THE ARCHITECTS' JOURNAL.

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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.

WEDNESDAY, SEPTEMBER 7, 1927. NUMBER 1703: VOLUME 66

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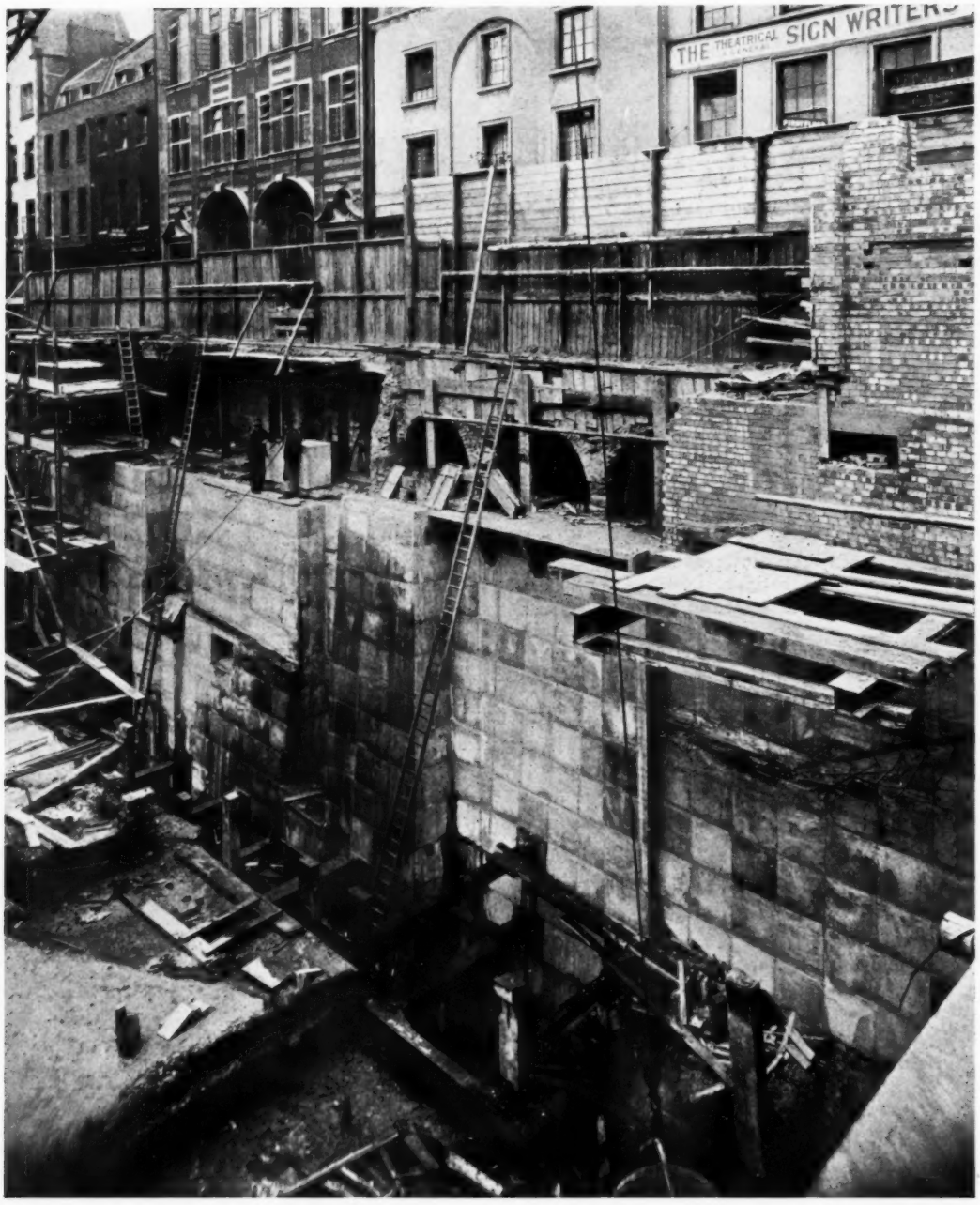


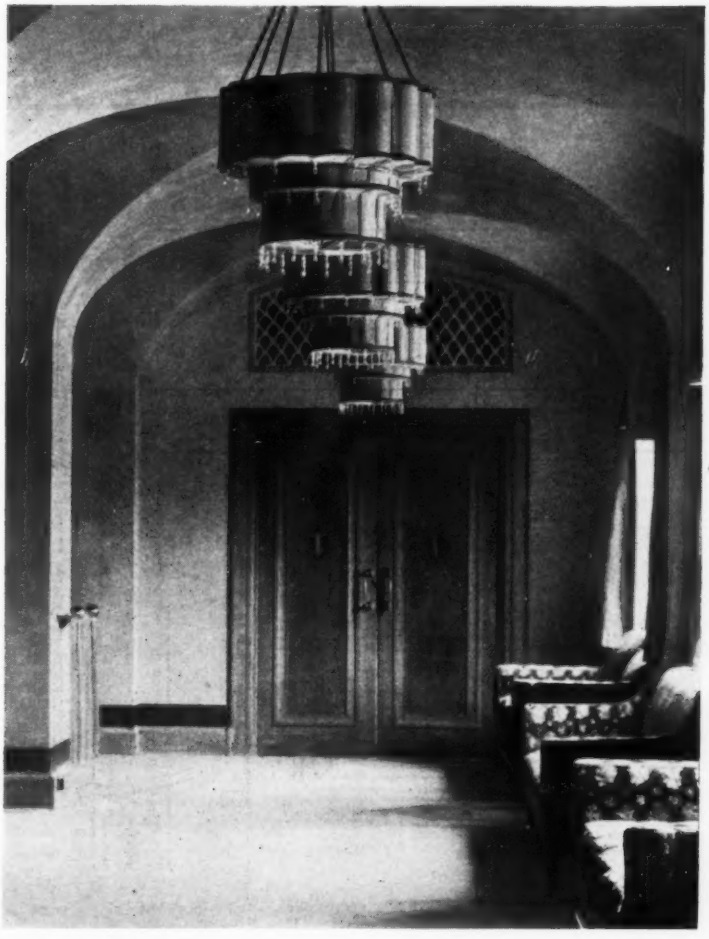
The Old Empire Theatre in Leicester Square is gone. The New Empire Theatre on the same spot is on the way. We who have to do with concrete retaining walls as suppliers of one of the materials from which orthodox walls are made see much interesting work. I have never seen work of greater interest than the Empire wall, a section of which now being placed is illustrated above. That "Colemanoid" wall is a typical example of present-day progress in this class of construction. Every architect interested in water-proof concrete retaining walls—"Colemanoid" walls—may to advantage spend a few minutes inspecting the Empire installation. Write for my "Specifications for Mass Concrete."

Regent House,
Regent Street,
London, W.1.

Frederic Coleman

Associated Architects { Thomas W. Lamb. / Frank Matcham & Company.

Contractors: F. D. Huntington, Ltd.



[A working detail of these doors appears on the following page]

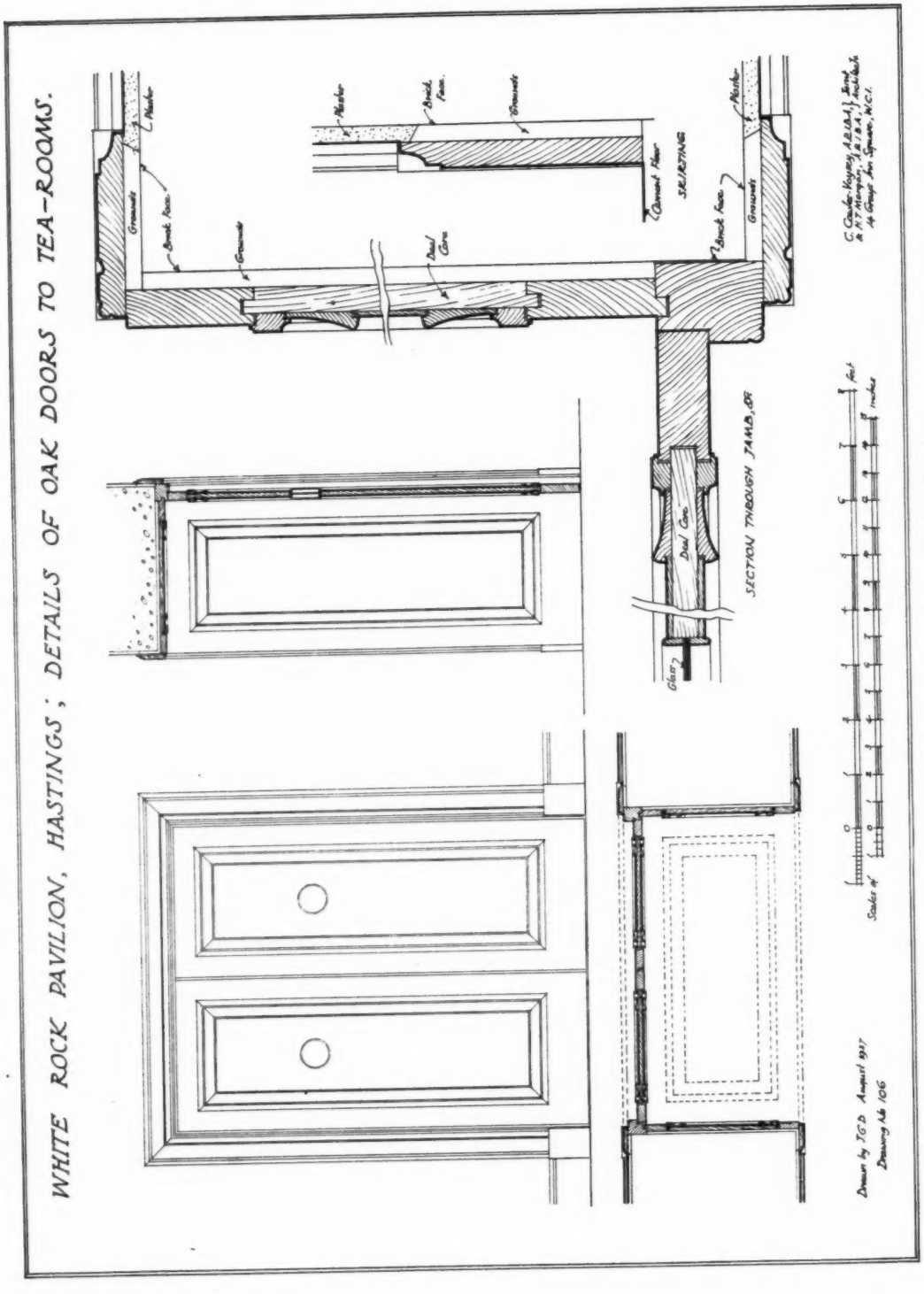
DETAIL OF DOORS TO TEA ROOMS,
WHITE ROCK PAVILION, HASTINGS

[BY CHARLES COWLES-VOYSEY AND THE LATE HUGH T. MORGAN]

THE WEEK'S DETAIL

[BY CHARLES COWLES-VOYSEY AND THE LATE HUGH T. MORGAN]

These double doors occur in the White Rock Pavilion, built for the Corporation of Hastings (which was described and fully illustrated in THE ARCHITECTS' JOURNAL *for April 20, 1927). They are of Austrian oak treated with lime and wax polished. The pull handles are of natural bronze. The panels are made with a deal core faced with oak plywood and the mouldings are planted on.*



A photograph of this detail is given on the preceding page.

THE ARCHITECTS' JOURNAL

Wednesday, September 7, 1927

A LEAD FROM THE STEEL TRADE

EVERYONE surely must rejoice at the news that one of the greatest industries in this country has decided to help itself. For years now we have listened to the bemoaning chorus of industries big and little; to their supplications to the Government for subsidies, for protection, for this or that measure. And all the while they must have known that they were but accelerating a vicious circle, since the past cause of their discomfort was the heaviness of taxation to which anything in the nature of a subsidy would be but an addition. At last we have an industry that is trying to put a spoke in the wheel.

The steel trade has evolved a scheme, which has already come into force, whereby consumers who purchase only British steel will receive substantial rebates. The system, we believe, is one that is not unknown in commerce, but it has never before been tried in the steel industry, where the accelerating growth of imports renders some measure essential if the industry, one of the most important in the north of England, is to be saved. Since 1923 imports have increased from £14,000,000 to £29,000,000 in 1926, and for this year they are estimated at £50,000,000. A moment's thought will show the implication of these figures. This growth of imports means an immense loss of employment in the trade itself; a loss estimated at 100,000 men. But the evil of unemployment is never limited to the unemployed.

True it is they who are the immediate subject of our sympathy, but every unemployed man is a burden to the community at large in its capacity of taxpayer, and to the surrounding community as ratepayer, and these higher rates are an added load to the already struggling industry. Moreover, unemployment means loss of purchasing power; loss of purchasing power lessens the demand for commodities generally, and so has an adverse effect upon the trade of the country. The ramifications are infinite.

It is true, of course, that the steel trade in this country is heavily handicapped in its competitive race with foreigners. In the first place it has, in common with most other home industries, shorter hours and higher wages, but it has, too, higher railway rates, heavy social obligations towards its employers, high national and local taxation, and it is possible that in many cases it has less efficient management and less up-to-date plant.

It would seem that before long the nation will have to consider whether it can maintain its present high standard of living and of social obligations. For what is it that is now happening? Laws are passed to raise the standard of living which necessitates an increase of taxation. The result of this increase is that the home market is boycotted in favour of the cheaper foreign market, and trade is left in an even more precarious position, while the standard of living, ignoring doctrinaire legislation, sinks lower and lower. The fact is, there comes a point beyond which the standard of living cannot be defended. Below a certain point it must not fall, but above a certain point it cannot be artificially maintained, and must depend upon the measure of the country's prosperity. The fallacy lies, and many economists and business men realize this, in adopting an arbitrary standard of living, and supposing that—whatever the state of the country's finance, trade, or prosperity—it can be maintained.

And now comes this fine effort of the steel industry. It is an economic platitude that increased production lessens overhead expenses. This is obvious enough, since to take one thing alone, rates, this is a factor which remains constant—constantly high most would say—whatever the output. The steel industry is hoping that the proposed rebate, which amounts to 7s. 6d. per ton on joists, will induce consumers to give the necessary undertaking that they will use only British steel.

We sincerely hope that the steel industry in adopting the so long neglected principle of self-help has set an example that will be followed by others; by the coal, for instance, by the railways, and by agriculture, to name but those of the biggest in the country that seem unable to put their houses in order. Upon the success of this scheme much depends, and it may well be worth the country's while to make some slight effort to see that it is a success. Architects in charge of large works might at any rate compare the prices of British and foreign steel where it has been proposed to use the latter, and where the difference is only slightly in its favour put the matter before their clients who, if they be long-sighted—which, alas! so few of us are in matters of finance—may sanction the extra expense.

In modern building steel and brick are the two principal materials. England is rich in brick earths as she is in iron ore. Yet for the last few years there has been difficulty in both these industries, and manufacturers have bewailed the growth of foreign importations. The steel trade is now embarking upon a policy of self-help, and we are convinced that it is a policy that sooner or later must be adopted by every industry in the country that seeks to regain prosperity.

