrel with and abuse other people for liking ornate buildings. The Gothic architect could use as many "cornices, pillars, pilasters—God knows what—to get his *effect*," as could the Renaissance or modern architect. Medieval "architectooralooral fal-lals" were equally reminiscent of, or suggested by, constructional requirements, but they were indulged in for the sake of effect, and governed by precisely the same conditions as to extent—namely, by the amount of money available.

I know it is dangerous to advise a modern sculptor or painter to give careful study to the past—they are so preoccupied with breaking with it—but I would beg Mr. Gill some day to devote a little time to the Middle Ages. I can quite understand from his own entirely different sculpture (the direct antithesis of the medieval craftsman's work) that he will find much in them that is repugnant to his idealizing mind: the intense practical logicality of the medievalist, his keen competitive spirit, his international outlook, his zest in richness and ornament for their own sake, his delight in subterfuge and tricks, his (what Ruskin would sillily call) dishonesty when he wished for an effect, his contempt for material as an influence on design. He will find that all these tendencies, many of them divergent, were directed into the creation of complete works of art by the controlling hand of the architect. Indeed, the architect is no mere product of the Renaissance or of modern methods of contracting: wherever and whenever fine and great building has been done, there has he been, though the modesty of our profession has led more frequently to anonymity than in the case of sculptors and painters.

Of course, it is quite true that many small domestic buildings have at all periods been erected without any architect's assistance; houses and cottages of the medieval period, of the transition during the sixteenth and seventeenth century (e.g. the Cotswold villages), of the eighteenth and early nineteenth centuries (the typical Georgian square house of every village and small town in the country), and, finally, the single houses and rows of the last fifty years. The building arrangements have probably been very similar; the workman living on or near the job, working on it personally with perhaps his sons and a few old hands—a family party.

"The old-fashioned builder" lives and still works to-day (I always employ him for preference for housing schemes). How, then, does Mr. Gill explain why the houses that the old-fashioned builder has put up under Mr. Gill's ideal social conditions (they take a pride in their work!) have been uniformly ugly whereas those of *all* the earlier periods were uniformly right and generally delightful? You can't blame the architect or contractor for this—the causes are more subtle; but they do not come into operation before the year 1800. So the simple solution recommended at the end of Mr. Gill's letter would neither produce pleasant cottages nor fine churches.

PATRICK ABERCROMBIE.

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—May I refer to just two of the many subjects so eloquently discussed in Mr. Eric Gill's article and letter, namely, the Forth Bridge and Waterloo Bridge?

Mr. Gill admires the Forth Bridge because, though the work of "slaves," in his opinion it "gives delight to the intelligence." He apparently believes the beauty of this structure to be due to its "truthfulness." It is noteworthy that his fellow medievalist, Mr. William Morris, was not equally impressed by this feat of engineering, for he wrote: "There never would be an architecture in iron, every improvement in machinery being uglier and uglier until they reach the supremest specimen of all ugliness—the Forth Bridge." But the really significant fact is that the engineers themselves regarded the bridge as a work of art. Sir Benjamin Baker, replying to William Morris in 1889, said: "It would be a ludicrous error to suppose that Sir John Fowler and I had neglected to consider the design from the artistic point of view. We did so from the first. An arched form is admittedly graceful, and we have approximated our bridge to that form as closely as we could without suggesting false construction and shams." That is to say, the engineers made the underside of the great cantilevers in the form of arches simply because they conceived this form to be elegant. A very slight acquaintance with the science of statics is sufficient to prove that the compressional members of the cantilevers could have assumed a hundred different shapes and yet have shown the requisite mechanical strength and economy in materials. The engineers had the grace to choose the one shape which "looked well," because it helped to combine each facing pair of cantilevers into a formal unity, and in so choosing they were concerned, not with mathematics, nor with mere building, but with "architecture."

Mr. Gill is frankly puzzled by Waterloo Bridge. He asks "Why is there what you call rustication to the masonry; why are there Doric columns; why are they in couples; why that balustrade to the footway?" The first question is surprising, because one would have supposed that Mr. Gill, with his love of craftsmanship and truthful construction, would have approved of the lines of rustication which indicate the positions of the voussoirs constituting the true arch and, moreover, tell us, even when we are some distance away, what massive blocks of stone were erected by human labour. In point of fact, while Messrs. Fowler and

[1] Has Mr. Gill ever studied the conditions under which an eighteenth-century country house was built?

Baker in the Forth Bridge adopted the arch form for æsthetic reasons, in Waterloo Bridge John Rennie, working in stone, was obliged to adopt it for purely constructional reasons.

The columns are in pairs, because a single column would have destroyed the unity of the pier by cutting it in two with a narrow line, and would also have failed to establish the proper formal connection between the balustrade and the pier. Walking across the bridge we are now aware that at intervals the balustrade breaks forward exactly over the piers and for a width corresponding to the width of the piers. Thus the design achieves an additional element of vitality, for the roadway itself is made conscious of both the number of arches and the intervals between them. The Doric Order was chosen because, being the most massive of the Orders, it best accorded with the masonry of the bridge itself. Why is the bridge decorated by an Order at all, or by a balustrade in the Classic style? Because by this means it declares itself to be of the same social family as are works of architecture in its vicinity, it pays deference to St. Paul's Cathedral, Somerset House, and innumerable other English buildings which show the continuity of our civilization with that of Greece and Rome. Mr. Gill prefers the Nile dam at Assouan. But the style of structure which is suitable for erection in the desert cannot with propriety be used in London town. Waterloo Bridge is a metropolitan bridge, and the English genius for urbanity is expressed therein. Mr. Gill has earnestly studied the social aspect of labour, but has he ever given a thought to the social aspect of buildings, to their mutual relationship, by which alone they may constitute a city? A. TRYSTAN EDWARDS.

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—Mr. Eric Gill's letter is obviously a *cri du cœur*. I believe that in reality he is quarrelling, not so much with the existence of the architect and contractor as we find them to-day, as with the epoch in which we live.