NEWS AND TOPICS

THE FATAL FOUNDATION—LEEDS UNIVERSITY LIBRARY—SYPHON IT!—BERT AND HIS ARCH—THE TOPOGRAPHY OF LONDON—AN A.J. READER

RECENT events have either stimulated the serving of dangerous structure notices, or the Press, in reporting them in my morning paper leads me to suppose that London is going to fall and blot me out. I therefore hasten to say, while I yet have the chance, that though some even of the technical papers have expressed astonishment that few old London houses have any concrete foundations, and most of them none of any sort, or even footings, the fact is well known to all who have dug in their cellars. Eight tons to the square foot, which London clay is considered capable of bearing safely, is all that even the big old houses in Bloomsbury are likely to be guilty of. Funk, not necessity, impels by-laws to demand concrete and footings to two-story cottages, and the same ignorant trepidation leads architects to do the same where by-laws do not operate. It is a question of habit. If I build in Birmingham I put no concrete because it is not the custom; if at Rugby, with equally good ground, I do, and for the same reason. The medieval builders of parish churches who dug a great pit, filled it up with stones and built on it a steepled tower with a peal of bells, knew their job. They also knew that a right building *ought* to settle, and that signs of settlement were no blemish but an added grace, softening the rigour of lines, emphasizing constructive principles, and expressing the sense of stones piled up on the ground; at any rate, it is clear that they did not seek generally to secure that settlement should not occur or to provide for it as at this day they do in Chicago, where lofty buildings are either built on a raft or upon foundations nicely proportioned so that the load is constant over the whole ground. Fifteen inches is an ordinary allowance, and the drawings show the ground floor that distance above the position at which it will finally repose.

* * *

In our attention to old buildings, lacking foundations, which settle, we overlook the new buildings, secured by all that science, experience, and terror can devise, which do the same. I am not in a position to say of any building that its settlement has been caused by the weight of its foundations, but I suspect this may sometimes be the case, and I actually know of an instance where the weight of armoured concrete foundation on firm ground, and not serving any other purpose than to support walls bearing no exiguous loads, is *nearly one quarter of the weight of the superstructure*. This is a fact established by careful measures of quantities weighted out to the nearest ton. It was, however, no architect who achieved this noble adequacy, but a consulting engineer of high eminence, and I make no question that had his eminence been even higher his foundations would have been proportionately heavier, for the bigger the engineer the bigger the margin of safety required to secure his reputation. Whether it was the weight of its foundations that caused the tower of the Imperial Institute to begin to move off towards the City directly it was built, I do not know; nor do I know whether that is the explanation of the settlement of the campanile of Westminster Cathedral, and of the main piers of the nave where the marble casing is bulging and "blistering." I call attention to these matters because the idea that medieval and eighteenth-century builders did not know how to build soundly, and that we do, is manifestly erroneous.

* * *

On the eve of the British Association's meeting at Leeds, a munificent anonymous gift towards the new library building for Leeds University was announced. Was that a wholly undesigned coincidence? I do not suggest that it was a counterstroke of Art against Science; for the British Association, rapt and absorbed though it be in the heart-whole contemplation of science, may, nevertheless, be assumed to cherish—secretly and shamefacedly, it may be, as if conscious of yielding to an unworthy weakness—some slight sympathy with artistic leanings. They may therefore be asked to rejoice with us at the good fortune of Leeds, and be also invited to share our earnest hope that a noble library building may in good time ensue. London should take heart and inspiration from the example of Leeds; and I cannot banish a faint hope that although the main function of the British Association is "to obtain more general attention for the objects of science," this opportune Leeds incident may serve as a timely reminder that art exists, and is worth considering, even though it may do but little to correct the severity of an exclusive diet of science.

* * *

Architecture is a profession which begets humility, and the wise architect knows that it never pays to be too proud to learn, from whatsoever source. A friend of mine told me that he was lunching with one of the few clients with whom he is still on friendly terms a few weeks after he had gone to live in his new house. "By the way," said the client as they walked round the garden after lunch, "the emptying of this cesspool is going to be a tremendous labour, I wish you could suggest some way of dealing with it that won't work out too costly," and they strolled towards the offending receptacle, meeting the gardener on the way. "Ah, Smith, here's Mr. Tracing, the architect, he's going to tell us what to do about the cesspool." Mr. Tracing temporized, "Well, it's no use knocking out the bottom, because you're on clay, I'm afraid there's nothing for it but the septic tank and filter beds that we cut out to bring down the price." It was at this moment that Smith made his presence felt. "Why not syphon it out?" he said. "Syphon it!" interjected client and architect, united for once in their astonishment. "Yes, sir. The ground falls and our hose will reach more than a fall of 8 ft., which is the depth of the cesspool, and we can keep moving it about amongst the fruit and vegetables. Do 'em a world of good, sir." "No harm in trying, I suppose, is there, Tracing?" "Oh, no, not a bit," replied the doubting Tracing. Presently Smith arrived trailing after him a length of hose-pipe which he had previously filled with water. "Now, sir," said Smith, "if you wouldn't mind holding that end up, while I get the other under the surface." Mr. Tracing did so. The sewage flowed. It flowed for twenty-four hours, here, there, and everywhere, all over the vegetables and fruit. A year later my friend met his client again. After talking of cabbages and things, the client said: "Did I ever tell you that Smith won about six first prizes at the local show with his vegetables? He says it's all due to his sewage disposal works. I believe he's right, too."

And this reminds me of the tale of Bert's arch, which another architect told me. He was visiting a job one day, a medium—before the war it would have been called small—country house, when the foreman drew his attention to one of those unpleasant complications which had arisen on the first floor, due to roof intersections. The sort of thing that ought to have been, but hadn't been, visualized and worked out. "What do you want me to do here, sir?" said the foreman, intimating clearly thereby that in his opinion the thing couldn't be kept as it was; "a regular box up." "Do here? well, yes, let me see, supposing we did——. No, we can't do that, because of that valley—well, I think we'd better—nothing to carry the purlin, no, of course not." "How would it be to turn an arch across the passage there, sir?" Turn an arch? of course, obvious, the very thing; look most effective, too, coming down the passage, and hide all those ugly intersections. And turn an arch they did. Later, when the house was finished and the client let fall one day a comment of admiration on the arch, the architect told his client of its genesis, and how it had been a brilliant suggestion of Bert, the foreman. And from thence onwards it became known as Bert's arch.

* * *

It is perhaps rather ungracious, if it be not positively profane, either to look a gift-horse in the mouth or to criticize the inscription on a war memorial. I am sorely tempted, however, to commit both these heinous offences; or, perhaps in the light of what follows, the two may be consistently regarded as only one. For my object is to protest against one of the words—but it ought really to be regarded as two words, and probably would be so counted by an English telegraph clerk—that are carved on the war memorial which the American Ambassador has been asked to unveil in Edinburgh on behalf of United States citizens cherishing Scottish sympathies. I must certainly admit that I have not yet seen the memorial itself, but only a picture of a little bit of it. That does not matter, for the little bit is enough to show only too plainly the use of the unorthodox neologism "forever," meaning "for ever." Though a neologism, it is yet no recent innovation, for it is a good many years since Charles Stuart Calverley tried to kill with lambent ridicule this uncouth habit of telescoping two words into one. As the Americanism has now been made monumental and perpetual in Edinburgh of all places in the world, it was evidently "scotched, not killed, by Calverley's sprightly verses, which I beg leave to recall here; and, running-on being of the essence of the argument, I will ask our printers to "run-on" Calverley's verses as if they were flat prose. Thus they run on then: "And nevermore must printer do As men did longago, but run 'for' into 'ever,' bidding two Be one. 'Forever!' passion-fraught it throws O'er the dim page a gloom, a glamour: It's sweet, it's strange; and I suppose it's grammar." Maybe it is, but it is not impeccable orthography. By the way, was it not some ingenious American who suggested a telescoping of two words into one in a famous sculptured epigraph in our Abbey? Many think with him that "O rare Ben Ionson" ought to read "Orare Ben Ionson."

* * *

London's County Hall has found a new use, and perhaps a fresh dignity. Watercolours and engravings now enliven its otherwise dull walls. This adventure into showmanship should be the prelude to a permanent exhibition. There would not be the slightest difficulty in getting together a representative and most interesting collection of London views of similar character to those "now showing, gentlemen," at the County Hall. They exist in multitudes. Most suburban museums have local views in plenty. Camberwell, for instance, has a rich store of them in its art gallery, where the collection includes some small and dainty drawings by Ruskin. Not that pictorial quality is essential when the aim should be mainly topographical; though certainly pictorial quality may happen to coincide with fidelity of likeness, as witness the innumerable fine drawings by such artists as, for instance, the facile and prolific Shepherd. Probably the suburban museums, as well as the trustees of our national institutions, besides very many private collectors, could be easily induced to co-operate in the formation of a London Topographical Gallery of surpassing value and interest.

* * *

Although some ninety-eight Norwegian timber houses have been erected at Newcastle-on-Tyne, not one has yet been occupied. The houses are virtually completed, but cannot be occupied owing to the absence of an outfall sewer, and also to the non-completion of water and gas mains. There have been some difficulties in regard to the linings for walls and ceilings, hence tenders for a further ninety-two of these Norwegian timber houses have been obtained in competition with brick, but the latter were preferred, for in Newcastle as elsewhere there is considerable prejudice against timber. Furthermore, the brick houses are now cheaper, both in first cost and in upkeep.

* * *

One of the occasions for public protest which I might have included in my list last week is the modern incidence of *noise*. Complaint and expostulation, and warnings, crop up almost daily in the papers. A lady recently wrote to the *Times* to initiate fellow-sufferers into a device practised by her to enable her to sleep undisturbed by the noises of the night-time. Her remedy is chiefly remarkable as evidence of the severity of the distress which calls for it. A quantity of sand is to be put into a handkerchief in which it is bound up as in a bag. The intending sleeper then composes herself with one ear pressed into the pillow, and upon the other the sand-bag is deposited in such a way as to tightly close down the little flap which Nature—in preparation for human needs in the twentieth century—has caused to overhang the aural orifice. Result—bliss.

* * *

Dr. Bell, the Dean of Canterbury, is a student of THE ARCHITECTS' JOURNAL, writes a correspondent. He was observed at Cannon Street Station last Wednesday evening walking down the platform with an "A. J." conspicuously in his hand. The Dean is, of course, extremely interested in the regional planning of Kent, and the recent meeting on the subject addressed by Mr. Neville Chamberlain was held at the Deanery. Dr. Bell took a part behind the scenes in the Addison Housing Act, for at that time he was private secretary to the Archbishop. He is also keenly alive to the necessity to preserve our English cathedrals with due regard to their architecture.

ASTRAGAL

THE HOUSE OF THE PROVOST

[FROM AN IRISH CORRESPONDENT]

With the death of Dr. J. H. Bernard speculation has begun at once as to who is to succeed him in occupying one of the noblest of Dublin's Georgian buildings as Provost of Trinity College. Probably no other academic appointment in these islands combines so much personal prestige and influence with such unique attractions for the ambitious and cultured scholar. "T.C.D." is not only a college, but a university in itself; and is the chief training centre for the Church of Ireland and the traditional stronghold of Irish Protestantism. It occupies a position of independence and power such as the most famous colleges of Oxford or Cambridge cannot command.

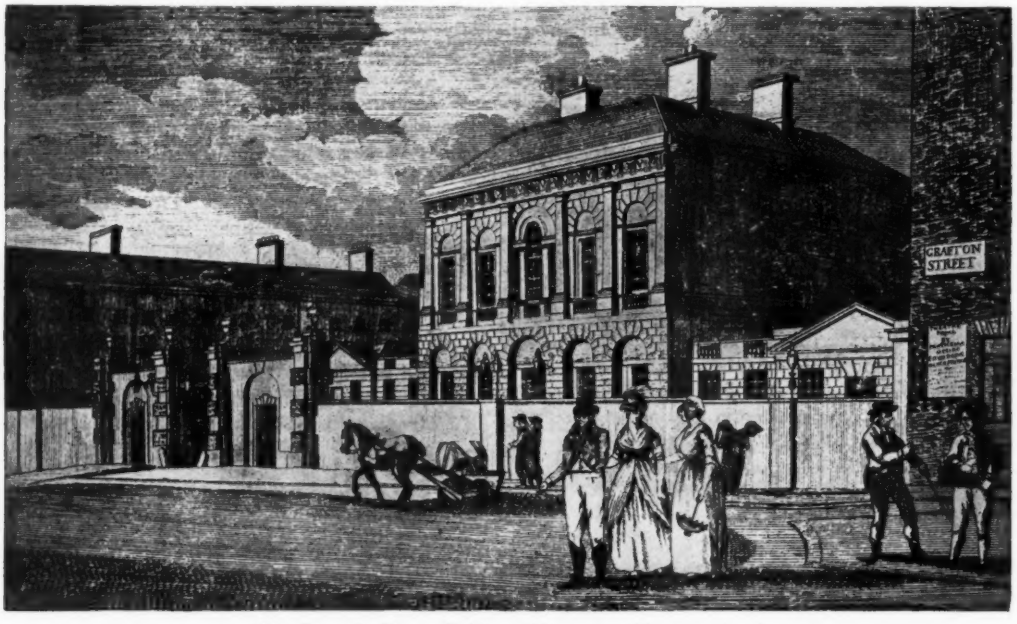
But apart from all such considerations, the appointment of a new provost involves the vital question of finding a worthy tenant for the Provost's House, and in no appointment anywhere is the official residence a matter of greater importance. Dublin does not expect lavish, or even frequent, entertaining at the Provost's House; but the question of who shall live there concerns the dignity of Ireland's capital.

To generations of Irish scholars the Provost's House has appeared as the symbol at once of the dignity of scholarship and of the great traditions of Dublin University. Few buildings, indeed, can have had such high tribute paid to them as when the late Dr. Bernard actually resigned from the Archbishopric of Dublin to succeed Dr Mahaffy as provost. To both men the provostship had been the ambition of a lifetime. Both were supremely well fitted for it, and both were frustrated for years by the rivalry between their respective claims.

When Lord Balfour was Prime Minister, the provostship fell vacant, and the candidature of both these illustrious scholars was vigorously canvassed. Dr. Bernard, as the principal lecturer in divinity, and as Dean of St. Patrick's—the position from which Jonathan Swift had wielded an immense influence over Irish affairs—was the ablest of the younger dignitaries in the Church of Ireland. But Professor Mahaffy, a classical scholar with a European reputation, and a conversationalist whose personality had won the friendship of half the royal families of Europe, had no less powerful claims. Even the subtlety of Lord Balfour could not decide between them; and as a compromise Dr. Traill was appointed instead.

But both men still cherished the same ambition, and each had it fulfilled at last. Dr. Mahaffy, after a long interval, succeeded Dr. Traill, and the Provost's House has never been presided over by a more original and enthusiastic scholar. No man knew more about eighteenth-century Dublin, or had a keener appreciation of its spacious and gorgeous traditions. The superb volumes of the Dublin Georgian Society, which revealed Dublin's wealth of magnificent Georgian architecture and interior decorations, owed much to his scholarly researches. His devoted labour and public spirit were rewarded when he was enabled at last to live in one of Dublin's finest Georgian houses, surrounded by a traditional magnificence.

Dr. Bernard himself had to wait for nearly twenty years. He had left St. Patrick's Cathedral to become a Bishop, and had been promoted to the Archbishopric of Dublin, which gave him as much influence and scope as any man in Ireland. But the old ambition had never left him; and on Dr. Mahaffy's death he resigned almost at once, to take up his residence as provost in the stately old house that stands alongside Trinity College's beautiful frontage, where Foley's statues of its pupils Oliver Goldsmith and Edward Burke stand on either side. Behind is the cricket ground where so many famous players have learnt their game; and at the side, the spreading buildings around the



The Provost's House, Dublin. [From an old engraving.]

wide quadrangle, one of the most spacious in the world, where the lights glimmer from the students' windows in the dusk. And in the Provost's House itself, with its superb staircases and ceilings and mantelpieces, he could contemplate the historic portraits, by Reynolds and Gainsborough and Lawrence, and the greatest masters of their period.

Both Dr. Mahaffy and Dr. Bernard had given a definite impulse towards the closer participation of Dublin University in Ireland's national life; and the new appointment will be made for the first time by an Irish Government. But the influence of the Provost's House will probably be all the greater for the change. Henry Grattan, whose name is always connected with the Irish Parliament in the late eighteenth century, which gave to Dublin its grandest Georgian architecture, declared, in celebrating the establishment of Irish independence: "You had no monuments, no trophies, none of those outward and visible signs of greatness, such as inspire mankind and connect the ambition of the age which is coming on with the example of that which is going off, and form the descent and concatenation of glory." His own Parliament conferred upon the Irish capital its architectural dignity and beauty; and those buildings alone would justify Grattan's prophetic statement: "You have done what your posterity may preserve but will never equal."

EYEBROWS

[BY T. S. ATTLEE]

Eyebrows play a prominent part in determining the character of a face. A pair of bushy, projecting brows will often confer distinction on features otherwise commonplace, for they indicate concentration, penetration, or ferocity, according to the angle at which they are set. Take a well-known portrait, such as Millais' Sir Henry Thompson, or the portrait of Darwin, and remove the eyebrows, and the loss is apparent at once; for, at the other end of the scale, a circus clown, seeking an effect of vacant perplexity, replaces his eyebrows by two tiny dots, and achieves it.

The analogy between the façade of a building and the human countenance is familiar, particularly to a townsman, who is accustomed mostly to street architecture, and judges a building by face rather than form. There is something to be said for it. It is not, of course, a matter of identifying feature with feature, but a resemblance between the few defining lines. I was at school with a boy whose profile could be (and often was) adequately indicated by half a diamond and a dot; others could be struck in from centres like mouldings. But while most people, I believe, have their counterparts in the animal kingdom, their architectural analogues are not so easily traced. Tennyson, however, showed his grasp of essential character happily (in "Maud"):

> Seeing his gewgaw castle shine,
> New as his title, built last year,
> There amid perky larches and pine,
> And over the sullen-purple moor
> (look at it) pricking a cockney ear.

In buildings the eaves or cornice stand for eyebrows, and in sunny countries their importance is prodigious. The Strozzi and Riccardi palaces, for instance, at Florence, would be nothing without their great, jutting cornices, and the whole city owes that aspect of grave watchfulness, which is its greatest charm, to the dark cornice-eyebrows which top its tall, flat wall-spaces.

These reflections are prompted by the aspect of the village which fronts this garden a mile or so away across the water. Ranged in a southward-facing bow on a terraced hump above the mud-flats of the creek, the houses catch every bit of sun there is, and have exactly the air—immobile but vigilant—of basking tom-cats. They watch the parapeted road across the valley, which runs between the woods and the water like the gangway of a ship, just above the level of high spring tides.

They, too, owe their character of watchfulness to their cornices. At the foot of the village street, beside the water, there is a timber-yard and sawmill, and here they will run you out the wooden gutters ("launders" locally), which are the principal members in the treatment of the village roofs.

Channelled deeply out of 4 in. by 3 in. stuff, the gutters are either spiked directly on to stout deep fascia-boards, or are carried on dumpy little modillions, and there is the thick line drawn by the square wooden "launder."

The design of the houses is generally simple enough—a square or oblong box, with five big sash-windows and a fan-lighted door on the principal elevation. The roofs are flattish—30 deg. to 35 deg.—covered with local grey slates, and hipped with big half-round hip-tiles. The launders are painted white, and the fascia-board drops an inch or so below the boarded soffit of the eaves.

It is the bold projection of the eaves with the comfortably unadorned space of wall below which creates their impression of dignity and permanence, qualities sufficiently rare in cottage architecture today. There is another quality of these buildings, however, which may be noted: the quality which gives them life in the midst of repose, and which saves them from being, in fact, the boxes they appear on paper.

They are built of the local stone which crops out everywhere, random rubble, coursed or uncoursed, with wide mortar joints; but the quoins are large blocks of dressed granite, with fine joints. The middle part of the wall, therefore, tends to settle rather more than the quoins, and, as a result, the angles of the building slope inwards—slightly, but enough to make a difference. The wooden launder, too, is barely perceptibly cambered in the middle (to throw the water towards the down-pipes at the ends).

The suggestion that results is that of a short man with arms folded and legs a little apart.

Some day, no doubt, ages ahead, architectural students will be set to measure the batter and entasis of the quoins, and the rise in the launder, striving thus to determine the formulæ which the wise old builders applied in working out these careful optical corrections.

But I think that Nature threw in these refinements as a reward to them for building with common sense. They seem to have had little else, these Cornish builders; houses more matter-of-fact and less adventurous were never built. But having stone lying about all round them, they used it; and having plenty of timber and a sawmill, they used wooden gutters. As a result, the houses fit into the landscape as if they grew out of the fields, and they regard the pert, ephemeral bungalows that camp beside them, much as the real inhabitants of a fishing village scrutinize the excursionists that the day-trip brings and carries away again.

E

MR. OSWALD MILNE

[BY A. R. POWYS]

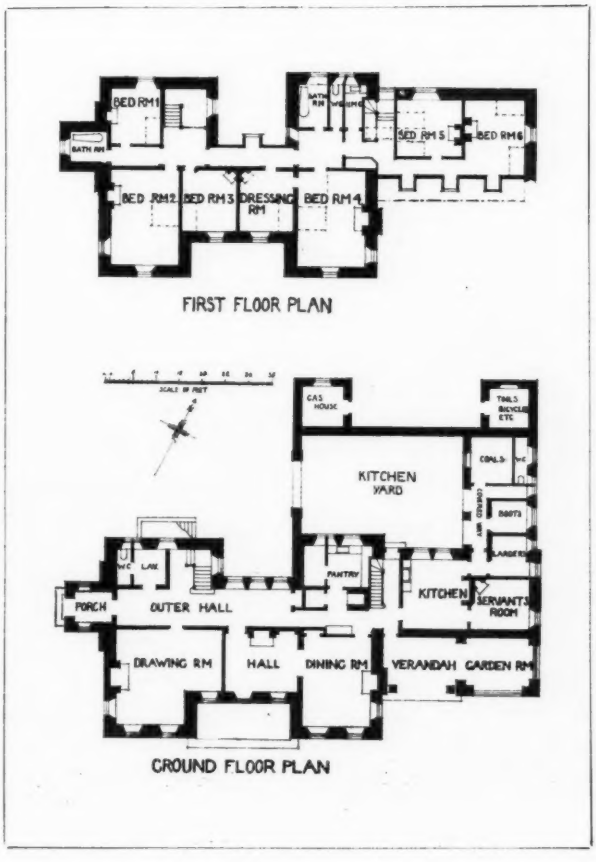
THE architecture of Mr. Milne is always such as would cause another of the profession to stop and consider it with more than passing attention. The main quality is sanity. In the sequence of his work it will become apparent that Mr. Milne has less and less concerned himself with the passing fashions of the day, and has more and more studied the proper building of houses. No one will be so obtuse as to gather from this that he does not consider appearances. His buildings show that they depend for success on being good rather than on looking well. We must all agree that a house is not completely right unless it looks as seemly as the building is good and the planning convenient. It is a sense of such balanced rightness that we get on the whole from Mr. Milne's work.

If, then, in considering the improvement of architecture we take as an example the first house built by Mr. Milne, Alstonfield, at Esher, in Surrey, 1903, we find a house well built and more habitable and better to look at than many today; but it is touched by the fashions prevailing then in the architects' offices and in the students' schools. The house is roughcast; and we get the sense of a young man seeking to strengthen his own slight uncertainties with an emphatic insistence on a particular kind of surface texture.

The same may be said of the use Mr. Milne then made of roofing tiles built into the walls. These, at that time, were coming into fashion. Here they are used with care, but there is present the question whether they were not dragged into the composition because they were "the thing." I have not visited the house, and the photographs may be deceptive, but both the roofing tiles and the brick chimneys seem to carry into the design artificial traditions connected with looks rather than with tradesmanship—traditions which were learned by the tilers and the foremen of the Victorian workshops. This, perhaps, raises a difficult question, and one which I shall not attempt to discuss here, namely, whether an architect should make use of and should improve the workshop customs, or whether he should disregard them and force the results of his learning, the conclusions of his æsthetic reasoning, and his own idiosyncratic whims on the prevailing usage. This house, then, if it is judged by the standards of 1926, would not deserve or receive much attention; but in its own year and without any qualifying thoughts due to its being the first work of a young man, it must be acknowledged as being typical of the better architecture of the decade.

The next house in chronological order that is illustrated in this article is Rhowmar. This was in building in the year 1912. The design certainly shows a completer grasp of a building as a single unit than is apparent in his earlier work. The conception is simpler, and is well held throughout. It is felt quite definitely that the house was conceived in three dimensions; there is no suggestion that it is a series of elevations. It has become clearer that the architect's object is not to display his cleverness, but to give his clients a good house. Some of us could produce a reasoned criticism finding fault with certain matters of planning or of shape; most might wish to question the architect with

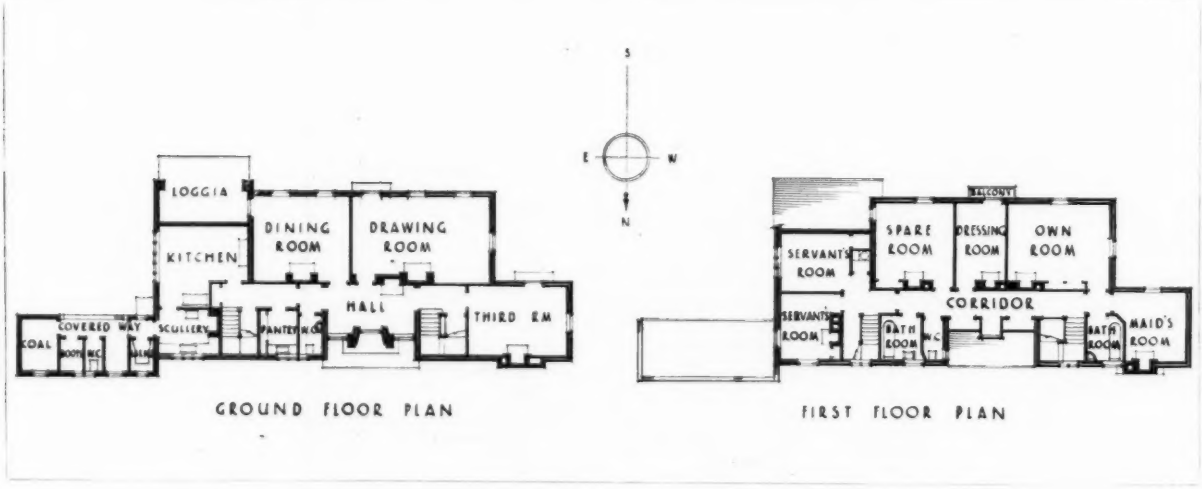
Alstonfield, Esher, Surrey. By Oswald P. Milne.



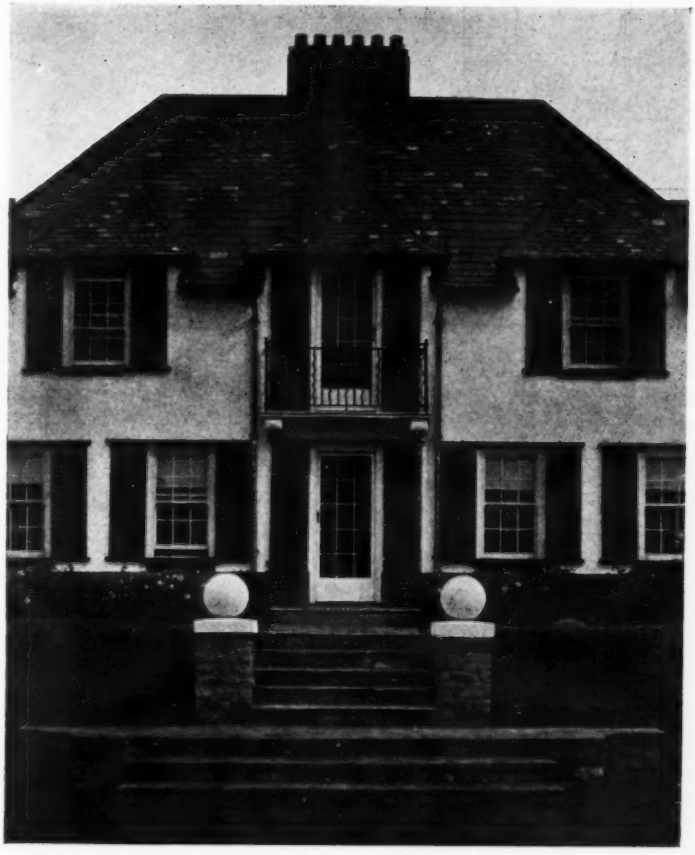
Rhowmar, Towyn, North Wales. By Oswald P. Milne. Above, the south-east front. Below, the plans.

regard to some of his decisions. For instance, it has been suggested that the junction of the main ridge with the subsidiary ridges is not arranged in the best way, and I know there are those who think that the design of a building should not so much be allowed to depend for its pleasant appearance on such temporary features as wooden shutters. These are legitimate matters for discussion, but it would be ridiculous to condemn work for such reasons when it is clear that the building as a whole is soundly thought out.