Obviously we must face facts as we find them—the introduction of machinery, the existence of organizations on a big scale and of specialists to cope with the increasing number of complex problems which affect building. It is of little use to regret the passing of the old system, of which the "old-fashioned builder" formed part and parcel. It is more constructive to use machinery intelligently than to regret its introduction.

Mr. Gill seems to regret not that architects should plan buildings, but that they should proceed to cope with their elevations, often with ill-success. The remedy is to improve the training of the architect, and at the same time educate the public.

A great many architects will join with Mr. Gill in regretting the lingering vogue for inexpressive and superfluous decorative "features." The use of these things is passing, but passing slowly, and the reason is that traditions are strong, and habit and sentiment are on the side of those familiar adornments, however illogical their presence.

Monsieur le Corbusier, in his book, *Vers une Architecture*, voices a dissatisfaction which appears to me to be very similar to that experienced by Mr. Gill. "Architecture is stifled by custom. . . . Styles are lies. . . . The plan proceeds from the interior to the exterior. The exterior is the result of the interior. Architectural elements are light and shade, solid and void. . . . Architects to-day no longer attain simplicity of form . . . . etc."

Architecture evolves slowly. A cornice is required to protect a wall, and the architect begins by borrowing his cornice detail from his classical vocabulary. And then, on a later building, evolves a cornice more closely related to his more modern expression. It is a slow and gradual process, and sculpture evolves in the same slow measure also.

The skill, the knowledge of materials, and what is still more important, the obvious pleasure in design which is revealed by much of the work at the Paris Exhibition, produced under modern conditions, shows a wealth of promise for the future of architecture and all the crafts connected with it. It is only a beginning, but it should help to relieve Mr. Eric Gill's pessimism.

HOWARD ROBERTSON, F.R.I.B.A., S.A.D.G.

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I have read with considerable interest the leading article in your issue for January 13, and Mr. Eric Gill's reply in your last issue.

Mr. Gill, no doubt, is quite right when he draws attention to the difference between the old "builder," who worked with his hands, and the modern "contractor," who works with his brains, and we have to recognize and abide by the difference.

It does not matter much what the exact term may be, whether "architect" or "builder"; our cathedrals, including Chartres, were erected from the designs and under the superintendence of real architects and builders, call them abbots, priors, or monks, if you like, but how grand and beautiful was the result!

Good architecture is as much the result of study and of cultivated taste as any other of the fine arts, and it could not be tolerated that an architect, who has the opportunity, should omit those features in design which the great masters employed to make architecture beautiful.

Mr. Gill's views on the design of Waterloo Bridge are *his* views, as they are on Liverpool Cathedral, but they don't happen to be mine, and so mote it be.

The real views of Mr. Gill on architecture can, I think, be gathered from the few words about the middle of his letter, wherein he commends the "younger men" for coming to see the "laudable plainness in some of the more 'recent work.'" After that enunciation, I am afraid I must say "good-bye" to Mr. Gill.

But is not the "architect" a man of taste, with a knowledge of construction, and an ability to look after the pocket of his employer? WILLIAM WOODWARD.

A CAPITALIST ON HOUSING

To the Editor of THE ARCHITECTS' JOURNAL.

SIR,—I read Sir Ernest Benn's article with some amazement. He says that "It is true that in recent years a few thousand cottages have been run up at public expense, and a few thousand people, who have been able to benefit from political influence, have got into houses which they would not otherwise have possessed." Up to October 1, 1925, 454,032 houses had been built under Government auspices since 1919. As there were then over 70,000 in course of completion the number, now, must be at least half a million. Perhaps the latter part of Sir Ernest's sentence is as wide of the mark as the first.

He then states that no one would become an engineer if engineers were not housed better than scavengers. If this means that such men would prefer to be scavengers it is a libel on youth generally, and engineers in particular.

Hitherto we have associated slums with closely built houses, in a bad state of repair, overcrowded with inmates. The Addison houses are decently spaced, carefully kept in repair, and the number of the occupants checked by regulations. Yet Sir Ernest Benn states, without giving any reason, that they will constitute slums in twenty-five years. The owners of property in Walthamstow (and presumably similar suburbs elsewhere) will be interested to read that if it had not been for "legislative interference and Socialist agitation" their houses would now be "unoccupied."

Sir E. Benn complacently suggests that there should have been no direct attempt to provide "Homes for Heroes," but that better class houses, "starting from the top," should have been built first, "gradually working downwards." In plain English this means that the ex-servicemen, who a few years since were often living in sheds, caravans, and even pigsties, should have been told that if they waited patiently long enough they and their families would be able to occupy rooms in houses which had been discarded because they were unhealthy, obsolete, or at least inconvenient. F. HERBERT MANSFORD.

[Owing to the pressure on our space we are reluctantly compelled to hold over several letters on *The Superfluous Architect* and other subjects until our next issue.—Ed., A. J.]

THE R.I.B.A. FINAL EXAMINATIONS

ALTERNATIVE PROBLEMS IN DESIGN

Following are the official instructions to candidates :

1. The drawings, which should preferably be on uniform sheets of paper of not less than imperial size, must be sent to the secretary of the Board of Architectural Education, Royal Institute of British Architects, 9 Conduit Street, W., on or before the dates specified below.

2. Each set of drawings must be signed by the author, and his full name and address, and the name of the school, if any, in which the drawings have been prepared, must be attached thereto.

3. All designs, whether done in a school or not, must be accompanied by a declaration from the student that the design is his own work and that the drawings have been wholly executed by him. In the preparation of the design the student may profit by advice.

4. Drawings for subjects (*a*) are to have the shadows projected at an angle of 45° in line, monochrome, or colour. Drawings in subjects (*b*) are to be finished as working drawings. Lettering on all drawings must be of a clear, scholarly, and unaffected character.

LXXXV

(*a*) A design for an auction room and auctioneer's offices, to be situated on the ground floor of a block of office buildings occupying a site 150 ft. deep with a frontage to a main street of 80 ft. The front part of the building, to depth of 40 ft., will be carried up an additional five stories and a separate entrance and staircase must be provided to the offices on the upper floors. A back street gives access to the rear of the site, and this frontage may be carried up an additional three stories to a depth of 30 ft.