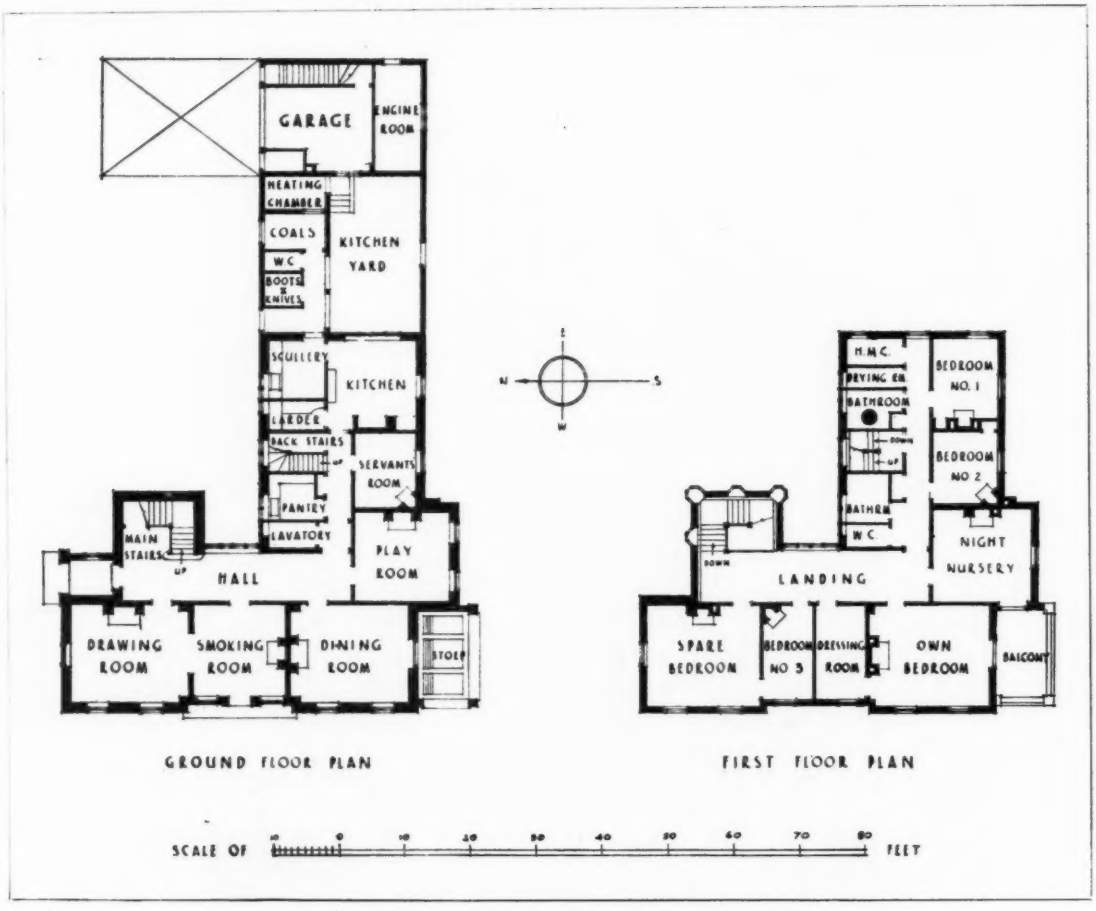
Merrow Mount, at Huntercombe, Oxon,. again, is a house built about the same time (1913), and it, too, is



Above, Rhowmar, Towyn, North Wales. By Oswald P. Milne. On the terrace. Below, Fourways, Budleigh Salterton, South Devon. By Oswald P. Milne. The plans.



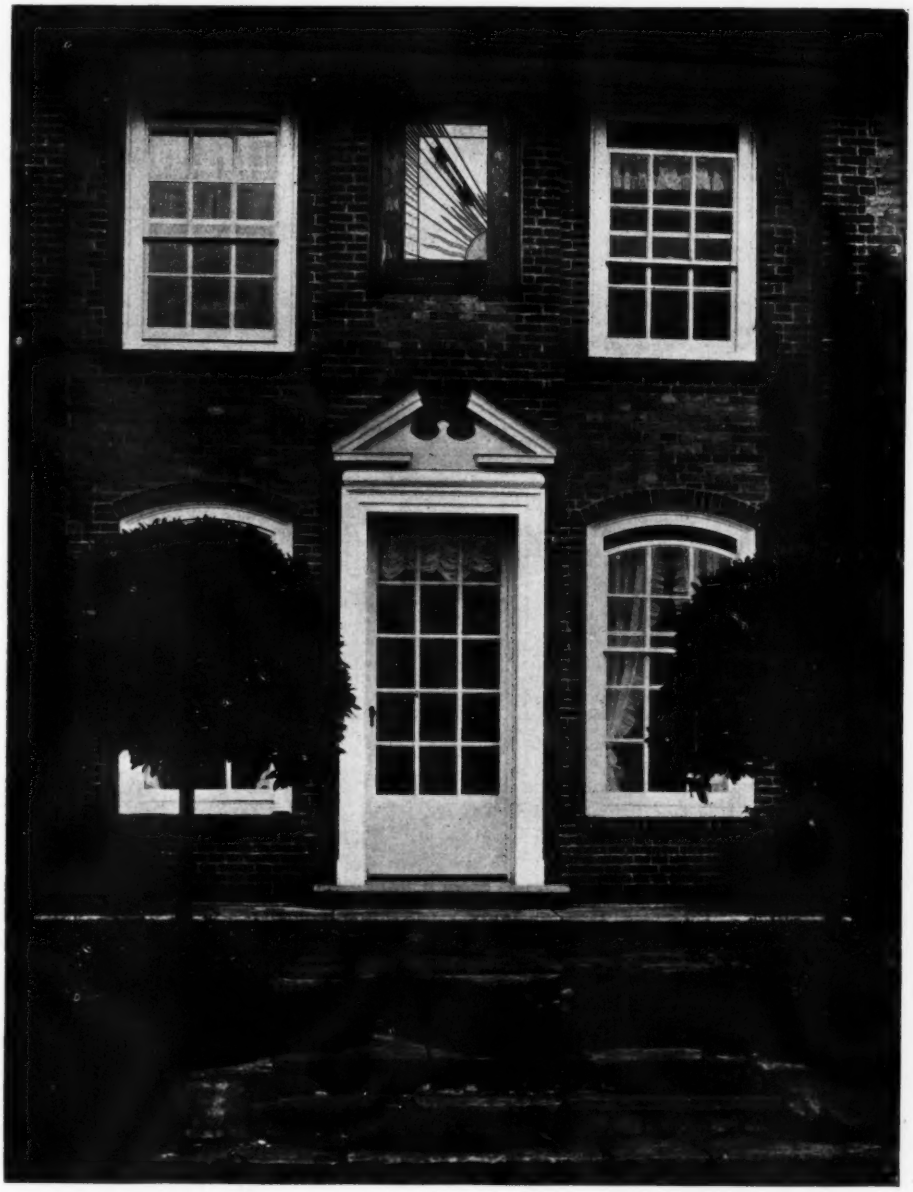
Fourways, Budleigh Salterton, South Devon. By Oswald P. Milne. Above, a view from the garden. Below, a detail of the garden front.



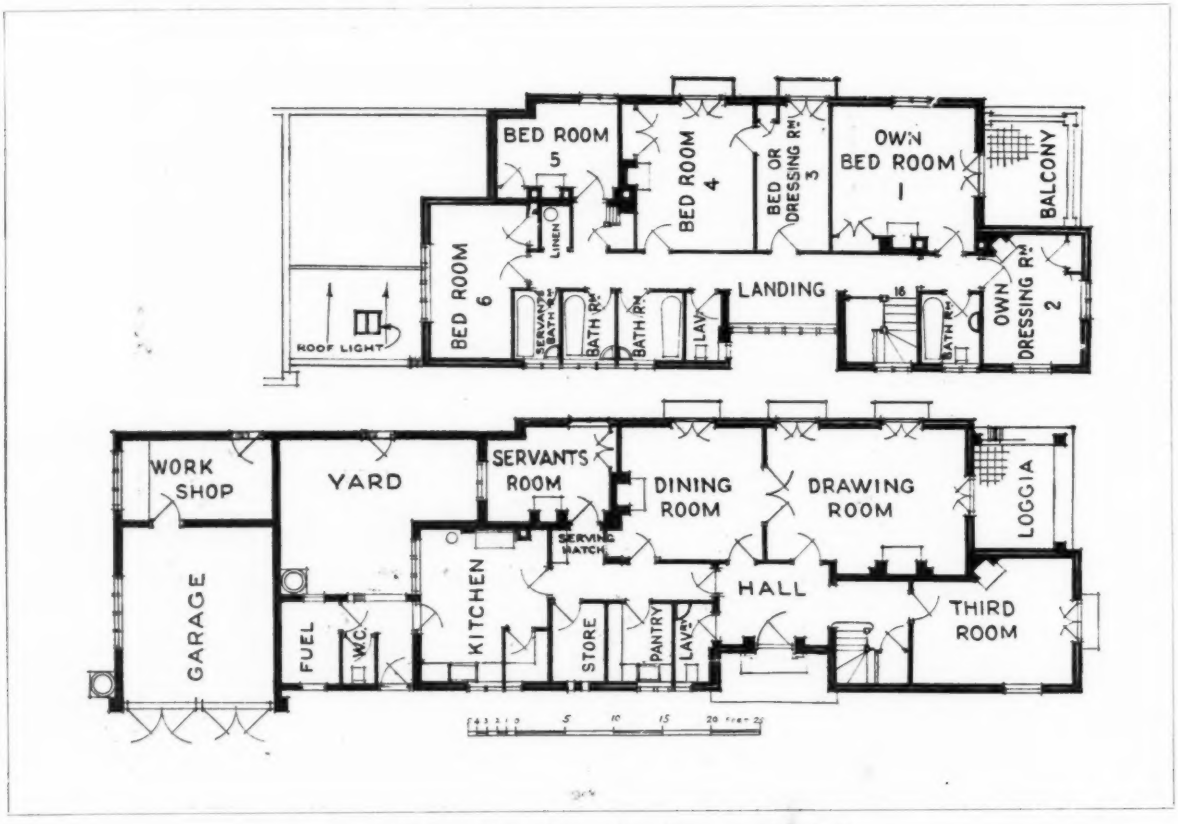
Merrow Mount, Huntercombe, Oxon. By Oswald P. Milne. Above, the garden (south-west) front. Below, the plans.

typical of what thinking architects were doing then. It is representative of what is called "period building." Perhaps it is because I so keenly desire to see an architecture grow which naturally interprets the best in present-day civilization that I would be more ready to find fault with this building than with others that are shown. I feel sure it is not Mr. Milne's object to get renown as a skilful imitator of Elizabethan or Georgian practice. Too often, I think, architects are compelled to follow this method owing to the wishes of their clients. But even with prejudices such as I disclose here, I found myself bound to say that the house is comfortable and seemly, and looks as if it would make a very pleasant place to live in. Mr. Milne's worst enemy—if, indeed, he claims any such relationship—could not say worse than that this building is not an outstanding example of architecture, even when the year of its building is taken into account. The house is among the better ones of that day; and most of our contemporaries would not feel nervous of their critics if they could claim it as newly built from their own designs. The rooms are very habitable, they are much what one expects when thinking of the inside of a comfortable and small house.

Mr. Milne's later work shows that he desires that his buildings shall be more in accord with our own civilization and the conditions which it imposes. Quietways, at Brasted, in Kent, is an example of this. It is a small house, built in 1922. There is no trace of "fashion-following" here; there is no architectural jargon about it. It does not pretend to be more than a well-thought-out

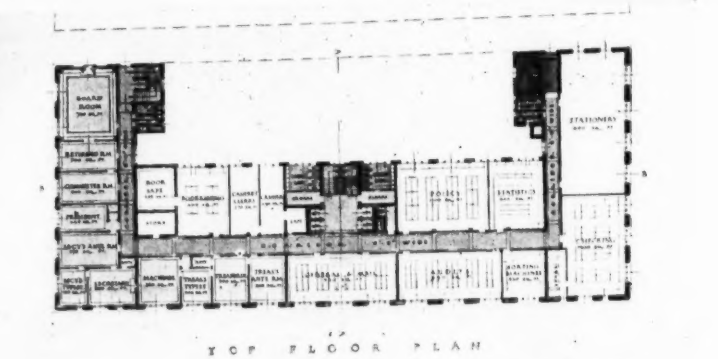


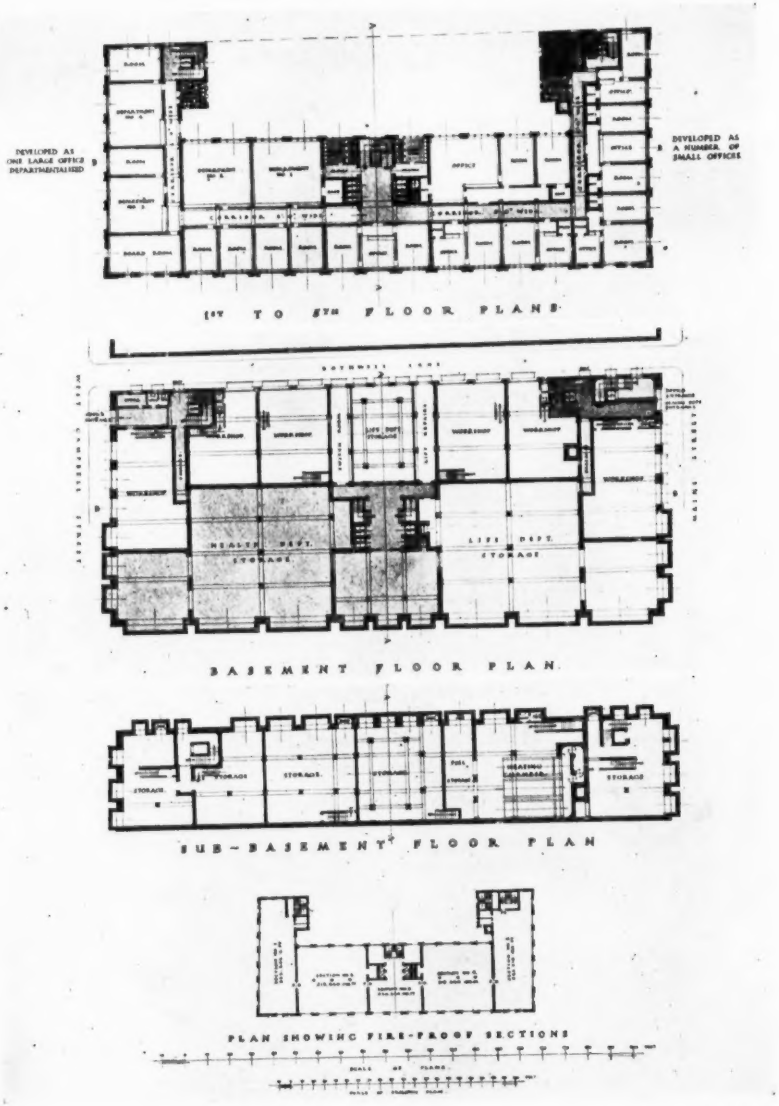
Merrow Mount, Huntercombe, Oxon. By Oswald P. Milne.
A detail of the garden door in the central bay, showing the sundial.