The auction room is for the sale of furniture, books, and *objets d'art*, which are displayed prior to sale.

The accommodation should consist of entrance hall, clerks' office and general information outer office with counter and space for the display of posters, etc., large auction room with auctioneer's private room adjoining, and basement storage rooms beneath, staircase and goods lift to basement and staircase to gallery, if any, of auction room.

Drawings required: Ground-floor plan to $\frac{1}{8}$-in. scale; basement—storage plan to $\frac{1}{8}$-in. scale; at least two sections through auction room, one of which is to be taken through the entrance hall, to $\frac{1}{8}$-in. scale.

(*b*) Working drawings for subject No. lxxxiii(*a*), a private chapel.

The design for a private chapel may, after it has been approved, be re-submitted with the addition of $\frac{1}{2}$-in. detail of the whole of the west front and a portion of the connecting colonnade. The drawings to show the vertical section through the wall and plans of the openings at various levels.

LXXXVI

(*a*) A design for a shop front. The shop front is to be in an important street and suitable for a firm of high-class jewellers. The frontage is 24 ft. between centres of 18-in. party walls. The building over will consist of offices five stories high, one to be in the roof. Access to these offices need not be provided as part of the scheme.

Drawings required : $\frac{1}{8}$-in. scale elevation showing front of building; $\frac{1}{2}$-in. plan, section and elevation of the shop front; detail of portion of ornament to one-eighth full size.

(*b*) Working drawings for subject No. lxxxiv (*a*), a garage.

The design for a garage may, after it has been approved, be re-submitted with the addition of complete $\frac{1}{8}$-in. scale working drawings showing all necessary details, including drainage, of the portion of the garage containing the chauffeurs' flats; $\frac{1}{2}$-in. detail of the same portion.

LXXXVII

(*a*) A design for a grand staircase of a city hall. The staircase is reached from a spacious entrance hall and leads to a suite of reception rooms which run along the front of the building over the entrance. The first floor is 20 ft. above the ground floor, which is itself 4 ft. above the pavement level of the street. The design is to show the entrance hall and the staircase together with the ante-room and principal reception room at the top of the staircase. No dimensions are prescribed for the space available for the staircase. It is to be appropriate to the dignity of a large city hall of an important city.

Drawings required: $\frac{1}{16}$-in. plan of ground floor to show entrance hall and staircase; $\frac{1}{16}$-in. plan of first floor to show ante-room, and part of reception suite; $\frac{1}{2}$-in. scale section on main axis.

(*b*) Working drawings for subject No. lxxxv(*a*), an auction room and auctioneer's office.

The design for an auction room and auctioneer's office may, after it has been approved, be re-submitted with the addition of two complete $\frac{1}{2}$-in. scale sections through the auction room, sufficient to show construction and materials.

LXXXVIII

(*a*) A design for a suburban electric railway station. The station will be built parallel to a main road, from which it is set back 50 ft. There are two lines in a cutting 14 ft. below the level of the roadway. Entrance and booking hall of not less than 2,000 ft. super., containing island booking offices and six small shops or kiosks. A left-luggage office and cloak-room, small office for travelling superintendent, mess room for porters and booking clerks with kitchen, store, signalling room, and lavatory accommodation for men and women. This accommodation will be on the up side, the down side having a covered platform only, to which access is gained by a bridge and staircase. Ample provision should be made for advertising, and this should be considered in conjunction with the scheme of decoration. Attention should also be paid to the following essential conditions : Centralization of control; dispatch in dealing with large crowds; cleanliness and durability of materials.

Drawings required : $\frac{1}{8}$-in. scale plan, cross section, and front elevation; $\frac{1}{2}$-in. detail of a portion of main front.

(*b*) Working drawings for subject No. lxxxvi(*a*), a shop front. The design for a shop front may, after it has been approved, be re-submitted with the addition of complete $\frac{1}{2}$-in. details of the elevation, section, and plan of shop front, to include also bulkhead construction and vaults under pavement, and one bay of reinforced concrete flooring to shop.

LXXXIX

(*a*) A small housing scheme. In a Suffolk village of about 1,000 inhabitants there is need for thirty new cottages; half are for agricultural labourers, the other half for village artisans and labourers. The cottages are to be erected under a housing scheme with the aid of a subsidy under the 1924 Housing Act. The village street runs east and west and is fairly level. On the north side of this street at the western end of the village is a rectangular field sloping upward from the road at a grade of about one in fifteen. There is a frontage of about 450 ft. to the road which is straight. The field contains 8 acres, the whole of which is available for the houses, gardens, etc. The north side of the field is bounded by a wood and common, to which access from the main road must be given for pedestrians and for occasional use by carts. On the south side of the road, on the central axis of the field, is the entrance to a large country house and park.

Drawings required : A lay-out plan of the whole to the scale of $\frac{1}{500}$; detail lay-out plan and plans of the houses fronting the main road with elevation of the whole of that frontage to a scale of 16 ft. to 1 in.; complete plans, sections, and elevations of one of the blocks of cottages to a scale of 8 ft. to 1 in.

All the dwellings to be of such sizes, accommodation, and economical design that they may be eligible for the Government subsidy. Two small village shops must be incorporated in the scheme.

(*b*) Working drawings for subject No. lxxxvii, a grand staircase of a city hall. The design for a grand staircase of a city

hall may, after it has been approved, be re-submitted with the addition of ½-in. scale details of section and part plan sufficient to show materials and construction.

XC

(*a*) A design for a concert hall. The concert hall is to be erected in an inland "spa," such as Bath or Buxton, a town which would have sufficient visitors to justify the provision of an attractive site for the building. The site is rectangular in shape with a frontage of 250 ft. to a main road running east and west, and 300 ft. to a side road running north and south. The south side overlooks a valley and river. The site is level for 200 ft., then falls steeply to the valley. The portion not covered by the building is to be laid out as lawns, gardens, etc.

Accommodation required: Concert hall to seat 750 persons; space for an orchestra of eighty performers; a small organ; a green-room for artists; dressing-rooms for musicians and soloists of both sexes; lavatories for both sexes (artists); large entrance hall with box or ticket office; cloak-rooms, lavatories for both sexes; a refreshment room to seat 250 persons, with kitchen accommodation and the necessary services.

Drawings required: To $\frac{1}{16}$ scale, plans, two elevations, and one section.

Note.—Students are to pay special attention to acoustics and to avoid circular or elliptical plans for the concert hall.

(*b*) Working drawings for subject No. lxxxviii, a suburban electric railway station.

The design for the railway station may, after it has been approved, be re-submitted with the addition of complete ½-in. details of booking hall, including plan.

Dates for Submission of Designs in 1926.

Subject lxxxv	27 Feb.	Subject lxxxviii	31 Aug.
,, lxxxvi	30 Apr.	,, lxxxix	30 Oct.
,, lxxxvii	30 June	,, xc	31 Dec.

COMPETITION CALENDAR.

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

Saturday, February 13. Clock tower with drinking fountains to be erected in the new park, Blackpool, as a suitable memorial to the late Dr. William Henry Cocker, J.P., first Mayor and Honorary Freeman of the Borough. Assessor, Mr. E. Bertram Kirby, O.B.E., F.R.I.B.A., President of the Liverpool Architectural Society. Particulars from Mr. D. L. Harbottle, Town Clerk. Deposit £1 1s.

Wednesday, March 31. New offices for the West Bromwich Permanent Benefit Building Society. Open to practitioners within fifteen miles of Birmingham. Assessor, Mr. W. A. Harvey, F.R.I.B.A. Premiums, £100, £75, and £50. Particulars from Mr. J. Garbett, Secretary, 301 High Street, West Bromwich. Deposit £2 2s.

Thursday, April 1. Public Hall, Topsham. Premiums £50, £40, and £30 respectively. Assessor, Mr. Walter Cave, F.R.I.B.A.

Friday, April 30. Australian National War Memorial, Villers Bretonneux, France. Open to Australians. Particulars from High Commissioner's Office, Australia House, Strand. Deposit £2 2s.

No date. Conference Hall, for League of Nations, Geneva. 100,000 Swiss francs to be divided among architects submitting best plans.

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.

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

No date. Café in the Mooragh Park, for the Ramsey Town Commissioners. Particulars from Mr. J. Bell, clerk, Town Hall, Ramsey.

No date. Open Air Bath, Morecambe. Premiums, £100, £50, and £25. Particulars from Town Clerk.

ANNOUNCEMENTS

Messrs. John Leaning and Sons, of 28 John Street, Bedford Row, W.C.1, chartered surveyors, have taken Mr. Stanley Steer into partnership. The name of the firm will remain unchanged.

Mr. W. E. Trent, F.S.I., of 6 Broad Street Place, E.C.2, has relinquished his practice on taking up the appointment of architect and works superintendent to the Provincial Cinematograph Theatres, Ltd., New Gallery House, 123 Regent Street, W.1. In future the practice will be carried on by his son, Mr. W. Sydney Trent, at the same address.

Members or students of the R.I.B.A. holding a degree or diploma in architecture which carries with it the privilege of exemption, on the usual conditions, from the R.I.B.A. final examination, may now have that distinction indicated against their names in the R.I.B.A. Kalendar. Persons who desire such distinction to be recorded in the next issue of the Kalendar should notify the secretary, R.I.B.A., as soon as possible.

TRADE NOTES

A brief *résumé* of about three hundred kitchen contracts carried out in recent years by Messrs. Benham and Sons, Ltd., has been published under the title of "Some Notable Kitchens." The contracts comprise kitchens for every kind of building, from private houses, hotels, and hospitals, to public and commercial buildings, Government establishments, and even battleships. Illustrations are given of the many well-known buildings in which the kitchens are installed, and the long list of clients for whom the work was executed include H.M. the King, the Duke of Connaught, and many distinguished peers and architects. The booklet can be obtained from the head offices of the company, 64-66 Wigmore Street, London, W.1.

A new booklet entitled *Notes on the Use of Reinforced Concrete* has been issued by the British Reinforced Concrete Engineering Co., Ltd. Under subsoil it is pointed out that the heaviest wheel load can, by means of a reinforced concrete foundation, be spread over a sufficiently large area of ground to give a unit pressure no greater than the ground can carry without permanent depression. This, it is stated, is true of soft ground that will carry no more than half a ton per square foot, and even of clay, which is, perhaps, the most troublesome soil encountered by the road-maker. Useful hints are also included on the selection of materials for, and the mixing of, concrete; and on the arrangement and use of reinforcement, especially the B.R.C. method, in connection with roads. The booklet can be obtained from the head office of the company, 1 Dickenson Street, Manchester.

The Ratner Safe Company, Ltd., have just issued a new catalogue of safes, strong rooms, doors and fittings, ventilators, and safe deposits and fittings, etc. The catalogue opens with a brief history of the foundation and growth of the firm during their thirty-five years' work, and a mention is made of a few of the largest contracts carried out by the company at home and abroad. There is also a formidable list of inventions and patents for which the firm have been responsible, showing at a glance the efforts they have made to bring their specialities to the highest state of perfection. It is, in fact, the proud boast of the firm that "no Ratner improved thief-resisting safe has ever been opened by burglars, and no Ratner improved fire-resisting safe has ever had its contents destroyed by fire or fall." The catalogue is profusely illustrated with, and contains constructional and other particulars of burglar and fire-resisting specialities, from a perusal of which it should be a simple matter to select one or more eminently suitable for any particular purpose or building, whether it be a bank, government or office building, or a private house. A copy of the catalogue can be obtained from the firm's City office and showrooms, 29 Cannon Street, London, E.C.4.

THE WEEK'S BUILDING NEWS

Waterloo Hospital Extension Scheme.

A scheme is proposed for an extension of the Waterloo Hospital at a cost of £10,000.

A New Cinema at Victoria.

One of the largest cinema theatres in London is to be built facing Victoria Station on a site of nearly half an acre.

Housing at Burnham-on-Sea.

A scheme to erect twenty-two parlour-type houses has been approved by the Burnham-on-Sea Urban District Council.