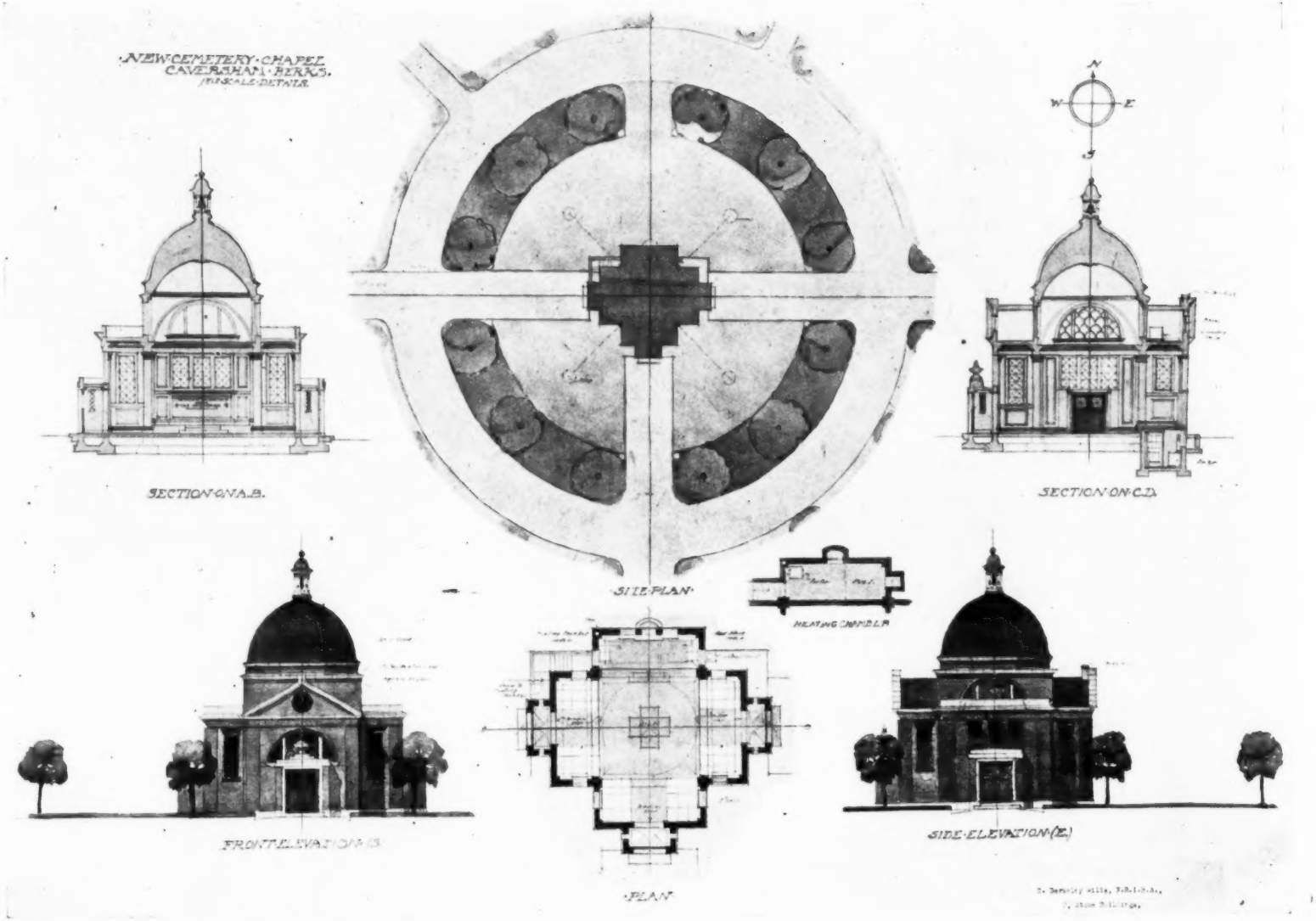
Above, Merrow Mount, Huntercombe, Oxon. By Oswald P. Milne. Left, the staircase. Right, the hall. Below, Quietways Brasted Chart, Kent. By Oswald P. Milne. The plans.


SCOTTISH EQUITABLE ASSURANCE SOCIETY
PERDOUSSIN
BENTLEY
SUNBEAM

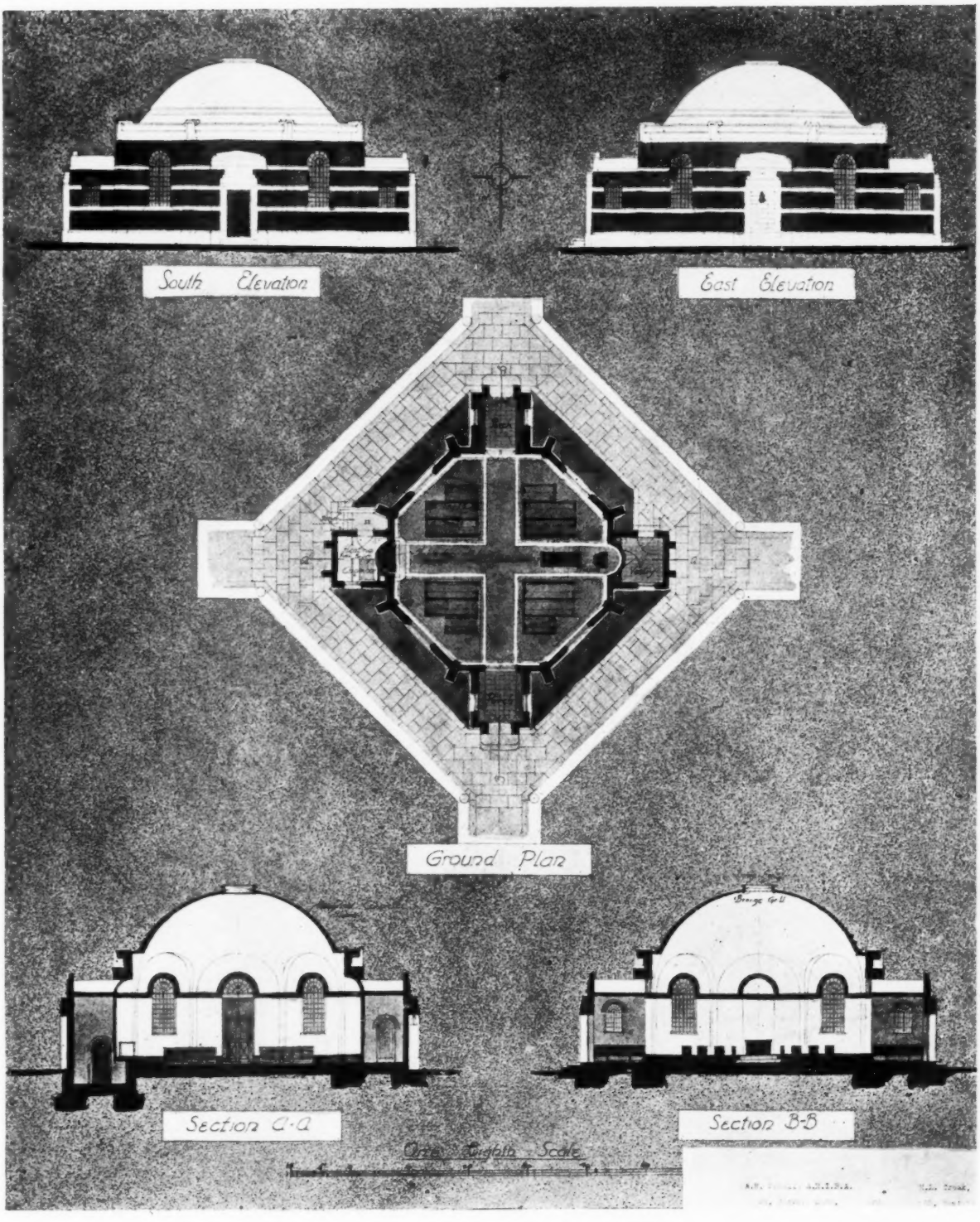




Competition for Scottish Legal Life Assurance Society's New Building, Glasgow: the Winning Design. By Wright and Wylie.



Reading Municipal Cemetery Chapel Competition : First Premiated Design. By G. Berkeley Wills.

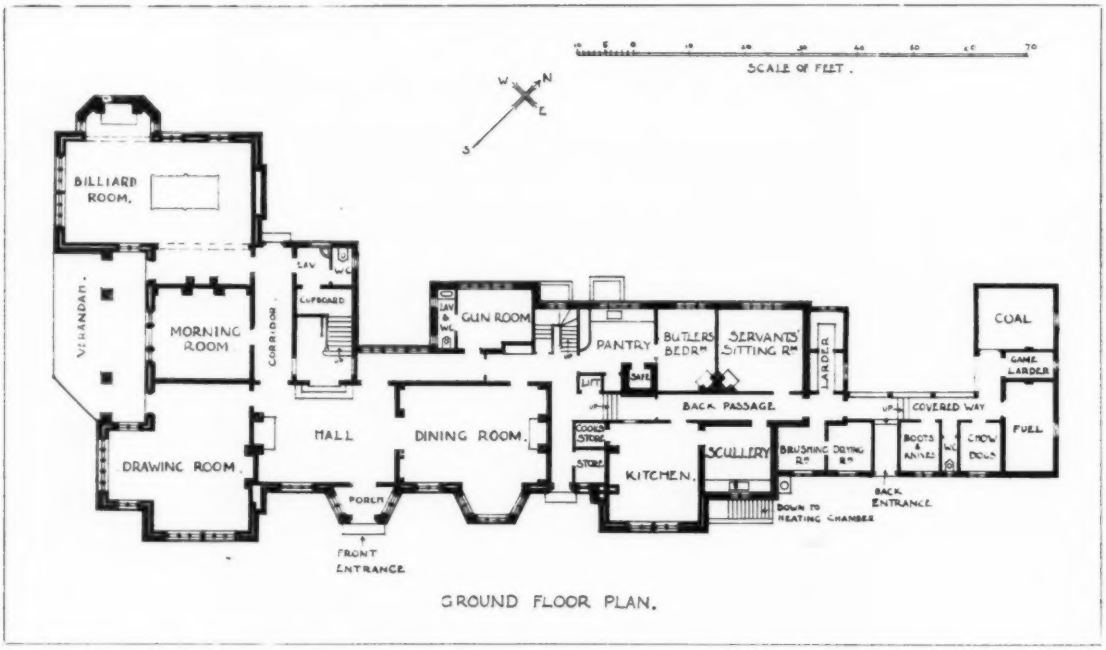


Reading Municipal Cemetery Chapel Competition: Second Premiated Design. By Horace L. Creak and A. H. Powell.

Quietways, Brasted Chart, Kent. By Oswald P. Milne. Above, a general view. Below, the entrance door.

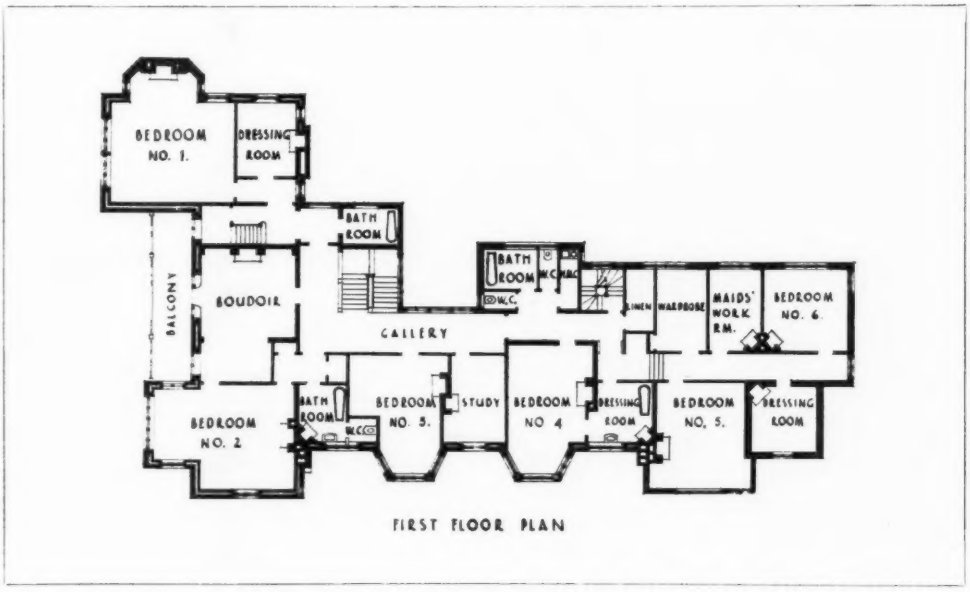
and well-built house, which has come to be what it is because the architect has done little more than make good use of such materials as he could get without extravagance, and without paying attention to the demands of cherished whims, whether his own or his clients'. Where he has felt decorative features were required, he has turned to the tradition of his office and his training, and modified these with a sure instinct. The front door and its setting is an example of this sort.

Such, then, are the tendencies in the development of modern architecture, and we may well ask where they will lead us. The answer, I think, is not far to seek. Let me



Huntercombe Place. By Oswald P. Milne. Above, a view from the approach. Below, the ground-floor plan.

advise those who are interested, and who share my hopes, to go and see Mr. Milne's latest work. Let them, as it were, continue this article for themselves and follow right up to the present day the tendencies to be found in architecture and in our architect's work. Indeed, as to the building I am about to refer to, I think I am not exaggerating when I say that it illustrates good modern architecture, and at the same time shows that Mr. Milne is developing a genius in his profession which may well be referred to in future editions of the students' histories of the subject. I advise them, my readers, to go and see the Eleventh Church of Christ Scientist, situated in Nutford Place, which lies near Cumberland Place and George Street, a little north of the Marble Arch.



Huntercombe Place. By Oswald P. Milne. Above, a detail of the south front. Below, the first-floor plan.

Huntercombe Place. By Oswald P. Milne. Above, a corner of the drawing-room. Below, the hall.

THE STUDY OF THE VERNACULAR: ii

[BY ARTHUR J. PENTY]

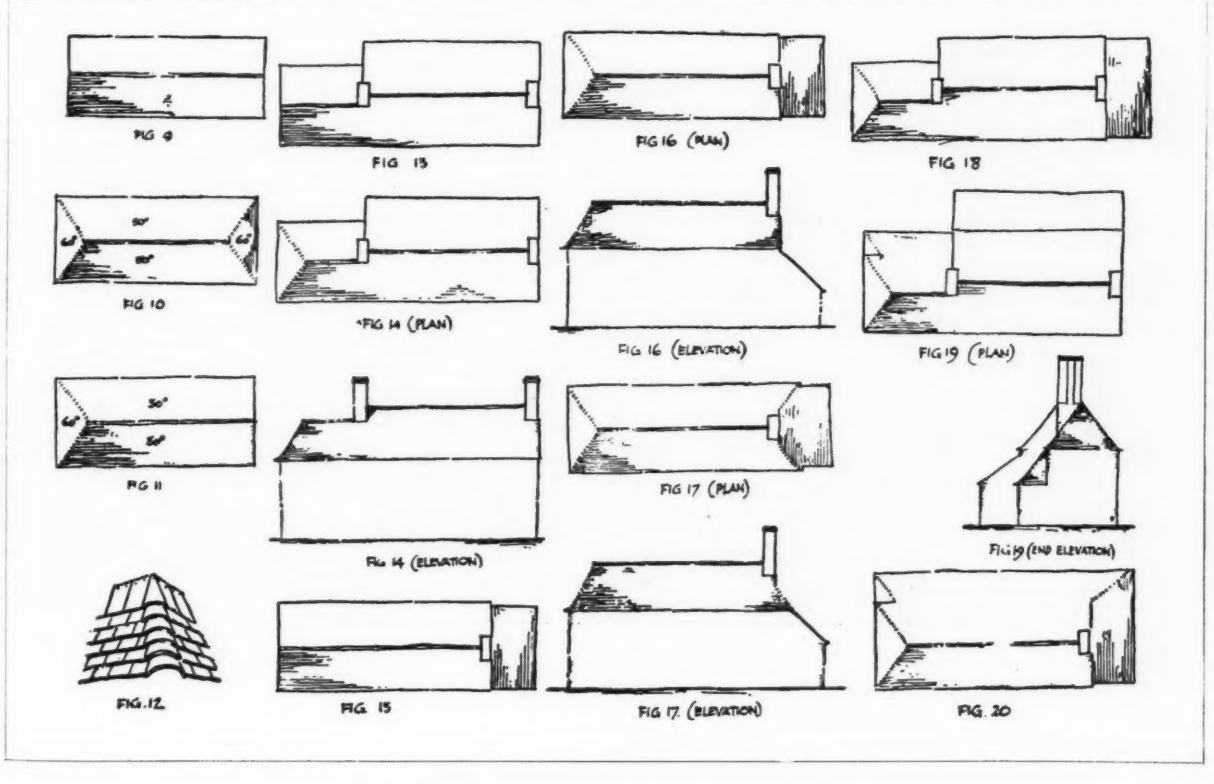
In the old English villages the typical detached cottage is long and narrow, one room thick, by which I mean that the principal rooms go from back to front and are generally lit from both sides. Though the plans of these cottages vary, figure eight would be typical of many of the simpler ones.