A London Builder's Estate.

Mr. John Garrett, of Streatham Lodge, Balham Hill, S.W., builder, left £39,737, with net personalty £21,852.

Swimming Baths for Scunthorpe.

The Scunthorpe Urban District Council have approved plans for swimming baths. The cost is estimated at £17,812.

A New Cathedral for Guildford.

Proposals are being made at Guildford in connection with the building of a cathedral in Stoke Park.

A School for Boroughbridge.

A new school with accommodation for 270 children is to be erected at Boroughbridge.

A New School for Islington.

It is estimated that the cost of a new secondary school to provide accommodation for 450 girls at Islington will be £46,704.

Steel Houses in Scotland.

The Greenock Corporation have agreed to offer sites to the Scottish National Housing Company for the erection of 130 of the Government's 2,000 steel houses.

A New Bridge for Hull.

The ratepayers of Hull have decided to adopt a scheme estimated to cost about £300,000 for the erection of a new bridge over the river.

A New School for Hammersmith.

A scheme has been recommended for providing at Hammersmith a school of arts and crafts and a building trade school at a cost of £58,000.

A New Bank at Bradford.

The Midland Bank, Ltd., have agreed with the Bradford Corporation to have new banking premises erected in St. James's Market.

A Big Newcastle Scheme.

A scheme is under consideration at Newcastle for the erection of over 200 flats, a number of shops, a large dance hall, and a cinema, at an estimated cost of £250,000.

Mexborough Grammar School Extension.

The governors of the Mexborough Grammar School have approved plans for the extension of the existing school buildings at an estimated cost of £24,000.

Housing at Torquay.

The Torquay Town Council have decided to buy 36 acres of land at Hele, St. Marychurch, upon which to erect 181 houses for the working classes. The cost of the scheme will be £116,075.

Progress of the London County Council Hall.

The construction of the raft foundation of the further wing of the L.C.C. Hall has been completed, but a decision has not yet been made to proceed with the superstructure.

Cost of Building at Brighton.

The constructional cost of the buildings for which plans were passed by the Brighton and Hove Councils last year approaches £1,000,000. The figures register an increase of £300,000 on those for 1924.

Electricity Supply at Worthing.

The Electricity Commissioners have decided to empower the Worthing Corporation to extend their electricity scheme so as to supply a large area surrounding the town. An expenditure of £25,000 will be involved.

New Churches in the Southwark Diocese.

The Bishop of Southwark has appealed for £100,000 to enable him to make grants towards the building of new churches in the satellite towns which are growing up in the diocese. So far £26,000 has been promised.

A Suggested New Tube Scheme.

A scheme is under consideration for the building of a new circular tube railway from Kennington or the "Elephant and Castle" to run through Brixton, Streatham, Norbury, Croydon, South Norwood, Penge, Crystal Palace, and Camberwell.

Ownership Housing Scheme at Dover.

The Dover Corporation Housing Committee have approved a scheme by which tenants of council houses may become their own landlords by payments, over a period of twenty years, of 2s. or less above the weekly rent.

Cheap Rental Houses for Honiton.

The Honiton Rural District Council are engaged on a scheme for the building of fifty-two houses. These are being built at a total average cost of £402 10s. per house. The council propose to let the houses at 4s. 6d. each per week.

Public Baths for Elgin.

The Elgin Town Council have decided to erect the new public baths on a site at the North Lodge. For the purpose of erecting baths, a legacy of £6,000 was left to the Council by the late Mr. John Munro, The Knoll, some twenty years ago.

Carlisle Housing Progress.

The Housing Committee of the Carlisle City Council have decided to ask the Ministry of Health to sanction another hundred three-bedroomed houses of the "parlour type," on the Longsowerby estate.

Housing at Dudley.

The Dudley Corporation Housing Committee recommend that the lay-out plans for the erection of twenty and forty-eight houses on the Belper Row and Church Road sites respectively, be approved, and that tenders be obtained for the erection of the houses.

New Glasgow Housing Project.

The Glasgow Corporation Housing Committee have authorized the director of housing to prepare plans for the erection of 1,000 houses to be let at 12s. per week. The committee have also resolved to pay a series of visits to unoccupied areas throughout the city to ascertain where sites can be acquired for their erection.

New Schools in Yorkshire.

The Education Committee of the West Riding County Council have approved plans for the erection of new school buildings at Thorne Grammar School at an estimated cost of £40,000, and a new secondary school at Wath-on-Dearne, at a cost of £45,700. A site comprising twenty acres has also been acquired at Rothwell, near Leeds, upon which the committee propose to erect a new secondary school.

The Restoration of a Plymouth Building.

One of Plymouth's oldest buildings, 33 and 33a Looe Street, which forms a link with the days of Drake, has been restored under the supervision of Mr. A. S. Parker, architect. The house timbers, of black English-grown oak, were found in excellent condition. The cost of the restoration was defrayed by the owners, the Society for the Protection of Ancient Buildings, the Devon and Exeter Architectural Society, the Plymouth Mercantile Association, and by Lord and Lady Astor.

New Art Gallery for Vancouver.

From time to time schemes have been prepared for the erection of a new city hall at Vancouver, but nothing has been done except to reserve a site which it is eventually hoped to develop as a civic centre. A proposal is now on foot, however, to erect an art gallery as part of the civic centre, and a number of local citizens have agreed to donate a sum of 100,000 dollars for the purchase of pictures and statuary provided the City Council will undertake the erection of a suitable gallery in which to house these works. The Vancouver City Council are being urged to prepare immediately a by-law for submission to the civic electorate to obtain the necessary authority for the erection of the art gallery, the cost of which it is estimated will be approximately 80,000 dollars.

READERS' QUERIES

Use of Land without Permission.

"Myop. England" writes: "For some years the tenants of cottages have used the land outside their garden walls for the drying of clothes. They have fixed posts on the land and allowed rubbish to accumulate there. Can they claim any rights through their using this land without permission? I desire in the near future to lay out tennis courts."