FIG 8

Houses of this kind would be roofed by a single pitched roof which might be anything from 14 ft. to 18 ft. span. They are rarely less or more than these widths. Such simple roofs may terminate in different ways: with a gable at either end, as in figure nine; with a hip at either end, as in figure ten; or with a gable at one end and a hip at the other, as in figure eleven. The first of these is most general. The second and third are unsuitable for building with stone slab roofs because of the difficulty of treating the hip satisfactorily. The third is, I believe, peculiar to the south-east of England, and is the most beautiful arrangement of all. This type is the unit from which the picturesque roofs in these villages are built. The alternating gable and hip is the secret of their charm. Another peculiarity of these roofs, which gives them such character, is the custom of making their hipped ends 10 deg. steeper than the main pitch of the roof proper. Thus the pitch of the latter may be anything from 50 to 55 deg., while the pitch of the hipped ends would be from 60 to 65 deg. as the case might be. I might add that special hip tiles are unnecessary in such a case, for the conical or granny-bonnet hip tiles, as in figure twelve, will cover a 10-deg. variation of pitch, and the adjustment will be unnoticeable. In cases where pantiles are used, the hip is made with a ridge tile, and the roof must be very simple in design. Pantiles make a very beautiful roof, but those on the market today are too big and destroy the scale of small buildings. If made smaller, they could be more widely used.

The old roofs were invariably long and narrow. The old builders rarely thought it necessary to introduce any variation from a perfectly plain roof, to break it up in any way, until a building had attained to certain dimensions, for they knew the value of a long unbroken roof line. Roofs of smaller dimensions, which most old ones were, came thus on plan to be simple parallelograms with one single ridge, like figures nine, ten, and eleven. It was because the old builders refused to break the roofs for small buildings that their designs were invariably good in scale. Lack of scale is a great defect of modern work. Most architects crowd their designs with too many features. The old builders knew better. They always aimed at breadth of treatment. In the case of small houses, they sought, wherever possible, to build in groups in order to get broad, simple effects. Modern houses in the suburbs are more and more being built separately, in order, it seems, to get as many features as possible. But it is a mistake.

When such houses or group of houses exceeded a certain length, they were in certain positions varied, as shown by figures thirteen



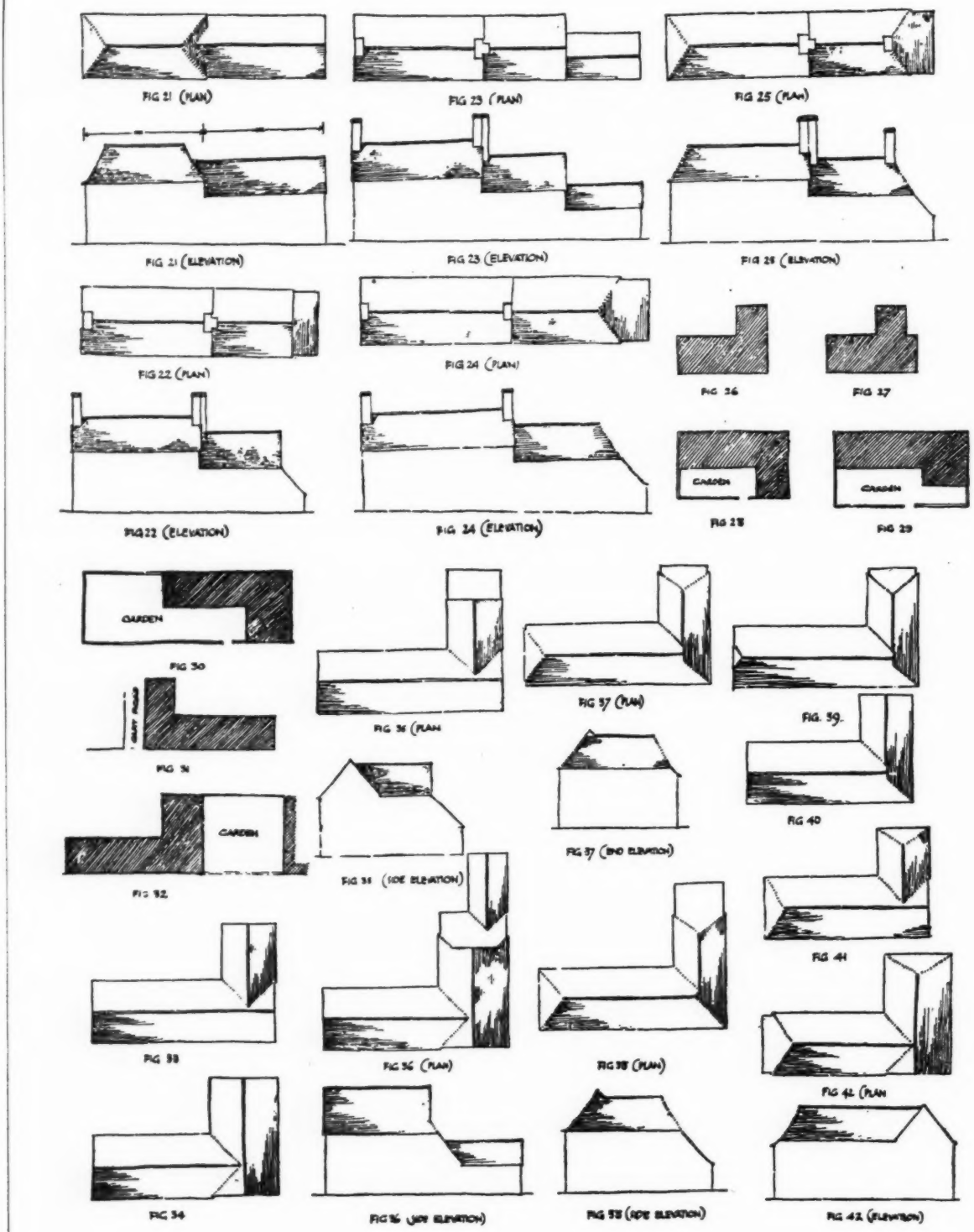


FIG 21 (PLAN)
FIG 23 (PLAN)
FIG 25 (PLAN)
FIG 21 (ELEVATION)
FIG 23 (ELEVATION)
FIG 25 (ELEVATION)
FIG 22 (PLAN)
FIG 24 (PLAN)
FIG 26
FIG 27
FIG 22 (ELEVATION)
FIG 24 (ELEVATION)
GARDEN
FIG 28
GARDEN
FIG 29
GARDEN
FIG 30
FIG 31
FIG 32
GARDEN
FIG 33 (SIDE ELEVATION)
FIG 35 (PLAN
FIG 37 (PLAN)
FIG. 39.
FIG 40
FIG 37 (END ELEVATION)
FIG 41
FIG 38
FIG 36 (PLAN)
FIG 38 (PLAN)
FIG 42 (PLAN
FIG 34
FIG 36 (SIDE ELEVATION)
FIG 38 (SIDE ELEVATION)
FIG 42 (ELEVATION)

and fourteen. Also the old builders were very fond of combining the long, narrow roof with a gable at both ends, or a gable at one end and a hipped end at the other, with a lean-to at the gable end, as in figures fifteen and sixteen; or they carried the lean-to higher, making it intersect the lower part of the gable, as in figure seventeen; or again they used some combination of these, as in figure eighteen.

Generally speaking, the old builders avoided breaks in the wall line. Where they made such breaks, it appears to have been for roof effects, as is evidenced by the fact that in such cases as are illustrated in figures thirteen, fourteen, and eighteen, the break occurs on the back elevation. If they required more accommodation on the ground floor (for strange to say they were satisfied with very little bedroom accommodation) they added a lean-to at the back of the house or carried the roof down, making a " cat slide," as in figures nineteen and twenty.

Then they were very fond of making one part of a roof higher than the other, either by putting some of the bedrooms partly in the roof, or by taking advantage of a rise in the ground, as in figures twenty-one, twenty-two, twenty-three, twenty-four, and twenty-five, or by any combination of these ideas that might suggest itself. In such circumstances care was always taken that the ridges should be of unequal length.

So far I have dealt with the types of roofs suitable for houses that were long and narrow. By combining these in different ways and varying the proportions between the different parts, they could be multiplied almost indefinitely. The custom in the past was to adopt the long narrow type of plan wherever possible and to depart from such a plan only after a building had attained to certain dimensions and where special circumstances of site suggested some other arrangement. Nine out of ten of the picturesque old houses are nothing more than parallelograms on plan.

The first departure from the long parallelogram type of plan was the L-shaped one which, next to the long narrow plan, was the most popular. When the L-shaped plan is used, one arm of the L is invariably much longer than the other, and generally wider, in order that one arm may be subordinated to the other. Furthermore, the old builders did not make a break in the line of the wall at the junction of the arm. Figure twenty-six shows the L plan as used by the old builders; figure twenty-seven, that generally used by modern architects. This variation by architects of today is due to the fact that their minds are occupied more with the secondary details than with the big fundamental ideas. If you ask most architects why they make such breaks, they will say that they want something against which to stop the eaves. Such considerations did not affect the old builders, who realized that every such break, by dividing up the wall space, tends to destroy breadth in design; and so they sacrificed secondary considerations to primary ones. Perhaps the reason why architects are tempted to make such needless breaks is because they give too much projection to the eaves. The old builders were satisfied with a six- or seven-inch projection apart from the rain-water gutter.

The next point to observe is that the old builders did not use the L-shaped plan in the fanciful way which obtains today. They never departed from the simple parallelogram except for some definite reason. Perhaps it was a corner site that suggested such an arrangement; or the site was restricted and it was impossible to secure the necessary accommodation in any other way. When the L-shaped plan was used for detached farmhouses where no such considerations could be urged, the old builders invariably sought to complete the parallelogram by means of a garden enclosed by walls, as shown in figures twenty-eight, twenty-nine, and thirty. In the case of an L-shaped house or group of houses appearing in a village street, it might be that a cart road at the side gave some justification, as in figure thirty-one; or perhaps the aim was to secure a garden at one end, as shown in figure thirty-two. In every case the departure from the simple parallelogram was justifiable, and was not simply a matter of whim or fancy.

We may now pass on to consider the various ways of roofing L-shaped buildings. Of these the simplest are those which use gables only. Figures thirty-three and thirty-four represent the alternatives. Variations of this arrangement can be made by adding a lean-to to one of the wings, as in figure thirty-five, or by adding a smaller roof at a lower level, as in figure thirty-six. Variants of this arrangement can be multiplied. The point to remember is to make one roof dominate.

Then there are the roofs in which hips only are used, as in figure thirty-seven. Interest is added by slight deviations from true hipped ends, as shown. This arrangement admits of still further variations. For instance, one of the hipped ends might be carried down as a " cat slide," as in figure thirty-eight; or a hipped gable may be substituted for one of the hipped ends, as in figure thirty-nine. Variations of this kind which prevent an exact repetition of the extremities are common. Sometimes a gablet (generally plastered and finished brown) is introduced at the angle at the apex of one of the roofs, as in figure thirty-seven, in order that a mitred ridge may be avoided. At other times the mitred ridge would be avoided by making one ridge the depth of a ridge tile below the other. The ridge tile in all cases would be half-round or hog's-back section.

[*To be concluded*]

THE DAMP-PROOF BUILDING

[BY WILLIAM BEESTON]

THE entire exclusion of damp from buildings has remained as a task for the architects and inventors of a quite recent period, but it may today be stated quite confidently that, if an architect is not too greatly handicapped by considerations of cost, there is little or no excuse for failure to provide a client with a thoroughly dry building. The " if " is, however, a large one, building costs being now almost double those of pre-war days and clients desiring in most cases to achieve big results at a small outlay.

It is an unpardonable sin on the part of the young architect, notwithstanding all handicaps, to provide a client with a leaky house. The offence may ultimately be lived down, but it is passed on from mouth to mouth and does him a great amount of harm.

In the course of a long practical experience the writer has observed a strange tendency, even in high quarters, to underrate the measures necessary for the exclusion of driving rains. The fact that such measures may vary considerably with the situation of a building is too often overlooked. Precautions that might be adequate, if not ample, in low-lying or otherwise protected situations may prove altogether futile on sites exposed, at high altitudes, to every wind of heaven, or on open sea-coast sites subject to the full fury of wet gales from the Atlantic. The writer was once invited to collaborate in the building of a house on an elevated site overlooking the English Channel, and had the greatest difficulty in convincing his colleague, unused to coast sites, that 9 in. solid roughcast outer walls would have no chance of resisting the effects of the weather at the site selected. In another case, in which the writer was merely an observer, a London architect of some note adopted as the outer first-floor walls of houses—on a site where the weather had an unobstructed sweep of half a mile to the walls—5 in. solid wood framing, the timbers grooved and the panels filled in with half brick with a roughcast face. A friendly warning was disregarded, with sad results to the health of the tenants and a final very expensive resort to battening and weather-tiling. In yet another instance, to the consternation of a very prominent architect, a 14 in. solid roughcast wall proved quite unable to resist the wet south-west gales of a very exposed coast site, the roughcast, by the way, being among the best the writer has ever seen.

The introduction of the hollow wall has greatly simplified the architect's task of providing a dry house. Various other expedients

exist, among which may be mentioned rendering a solid wall in cement and sand with or without waterproofing ingredients; roughcast combined with waterproofing materials; and walls built in two thicknesses with a cavity of about ½ in. in width grouted with neat cement. In the use of waterproofing powders or liquids incorporated with the rendering materials the workman too often defeats the architect's aim by careless or unequal mixing.

In passing it may be observed that the efficiency of a cement-rendered surface is greatly increased if the first coat is roughly trowelled with a steel trowel. This shuts up the pores of the material, while in no way interfering with the adhesion of a finishing coat or roughcast as the case may be. In brickwork, where the narrow cavity is grouted with neat cement at every second course, there is the danger of penetrable veins of mortar being allowed to fall into and remain in the cavity owing to lapses in the use of preventive wood fillets. Walls built in two thicknesses with ½ in. cavity, having a bituminous compound poured in hot, have had a considerable vogue. A perfect vertical seam of this kind would unquestionably be of extreme value, incidentally binding the two thicknesses of brickwork strongly together. This expedient is also subject to the danger of mortar being left in the cavity and preventing perfect adhesion between the successive pourings.

Weather tiling is a good cover for a thin, solid brick wall, but, although its æsthetic value is undeniable, it is a costly expedient because of the time taken up in cutting and fitting around openings and at other points.

The importance of a good damp-proof course to the walls need hardly be emphasized. It is well to see, personally, that the specified type of damp-proof course is actually provided and used; for, incredible as it may seem, a builder is occasionally found who, for the sake of saving a small sum, will introduce a cheap and useless substitute.

Cavities in hollow walls should in all cases start from the foundation concrete. This start should be well below the ground-floor line. It is, perhaps, not generally realized that the inner face of the outer half-brick of an ordinary hollow wall streams with wet when the bricks have become super-saturated in a driving rain of many hours' duration. If allowed to descend to the concrete the water will soak away harmlessly in the foundations. It is therefore essential that the bottom of the cavity should not be less than 1 ft. 6 in. below the ground-floor line and well below the damp-proof course. The writer has known a case in which the bottom of a cavity, only 9 in. below the floor-line, had become a veritable tank, owing to a continuous driving rain lasting for twenty-four hours, and where the damp struck up the inner half of the wall to a level a foot above the skirting.

Saturation by rain of the brickwork of chimneys will often cause damp to show in the interior chimney-breasts and other places.

Each brick will absorb several pounds of rain-water, and in long-lasting rains the water will circle the damp-proof course of the chimney and proceed downwards. This is not of much consequence where the chimney is at the ridge level, as there is a considerable length of shaft in the roof-space, where, in the attic-less house, the water is absorbed without showing in the rooms; but in chimneys near the eaves of a building great care is necessary to avoid trouble. Measures should be taken to enable the water to escape at a tile or other projection on the line—horizontal or stepped—of the chimneys' damp-proof course, and any space between the latter and the flashings should be waterproofed by rendering it with cement and sand.

The question of wall-ties is not irrelevant. It is possible that good cast-iron ties last much longer than wrought iron in cases where there is a perfectly rigid and reliable foundation to the walls, but any unequal settlement of the two thicknesses of the wall will snap them.

In a choice of wall-ties as little chance as possible should be given for the lodgment of mortar droppings, as rain will cross such lodgments and show in spots on the interior. Only by the most careful watch upon the erection of hollow walls can the workman's neglect to remove mortar-droppings from the ties be prevented in some cases.

For ordinary domestic buildings and minor commercial ones the hollow wall combines a moderate cost with a proved efficiency. The cavity has valuable insulating qualities when the free circulation of air in it is assured by means of air bricks inserted at damp-course and eaves levels.

Trays over door and window openings in hollow walls should overhang the lintel or arch not less than 2½ in., and should be depressed in such a way as to direct the drippings towards the outer wall of the cavity. Attempted economies in the provision of such trays can only result in the worst trouble. There is no efficient substitute for lead for this purpose, and a little reflection will show the folly of installing a perishable substitute to fulfil an important function in situations where their later replacement by a better material will be, to say the least, highly difficult and costly.

Entry of rain at well-made sliding-sash windows, or the now more popular hinged casement windows, is easily prevented. It is important that, in both kinds of window, deep sill-beads should be used, for in driving rains the joint between sill and bottom rail becomes charged with water, which a heavy shock of wind will cause to leap over a sill-bead of small depth. The side rebates also of solid frames should have grooves to conduct downwards any water entering at the joints, and, where there are transoms, there must be a good projection and drip.

Boarding and felting to roofs before applying battens for slates or tiles are always advisable, but, where economically impossible, a good waterproof felt resting on wire netting strained across the rafters is a fairly good substitute, excluding draughts (if the laps of the felt are properly supported) and conducting any water, whether from driven rain or snow, down to the eaves line. Counter-battens under slate or tile battens cost but little and are in the end economical. It is not generally recognized that all roofing tiles, but especially the sand-faced kind, absorb a good deal of water, and when only the thickness of a batten intervenes between them and the felt, their dampness conduces to rot in the felt, and in felt and boarding where the latter is used. Even in the case of slates there is a good deal of damp on the underside in long rains, and the use of counter-battens is quite advisable, as the additional space encourages the circulation of air and has a useful quick-drying effect.

The splendid adaptability of the English plain tile has favoured a custom which prevails of greatly flattening the pitch of a tiled roof near the eaves line. This custom is strongly to be deprecated. The rain-water, descending rapidly over the steeper portion of the roof, is checked on nearing the eaves line and super-saturates the tiles there, often to the dripping point, setting up rot in the battens, felt, and boarding. The whole roof should be allowed to drain freely to the gutter. A case is in mind in which, ten years after erection of a house, a large outlay for repairs was incurred owing to this flattening, with the further misfortune that it was necessary to reduce the projection of the eaves so much that the appearance of the house was badly affected.

Though not absolutely essential, it is well to " head " the courses of a plain tile roof in lime and hair mortar to prevent rain and snow from driving under. Galvanized cast-iron tile pins are a good type of fixing, and in no way interfere with the replacement of broken tiles. The nailing of tiles to the battens, even in occasional courses, is seldom justified. The nailing seriously interferes with repairs and is, moreover, in nearly all cases entirely needless, the weight of the tiles, except in quite unusually high and wind-swept positions, as well as the absence of any good grip for the wind, being sufficient safeguards against dislodgment.

It should be said that these notes are written for the younger members of the profession, and may possess no particular value for those of wider experience. If they serve to impress the fact that mistakes made while erecting a building are often, upon discovery, extremely difficult of correction, they may save a good deal of mortification and avert a large amount of blame.

Proto-Ionic Capital from Larissa. [*From* The Architecture of Ancient Greece.]

LITERATURE

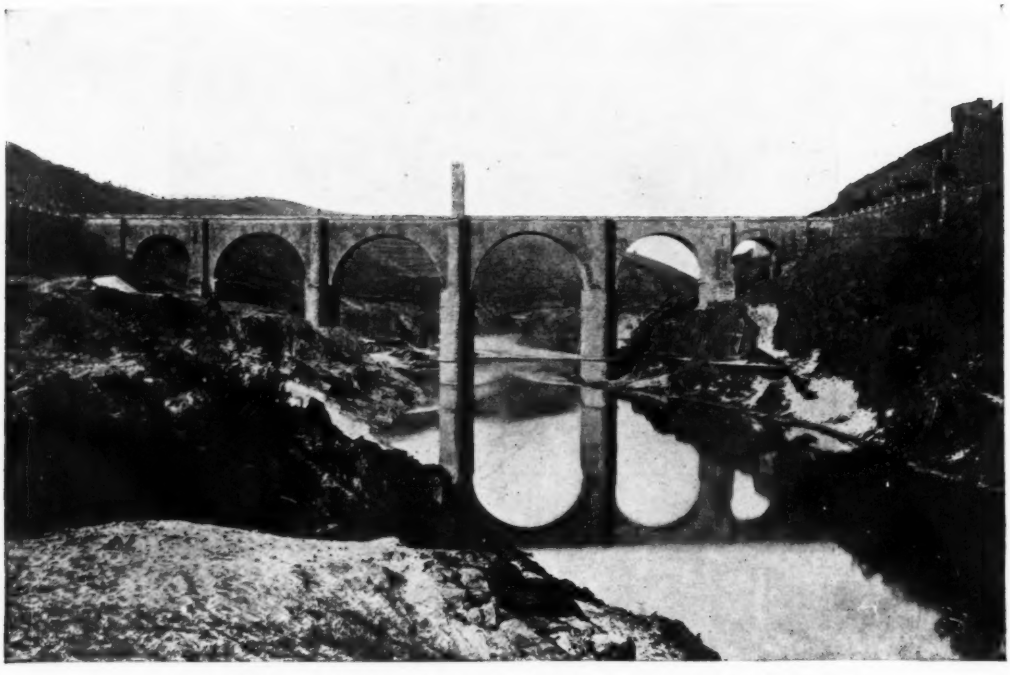
GREEK AND ROMAN ARCHITECTURE

THAT architecture is a science as well as an art is easier to realize in this age than in any other, for the scientific aspect is naturally prominent in a period of rapid scientific advance. Architecture is scientific in that men must erect buildings to house new enterprises, such as electric power-houses, radio-stations, laboratories, and the latest equipment for medical and surgical treatment and research. It is directly affected by science not only as to new needs, but as to new materials and methods. The art of architecture is also a science in itself; for it is a thing of ever expanding knowledge. Science possesses the two apparently conflicting qualities: exactitude and perpetual change. Exactitude, because even when it works upon a hypothesis it works upon a definite and stated hypothesis; perpetual change, because the search for truth and for the practical uses of theory is an unending search, and the landmarks are ever being moved as man advances into his newly consolidated territories of knowledge. Art, in some respects ephemeral and intangible, has also qualities that are essentially immutable and eternal.

And so the qualities of the scientific art of architecture, and its history of development, are a combination of the fixed and the mutable. In the introduction to the *Architecture of Ancient Greece* we read: "Art is a flower and, like a flower of the field, is sown in obscurity, nourished by the decay of pre-existing organisms, rooted in the mire of an imperfect civilization, and, though refined and perfected by high culture, buds and blooms at its own time." But even the "purely artistic" study of the flower borders upon the science of botany. It is because scientific exploration and research operate perpetually in the regions of architectural archæology, as well as in the realms of modern engineering and construction, that it was necessary to revise, largely re-write, re-illustrate, and expand into two volumes, Anderson and Spiers' *Architecture of Greece and Rome*. It is because architecture, as an art, endures in tangible fact, in fragments of history and tradition, and as a living, vital possession of the ages, that a new edition of the work has been launched. The inspirational value is an unchanging factor in the buildings of antiquity.

The portions of the record that lie farthest back along the road of history are the most prone to be disturbed by modern research, for the later the period the more definite and clear are traces of its civilization in actual visible memorials, and the less wide therefore is the margin of conjecture and error. And so it is in the earlier parts of the review and analysis of Greek architecture that the greatest amount of new material is introduced in the new edition, although emendations have also been made in the chronology and dimensions even of later buildings in the light of recent study. Since the second edition of the work, originally published in 1902, immense new fields have been opened up, particularly with regard to pre-classic building. To mention a date so far back as 8000 B.C. as a period of Cretan culture would have seemed fantastic even twenty years ago. "To the drama of the history of Greece, which not so long ago opened with the scenes of the *Iliad*, there has thus been unfolded at one and the same time a background and a prologue." Thus does Professor Dinsmoor, of the American Academy at Athens, describe changes in outlook and knowledge that the first quarter of the twentieth century has contributed. Domestic building runs like a continuous thread throughout the course of architectural history, and so it is natural that the volume should begin with the domestic buildings of Crete and end with the Hellenistic and Græco-Roman house. The intervening chapters trace the growth, flowering, and fruit of Greek architecture in its many aspects.

The Roman volume begins likewise with the round hut, and mentions in the final chapter the apartment house at Ostia, although the main portion of the book naturally considers in turn the fora of Rome, the collonaded streets of the Roman East, temples, theatres, thermæ, triumphal arches, bridges, and aqueducts. The aspect of the science of architecture which receives particular stress in this volume is that of materials and construction. Doctor Thomas Ashby, late director of the British School at Rome, prefaces the new edition of the Rome section, for which he is responsible, by saying: "The history of Roman architecture is perhaps more difficult to write at the present time than at any other. The critical examination of materials and methods of construction and of architectural forms has entered upon quite a new stage and a number of new problems present themselves for solution." He goes on to show how, despite constant devoted work by scholars and students, there is still an immense amount of valuable information undiscovered. In a more and more scrupulously scientific spirit must this research be undertaken, since records, statements, and theories must be as constantly checked and correlated where the history of an art such as architecture is concerned, as in any other branch of what is more



Roman Bridge at Alcantara. [*From* The Architecture of Ancient Greece.]

popularly acknowledged as a science. The aim of the editor of each volume has been to maintain as far as possible the programme, methods, and outlook of the original authors, and to set aside the natural inclination to assert personal opinions on points which may be still in debate. It is a difficult task at any time to revise other men's work. It is conspicuously difficult to bring up to date a work so well known. But throughout the two volumes into which it is now divided, it is evident that the two eminent scholars responsible have the strong-minded humility characteristic of the true scientist. It is clear also that no scientific formulæ or valuable tabulation of dates and of schools of workmanship can obscure the brilliant vitality that has made the building art of the two great nations of antiquity the inspiration of succeeding centuries of civilization. Both volumes are copiously illustrated with up-to-date photographs, drawings, and maps. V. M. C.

The Architecture of Ancient Greece. Anderson and Spiers. Revised and re-written by William Bell Dinsmoor. *The Architecture of Ancient Rome.* Anderson and Spiers. Revised and re-written by Thomas Ashby, D.LITT., F.S.A. Batsford. 21s. each vol.

CORRESPONDENCE

DESIGNING THE LAUNDRY

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Referring to the article in your issue for August 24, entitled "Designing the Laundry," I notice the authors refer to the trouble sometimes experienced due to condensation of moisture and drips from the roof, etc. I should like to point out that this can often be best overcome by installing a fan and air-heater to blow warm air into the room, rather than by trying to extract the steamy vapour by means of fans. The reason for this is that it is a well-known scientific fact that if air is raised in temperature by passing it over steam pipes or other form of air-heater its affinity for absorbing moisture is increased. If, therefore, air is drawn in from outside the building at, say, 40 or 50 deg. Fah., and raised in temperature up to, say, 100 deg. or more, it will be able to absorb a considerable amount of moisture before it reaches the dew point. This principle has for many years been made use of in the textile trade in Lancashire and Yorkshire in dye houses and bleachworks. Many hundreds of hot-air plants have been installed to prevent trouble with condensation and risk of spoiling fabrics with drips. Though the conditions are somewhat similar in laundries very few of the latter have installed similar plants.

One of the simplest forms of installation is to fix a steam turbine-driven propeller type fan drawing air through a cast-iron or wrought-iron tubular air-heater in the gable or end wall of the washhouse at a fairly high level. The air is blown across the room, and in its transit absorbs the steamy vapour. The exhaust steam from the little turbine passes through the air-heater warming the air, and the condensed steam being quite free from oil can be used for washing purposes, or returned to the boiler for feed purposes. If preferred, a belt-driven or electric-driven fan can be used. Care must be taken to provide openings or louvres in the roof to allow the warmed air to escape.

If the laundry is a very large one a more elaborate type of plant may be required, consisting of a centrifugal fan with a system of air-ducts to deliver the air to the points where most vapour is given off. The fan in this case also can be steam, electric, or belt-driven. For the average laundry, however, the installation of, say, a 24 in. or 30 in. diameter turbine-driven propeller with suitable air-heater would get over any troubles due to condensation.