The facts are not quite sufficiently stated to enable us to positively answer the question. It is necessary that we should know definitely how long the occupiers have used the land by fixing the posts for drying linen. But, upon the assumption that the posts were not fixed, and the land was not used as stated, many years ago, the cottagers are trespassers, and the owner is entitled to sue for damages and require removal of the posts. A solicitor must be consulted and instructed to obtain execution of an agreement for the tenant to pay a small rent, and to undertake to remove the posts and clear the land when the owner's circumstances require that. S. J. S.

Reinforced Concrete Retaining Wall.

"R" writes: "In the article on 'Reinforced Concrete Retaining Walls,' by Professor Henry Adams, published in your issue for August 26, the mean centre of gravity is stated as being 2·5625 ft. from face of wall. May I ask how this is obtained?"

The method of finding the mean centre of gravity was not given in the article as anyone who had worked through the previous articles should have been able to find this for himself. The details are as follows:—

Mean centre of gravity of loads—

The loads are:

(1) 1·25 tons=2,520 lb. from foundation of wall of building.

(2) Weight of earth enclosed in area considered.

$$\text{Wt.}=\frac{4'\cdot0\frac{1}{2}''+3'\cdot4''}{2}\times 13'\cdot5''\times 100$$

$$=7'375\times 13'417\times 50=4,947'5, \text{ say, } 4,950 \text{ lb.}$$

(3) Weight of retaining wall=2,140 lb.

The leverage of the respective loads is—

(1) 3′ 11¼″ from face of wall.

(2) 2′ 6½″ ,, ,,

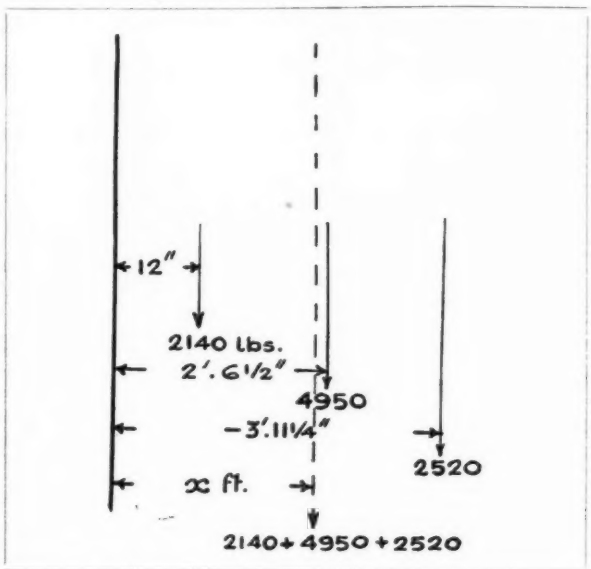
(3) 12″ ,, ,, (found graphically by cutting out a model section and suspending from two points alternately).

The case will then stand as shown in the accompanying sketch.

Then:

$$1\times 2140+2'541\times 4950+3'9375\times 2520=x\times(2140+4950+2520)$$

$$\text{or } x=\frac{2140+12,577'95+9922'5}{9610}=\frac{24,640'45}{9610}$$



=2·564 ft., which is practically the same as the figure first given, viz. 2·5625, the difference arising from the calculation having been made entirely afresh. HENRY ADAMS.

Inserting a Dampcourse in Old Walls.

"Aporia" writes: "I wish to restore an old Tudor manor house which has been standing with the roof off, and exposed to the weather, for twenty years. I am told there is no dampcourse in the walls. Is there a more economical method of inserting a dampcourse than by the undersetting method? Is it possible to put an impervious lining on the inside of the walls, and so avert the damp coming into the rooms? I am anxious to retain the old walls if possible without interference."

The district surveyor probably has the right to decide whether he can pass the old manor house as a habitable building with or without a dampcourse to its walls, and it will be wise to consult him on that point. If the walls are at all well built and worthy to be trusted, the process of inserting a horizontal dampcourse is not particularly difficult. The work is done in short lengths by cutting a joint out right through the wall, threading in an approved dampcourse, and then tamping in a strong cement mortar to fill any remaining cavities. Sometimes a whole course of bricks is removed and re-set in order to give a little more play for the insertion of the dampcourse, but the sawing-out process is quite effective provided that a suitable flexible dampcourse is used. Sheets of lead or sheet copper with folded joints, which can be pushed into the open joint in succession, could be admirably adapted for the purpose. To make the inner face of a damp wall impervious to moisture really means building an independent inner lining with a cavity between the old damp outer wall and the new inner face. This will make a good job at a certain sacrifice of floor space, but it is very doubtful if it will be more economical than inserting proper dampcourses in the walls. The lining of a damp old wall with "waterproofed" slabs is generally only partially successful if these slabs are placed in contact with the old work, owing to the fact that a slight continuous sweating of moisture takes place through the pores of the material. Asphalt and hygeian rock composition require an inner lining of wall to keep them effectively in position, and as a single air bubble may occasion a troublesome leakage it is essential that they should be applied by skilled workmen under competent supervision. If the walls have become badly burst with frost during their twenty years' exposure, it may be a good policy to strengthen them with an inner lining of hygeian rock to bind the old and the new work together. On the other hand, if the exterior surfaces of the old walls present features of historic interest, any repair should be confined to the interior of the walls, where it may take the form of cement grout, amplified by reinforcement calculated to take up any tensile stresses due to bulging or bursting. In this case the damp-proofing operations are attended to at the tops and the bottoms of the walls by means of dampcourses inserted under the parapets and above the foundations. W. H.

Building Defects after Final Certificate.

"Architects" write: "A building was recently erected by contract, the usual R.I.B.A. form being employed. The final certificate was given about a year ago. Before the maintenance period expired the contractor's attention was called to dampness in the ceilings of two ground floor bay windows, immediately under the steel joists carrying the external 11 in. hollow-walls over. He reported that the defect had been rectified, and the retention money was paid. Recently our attention was again called to the fact that dampness is always present in the ceilings as already described, and from an examination of the wall we think it most probable that the lead specified over the steel lintels, so necessary in a cavity wall, has been omitted. Can we, so long after the issue of the final certificate, insist upon the contractor inserting the lead, if it is found to be absent?"

Unless a charge of fraudulent concealment or other unfair dealing can be made against the contractor and proved, the final certificate is conclusive and the matter cannot now be reopened.

S. J. S.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A_1	Abergavenny	Do.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W.Counties	1 8	1 3½
A_3	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W.Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C_1	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W.Counties	1 8	1 3½
B_3	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W.Counties	1 8	1 3½
A_2	Atherstone	Mid. Counties	1 6½	1 2
B_3	Aylesbury ..	S. Counties	1 4½	1 0½
B	BATH ..	S.W.Counties	1 6	1 1½
B_3	Banbury ..	S. Counties	1 4½	1 0½
B_2	Bangor ..	N.W Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B_1	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
B_3	Basingstoke	S.W. Counties	1 4½	1 0½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A_2	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A_3	Bewdley ..	Mid.Counties	1 6½	1 2
B_3	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
B_3	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W.Counties	1 8	1 3½
A_3	Boston ..	Mid. Counties	1 6½	1 2
B_1	Bournemouth	S. Counties	1 6	1 1§
A	Bradford ..	Yorkshire	1 8	1 3½
A_3	Brentwood	E. Counties	1 6½	1 2
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B_2	Bridgwater	S.W. Counties	1 5	1 1
A_2	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse ..	Yorkshire	1 8	1 3½
B_1	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B_3	Brixham ..	S.W. Counties	1 4½	1 0½
A_3	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	Bursiem ..	Mid. Counties	1 8	1 3½
A_2	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W.Counties	1 8	1 3½
A_3	Buxton ..	N.W.Counties	1 6½	1 2
B	CAMBRIDGE	E. Counties	1 6	1 1½
B_3	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
B_2	Carnarvon ..	N.W.Counties	1 5	1 1
A_1	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford ..	Yorkshire	1 8	1 3½
B_1	Chatham ..	S. Counties	1 5½	1 1½
B_1	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
B_3	Chichester..	S. Counties	1 4½	1 0½
A	Chorley ..	N.W.Counties	1 8	1 3½
B_2	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
B_1	Colchester..	E. Counties	1 5½	1 1½
A	Colne ..	N.W.Counties	1 8	1 3½
B_1	Colwyn Bay	N.W.Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B_1	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A_3	Crewe ..	N.W.Counties	1 6½	1 2
A_3	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W.Counties	1 8	1 3½
B_3	Deal ..	S. Counties	1 4½	1 0½
B_1	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
C_1	Dorchester	S.W.Counties	1 4	1 0½
A_3	Driffield ..	Yorks	1 6½	1 2
A_3	Droitwich ..	Mid. Counties	1 6½	1 2
A_2	Dudley ..	Mid. Counties	1 7	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B_1	EAST-BOURNE	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 & Mon. Valley	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	§1 7	1 2½
B_2	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A_3	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W.Counties	1 8	1 3½
B_3	Folkestone	S. Counties	1 4½	1 0½
A	Frodsham ..	N.W.Counties	1 8	1 3½
B_3	Frome ..	S.W.Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B_1	Gillingham	S. Counties	1 5½	1 1½
B	Gloucester..	S.W.Counties	1 6	1 1½
A_2	Goole ..	Yorkshire	1 7	1 2½
B_1	Gosport ..	S. Counties	1 5½	1 1½
A_3	Grantham..	Mid. Counties	1 6½	1 2
A_2	Gravesend..	S. Counties	1 7	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B_1	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX..	Yorkshire	1 8	1 3½
A_1	Hanley ..	Mid. Counties	1 7½	1 2½
A	Harrogate ..	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B_2	Harwich ..	E. Counties	1 5	1 1
B_3	Hastings ..	S. Counties	1 4½	1 0½
B_1	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S.W.Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A_1	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
C_1	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
B_2	Kendal ..	N.W. Counties	1 5	1 1
B_2	Keswick ..	N.W.Counties	1 5	1 1
B	Kettering ..	Mid. Counties	1 6	1 1½
A_3	Kiddermin-ster	Mid. Counties	1 6½	1 2
B_2	King's Lynn	E. Counties	1 5	1 1
A_1	LANCASTER	N.W.Counties	1 7½	1 2
A_3	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
B_3	Lewes ..	S. Counties	1 4½	1 0½
A_3	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	Lough-borough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A_1	MACCLES-FIELD	N.W.Counties	1 7½	1 2½
B	Maidstone ..	S. Counties	1 5½	1 1½
A_3	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W.Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B_3	Margate ..	S. Counties	1 4½	1 0½
A_3	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middles-brough	N.E. Coast	1 8	1 3½
A_3	Middlewich	N.W. Counties	1 6½	1 2
A	Monmouth	S. Wales & M.	1 8	1 3½
	S. and E. Glamorganshire			
A_1	Morecambe	N.W. Counties	1 7½	1 2½
A_3	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
A_2	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
A_3	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
A_3	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	QUEENS-FERRY	N.W.Counties	1 8	1 3½
B	READING..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A_3	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A_3	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W.Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A_1	Ruabon ..	N.W.Counties	1 7½	1 2½
A_2	Rugby ..	Mid. Counties	1 8	1 3½
A_3	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A_3	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens..	N.W.Counties	1 8	1 3½
A_1	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
A_3	Shrewsbury	Mid. Counties	1 6½	1 2
A_2	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A_2	Solihull ..	Mid. Counties	1 7	1 2½
B	South'pton	E. Counties	1 6	1 1½
B_1	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
A_2	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
A_1	TAMWORTH	N.W.Counties	1 7½	1 2½
B_1	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
A_2	Torquay ..	S.W.Counties	1 7	1 2½
B_1	Tunbridge Wells	S. Counties	1 4½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKE-FIELD	Yorkshire	1 8	1 3½
A_2	Walsall ..	Mid. Counties	1 7	1 2½
A	Warrington	N.W.Counties	1 8	1 3½
A_3	Warwick ..	Mid. Counties	1 6½	1 2
B	Welling-borough	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
A_3	Whitby ..	Yorkshire	1 6½	1 2
A	Widnes ..	N.W.Counties	1 8	1 3½
A	Wigan ..	N.W.Counties	1 8	1 3½
B_2	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolver-hampton	Mid. Counties	1 8	1 3½
A_3	Worcester ..	Mid. Counties	1 6½	1 2
A	Worksop ..	Yorkshire	1 8	1 3½
A_1	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B_1	YARMOUTH	E. Counties	1 5½	1 1½
B_2	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3½

* Plasterers, 1s. 9d.

† Carpenters and Painters, 1s. 8½d.

‡ Plumbers, 1s. 9d.

§ Painters, 1s. 6d.

‖ Carpenters and Plasterers, 1s. 8½d.

¶ Painters, 1s. 7d.

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.*

	£	s.	d.
Broken brick or stone, 2 in., per yd.	0	10	0
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.

	£	s.	d.
Portland cement, per ton	2	19	0
Lias lime, per ton	2	5	0

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

	£	s.	d.		£	s.	d.
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.

	£	s.	d.
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.

	£	s.	d.
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.

	£	s.	d.
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.*

	£	s.	d.
Stoneware pipes, tested quality, 4 in., per yd.	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	7	6
Gaskin, per lb.	0	0	5½

	£	s.	d.
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.*

	£	s.	d.
London stocks, per M.	£4	7	0
Flettons, per M.	3	6	0
Staffordshire blue, per M.	9	12	0
Firebricks, 2½ in., per M.	11	3	0
Glazed salt, white, and ivory stretchers, per M.	22	0	0
DO. *headers, per M.*	21	10	0
Colours, extra, per M.	£5	10	0
Seconds, less, per M.	1	0	0

Cement and sand, see "Excavator" above.

	£	s.	d.
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

	£	s.	d.
BRICKWORK in stone lime mortar, Flettons or equal, per rod	35	0	0
DO. in cement do., per rod	37	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.

	£	s.	d.
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, ¾ 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	6
DO. DO. 3 in.	0	7	0

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 enquiry.

MASON

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

	£	s.	d.
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.

	£	s.	d.
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	1	6

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

	£	s.	d.
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.

	£	s.	d.
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.

	£	s.	d.
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.*

	£	s.	d.
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

	£	s.	d.
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.

	£	s.	d.
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):

	£	s.	d.
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	8	0
DO. *T. and G., 1 in., per sq.*	1	8	0
Planed Boards, 1 in.×11 in., per std.	36	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	11	0
MOULDED CASEMENTS, 1¾ 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., 1½ in., per ft. sup.	0	3	0
DO., DO., moulded b.s., 2 in., per ft. sup.	0	3	9
DO., DO., DO., 1½ in., per ft. sup.	0	3	3
If in oak multiply 6 times.			
If in mahogany multiply 6 times.			
If in teak multiply 7 times.			
WOOD BLOCK FLOORING, standard blocks, laid in mastic herringbone:			
Deal, 1 in., per yd. sup., average	0	11	0
DO., 1½ in., per yd., sup., average	0	13	3
DO., DO., 1½ in. maple blocks	0	16	0
STAIRCASE WORK, DEAL:			
1 in. riser, 1½ in. tread, fixed, per ft. sup.	0	3	9
2 in. deal strings, fixed, per ft. sup.	0	4	0

PLUMBER

PLUMBER, 1*s.* 3½*d. per hour;* MATE OR LABOURER, 1*s.* 4½*d. per hour.*

Lead, milled sheet, per cwt.	£2	7	6
DO. *drawn pipes, per cwt.*	2	8	0
DO. *soil pipe, per cwt.*	2	11	0
DO. *scrap, per cwt.*	1	4	0
Copper, sheet, per lb.	0	1	5
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	7
Cast-iron pipes, etc.:			
L.C.C. soil, 3 in., per yd.	0	4	2
DO. 4 *in., per yd.*	0	5	1
R.W.P., 2½ in., per yd.	0	1	10
DO. 3 *in., per yd.*	0	2	2
DO. 4 *in., per yd.*	0	3	0
Gutter, 4 in. H.R., per yd.	0	1	10
DO. 4 *in. O.G., per yd.*	0	2	0
MILLED LEAD and labour in gutters, flashings, etc.	3	16	0
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 OF 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	3
DO. 3 in., per ft.	0	2	8
DO. 4 in., per ft.	0	3	0
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, 1*s.* 9½*d. per hour;* LABOURER, 1*s.* 4½*d. 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 or Sand, 1 to 3, for tiling or woodblock, ¾ 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. and up	1	13	0
FIBROUS PLASTER SLABS, per yd.	0	1	11

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

Gloss: 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 ¼ in., up to 2 ft. sup.	0	2	5
DO. 3*ft. 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, $\frac{3}{16}$ 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 1*s.* 5*d.* to 2*s.* 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, 6½*d.* to 8*d.* per ft., according to size.			

DECORATOR

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

Genuine white lead, per cwt.	£3	5	0
Linseed oil, raw, per gall.	0	4	2
DO., *boiled, per gall.*	0	4	5
Turpentine, per gall.	0	7	2
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	4	0	2
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* 1*s.* 9½*d. per hour;* MATE, *do.* 1*s.* 4*d. per hour;* ERECTOR, 1*s.* 9½*d. per hour;* FITTER, 1*s.* 9½*d. per hour;* LABOURER, 1*s.* 4*d. per hour.*

Mild steel in British standard sections, per ton	£11	0	0
Sheet steel:			
Flat sheets, black, per ton	18	0	0
DO., *Galvd., per ton*	27	0	0
Corrugated sheets, galvd., per ton	26	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	27	0	0
DO., in small sections as reinforcement, per ton	17	0	0
DO., in compounds, per ton	18	0	0
DO., in bar or rod reinforcement, per ton	20	10	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, $\frac{3}{32}$ in., grey flat, per yd. sup.	0	2	5
DO., *corrugated, per yd. sup.*	0	3	6
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	4
DO., corrugated, per yd. sup.	0	5	6
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, $\frac{5}{32}$ 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	3½
⅜ m/m figured ash, per ft. sup.	0	0	5
4½ m/m 3rd quality, composite birch, per ft. sup.	0	0	1½