A. FLEMING BROWNE

THE ARCHITECT'S LIABILITY

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—The writer of your leading article of August 24 expresses the view that the architect glories in his professional responsibilities, and resents any indication that he is not to be called upon to accept them in full measure. Some of your readers may possibly question this sweeping generality, and point to the fact that it has been the common practice of many architects to insure themselves against professional risks and responsibilities just as they do against other risks. There is nothing new in the objects of the Architects' Defence Union *per se*. The advantage of membership is that it enables those concerned, by co-operative effort,

to obtain from the Union protection of a nature and to an extent which they cannot get elsewhere in an individual capacity at the nominal annual premium quoted by the Union.

C. MCARTHUR BUTLER,
Secretary of the Architects', Engineers', and Surveyors' Defence Union.

To the Editor of THE ARCHITECTS' JOURNAL

SIR,—Readers of the leading article in your issue for August 24 must surely have experienced some discouragement, on reaching its conclusion, to learn that the responsibilities in which they "glory" are appraised by "skilled actuaries" at the very modest rate of £3 13s. 6d. per head per annum.

Such, however, may take comfort from the consideration that it is not, after all, quite the whole of their liability to dignify their calling by submitting to undeserved pecuniary loss associated with allegation of "default, neglect or error," which is abrogated by the payment of this sum; but on occasion arising, there will still remain to the architect concerned the opportunity to minister to "the respect and esteem which is associated with his calling" by a payment varying from £25 or £75 to, in defined cases, the whole amount of the loss.

LEONARD LAIT

COMPETITION CALENDAR

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

October 31. Designs are invited by the Herne Bay Urban District Council for the erection of municipal buildings and business premises on a prominent site at Herne Bay. The President of the R.I.B.A. has nominated Professor A. E. Richardson, F.S.A., F.R.I.B.A., to act as assessor. Premiums: £150, £100, £50. Printed conditions can be obtained from the Clerk to the Council, Westminster Bank House, Herne Bay. A deposit of one guinea is required for a set of the printed conditions, which will be returned upon the submission of a bona fide design.

November 30. New town hall and municipal buildings, proposed to be erected on a site in the Broadway, Wimbledon, for the Wimbledon Corporation. Assessor: Mr. H. V. Ashley, F.R.I.B.A. Premiums: £200, £150, and £75. Particulars from Mr. Herbert Emerson Smith, LL.B., Town Clerk. Deposit £2 2s.

THE MIDLAND BUILDING EXHIBITION

The second Midland Building and Allied Trades Exhibition was opened at Birmingham on September 5, and will remain open until September 17. It has been organized by the Birmingham Chamber of Commerce (Inc.) in response to representations from the majority of exhibitors at the exhibition which the Chamber originated in 1925. The present exhibition, taking into account the progress made in many special branches, necessarily covers a much wider field than its forerunner. The aim has been to show the latest developments, not only in building construction, but also in the allied trades. Wherever practicable, recent progress is demonstrated by working machinery. The newest methods of heating, lighting, and ventilation are also shown in operation; the regulation of temperature in the broadest sense, from the production of heat for culinary purposes to the preservation of even atmosphere throughout the home or the factory, forms one of the most important sections. In wood-working machinery many new devices are displayed for the first time. Structural steel work, metal partitions and screens, and expanded metal for a hundred different purposes, form another notable section; the decorative arts are also strongly represented. Builders' ironmongery and hardware present many new features of interest. Sanitary apparatus, fittings, and other equipment for the home and garden, from bath and piano to rockery and sundial are also exhibited. The exhibitors come from all parts of Britain. Under the auspices of the leading architectural and trade associations, daily conferences are to take place in a special pavilion.

TRADE NOTES

Until September 9 the travelling exhibit of the National Radiator Company, Ltd., which is fitted with a working installation of the Ideal Cookanheat and Ideal Classic radiators, will be in the Covered Market Square, Birkenhead. On September 12 the exhibit will be in the Little Roodee Parking Ground, Chester, and on September 14 at the rear of the Palladium Theatre, Prestatyn.

At this time of year, when holidays are so much in our thoughts, the thermometer and the barometer assume growing importance. With the comparatively simple types of apparatus we are all familiar; but these are only a very small proportion of the various types of temperature and pressure recorders which are now being used in this country. Messrs. Negretti and Zambra have a factory in North London in which a remarkable variety of instruments is made. The story of their work has been published, by arrangement with the British Commercial Gas Association, in the current issue (No. 161) of *A Thousand and One Uses for Gas*, which contains illustrations showing some of the many scientific gas-heated appliances used in the factory to bring thermometers and other scientific apparatus to that state of perfection always expected of instruments on which "N & Z" is stamped. A copy of this interesting publication can be obtained free of charge on application to the Secretary, The British Commercial Gas Association, 28 Grosvenor Gardens, London, S.W.1.

NEW INVENTIONS

[The following particulars of new inventions are specially compiled for THE ARCHITECTS' JOURNAL, by permission of the Controller of H.M. Stationery Office, by our own patent expert. All inquiries concerning inventions, patents, and specifications should be addressed to the Editor, 9 Queen Anne's Gate, Westminster, S.W.1. For copies of the full specifications here enumerated readers should apply to the Patent Office, 25 Southampton Buildings, W.C.2. The price is 1s. each.]

LATEST PATENT APPLICATIONS

21813. Brucklacher, K. Adjustable shore for building construction. August 18.
21475. Dennis, J. E. Metal window construction. August 15.
21714. Trewen, E. J. Walls, &c. August 17.
21563. Handelmaatschappij, Cuba. Process for applying plywood to walls, &c. August 16.
21625. Morton, F. Spring floors. August 16.

SPECIFICATIONS PUBLISHED

275680. Robins, F. A., and Taylor, F. M. Concrete building block.
275744. Leighton, J. M. Ventilation and warming of houses and other buildings having cavity walls.
275772. Sargint, A. M., and Crowe, G. W. Composition of matter adapted for use as paints, plasters, cements, putties, fillers, and the like, and the treatment of surfaces for the protection, repair, or ornamentation thereof.
274017. Buitenhuis, A. J. Process of and means for making building materials, walls, cellars, and the like watertight.
267484. Piehler, K. Process for mixing concrete.

ABSTRACT PUBLISHED

273501. Barr, A. Ladder brackets.

THE WEEK'S BUILDING NEWS

The Lancashire Education Committee has voted a sum of £14,450 for the erection of extensions at the Grammar School at HINDLEY.

*

The Herts Education Committee has asked the county surveyor to prepare plans, in conjunction with the chief education officer, and specifications and estimates, for the erection of a practical instruction centre at EAST BARNET Valley.

*

The managers of the St. Walburga's School, BOURNEMOUTH, are proposing the erection of new schools in Yelverton Road.

*

The GLASGOW Corporation Electricity Committee has obtained a site in Lancaster Crescent Lane for the erection of a sub-station.

*

Plans and reports on the future development of the County of HERTFORD are being prepared on behalf of the County Council, and the Lea Conservancy Board is supplying particulars as to the traffic on such parts of the Lea and Stort navigations as affect the county, and other information which will emphasize the value of waterways as a means of communication and their relation to future industrial development.

*

The Durham County Education Committee has obtained a site in Bullion Lane, CHESTER-LE-STREET, for the erection of an elementary school.

*

The borough engineer of the BOURNEMOUTH Corporation has prepared sketch plans for the erection of a chapel in the north cemetery.

*

Plans passed by the HERNE BAY U.D.C.: Two bungalows, Linden Avenue, for Mr. H. Pettman; two houses, Ridgway, for Mr. A. E. Nightingale; three bungalows, Bournemouth Drive, for Mr. H. C. Box.

*

The Kent Education Committee has purchased land in Halfway Street, SIDCUP, for the erection of a junior and infants' school.

*

Plans passed by the FULHAM B.C.: Stables and loading-sheds, adjacent to Parsons Green Railway Station, for London Co-operative Society; machine-shop, Willow Bank Wharf, for Messrs. Fennings & Co.

*

The WARWICKSHIRE C.C. is conferring with the Solihull R.D.C. on the subject of the proposed by-pass road at Knowle.

*

The DEAL Corporation is seeking sanction for a loan of £9,000 for the construction of a new band pavilion on the front.

The Essex Education Committee has obtained sanction to borrow £12,000 for the erection of an elementary school at Richmond Avenue, SHOEBURYNESS.

*

The GLASGOW Corporation is applying to the Ministry of Transport for an increase in the grant, from 25 per cent. to 33 per cent., in connection with the construction of the bridge over the River Kelvin in the Botanic Gardens.

*

Terms have been arranged with the Southern Railway, by the Margate Corporation, for the construction of a bridge to replace the level crossing at MUTRIX, the cost being estimated at £12,500.

*

The Warwick county surveyor has had a survey prepared of the COLESHILL bridges and approaches, and will shortly be submitting a scheme for an improvement.

*

The GLASGOW Corporation has obtained an order for the construction of the proposed Finnieston Bridge, and a sub-committee has been appointed to prepare the details of the proposal.

*

The West Riding Education Committee is seeking sanction to borrow £17,000 for the erection of an elementary school at GUISELEY.

*

The West Riding C.C. has voted an estimate of £7,500 for widening High Bridge, KNARESBOROUGH.

*

The STAINES U.D.C. is urging for the widening of the Staines county bridge.

*

The Middlesex Education Committee is seeking sanction for a loan for the enlargement of the Woodthorpe Road school, ASHFORD.

*

Sanction is to be asked for by the WALSALL Corporation to borrow £31,000 for the erection of an isolation hospital at Goscote.

*

The BOURNEMOUTH Education Committee has accepted the tender of Messrs. Hawkins Bros., £16,557 17s. 7d., for the erection of an elementary school at CHARMINSTER.

*

Plans passed by the CHORLEY Corporation: Branch premises, Pilling Lane, for Chorley Co-operative Society, Ltd.; two bungalows and four houses, Claremont Avenue, for Messrs. J. W. Lee, Ltd.

*

The Durham County Education Committee has acquired a site on the Grove estate, CONSETT, for the erection of an elementary school.

The Derbyshire C.C. is to widen the Staveley Bridge at NORBRIGGS.

*

The HERNE BAY U.D.C. is borrowing £10,000 for further housing advances.

*

The Warwickshire C.C. has instructed the county surveyor to proceed with the widening of the Stratford-Evesham main road between BINTON and Bidford, at an estimated cost of £10,000.

*

Agreements have been made between the Lancashire C.C., the Chadderton U.D.C., and the Rochdale Canal Company for the construction of a new lift bridge over the canal at Grinshaw Road, CHADDERTON.

*

Plans have been prepared by the Lancashire Education Committee for the erection of an elementary school at HAVERTHWAITE, at a cost of £11,000.

*

The West Riding Education Committee has purchased a site at LINTHWAITE for the erection of a middle school.

*

The Warwickshire C.C. has asked the county surveyor to prepare plans and estimates for widening the whole of the Castle Bromwich-Water Orton main road, CASTLE BROMWICH.

*

The Catholic Trustees have obtained sanction from the Board of Education to their proposals for the erection of a central school at CHORLEY, to accommodate 500 scholars.

*

Mr. A. C. Hunter is to construct roads and sewers on the Brightlands estate, BOURNEMOUTH.

*

A revised lay-out of the Rumford Street housing scheme has been approved by the GLASGOW Corporation Housing Committee.

*

The LLANDUDNO U.D.C. has accepted the tender, £11,547, of Messrs. W. Dobinson and Son, of Llandudno, for the erection of twenty-three houses on the Trinity Street estate.

*

The BOURNEMOUTH Corporation has obtained sanction to borrow £10,000 for further housing advances.

*

The HULL Corporation will shortly begin the construction of a new pedestrian and vehicular bridge over the river between the oil milling quarter of the port and the business centre of the city. The new bridge, which will replace the present inadequate structure, will cost £100,000, and the Ministry of Transport is to bear half the cost.

An open-air swimming bath for WEALDSTONE is proposed.

*

After an examination of their standing and their guarantees, two companies have been considered to fulfil the necessary conditions for participating in the impending tender for the construction of many hundred miles of asphalt roads throughout GREECE, at an expenditure of £6,000,000.

*

The announcement has been made that the Ministry of Health has given its sanction to the HULL Corporation to expend £150,000 towards the erection of the buildings required for a university for Hull. This sum will be lent to the Corporation and will be repayable over a period of years. The new university will be erected on a site between Hull and Cottingham, and will be built from a nucleus fund of £250,000 sterling given by the Right Honourable Thomas Robinson Ferens, Lord Steward of Hull.

*

Plans for the establishment at Shenley of a new centre for the treatment of mental defectives have been submitted to the Ministry of Health by the MIDDLESEX County Council. It is proposed to build two separate institutions, each accommodating 2,000 patients, on the Porters Park estate, and what was formerly Shenley Aerodrome. One of these institutions will be a hospital, in which the most modern methods of treatment will be applied with appropriate equipment to the cure of patients, and the other a village, pleasantly designed on a spacious scale, where patients will be divided into a greater number of grades than has ever before been considered practicable. It is estimated that the cost of the new centre will be in the neighbourhood of £2,000,000, and, in all, 1,167 acres have been secured. It is proposed to allot 400 acres to the colony for mental defectives. There will be special houses for difficult cases, a separate quarter for children, a large school, and a recreation hall. The hospital section will consist of a large administrative block having committee rooms and offices, a laboratory, an assembly hall capable of accommodating 1,000 people, a stage for a cinema and concerts, a church to hold 800, a gymnasium, and nurses' homes, a laundry, and workshops. One portion of the hospital will be set aside for dangerous cases, and there will be separate houses for numbers of patients varying between thirty and eighty.

*

The Merioneth Education Committee is seeking sanction to borrow £9,500 for extensions at the County School, FESTINIOG.

*

The Board of Control is urging the DENBIGH C.C. to proceed with the scheme for the provision of a mental colony on the Coed Du estate, which has already been purchased by the authority.

The East Suffolk C.C. has agreed to a scheme for alterations and extensions at the mental institution, KEDINGTON.

*

The Norfolk Education Committee has decided to erect a new senior mixed school at HOLT.

*

The DEWSBURY Corporation has obtained sanction to grant a further hundred housing subsidies.

*

The Norfolk Standing Joint Committee has prepared plans for the erection of a police house at HETHERSETT.

*

A village institute is to be erected by the HORSFORD (Norfolk) Parish Council.

*

The Norfolk Education Committee is to erect a secondary school at DOWNHAM.

*

The Norfolk Education Committee has decided to erect a new elementary school at WELLS.

*

The governors of the Paston Grammar School, NORTH WALSHAM, Norfolk, have prepared plans for extensions.

*

The Norfolk C.C. has asked the county surveyor to prepare sketch plans for additional office accommodation on a site in Thorpe Road, NORWICH.

*

The Norfolk Education Committee is raising a loan for the erection of a school house at MELTON CONSTABLE Higher Standard school.

*

The governors of the WISBECH Grammar School are asking the county education committee for a grant towards the cost of a scheme for extensions.

*

Land on Sir Edward Stracey's estate at BUXTON, Norfolk, is being developed for buildings.

*

Messrs. Roy, of Wroxham, are to erect a store in Stalham Road, Hoveton St. John, NORFOLK.

*

The Norfolk Standing Joint Committee has prepared plans for the reconstruction of the police quarters at Dereham, Holt, and Lodden.

*

The Guinness Trust is negotiating with the CHELSEA B.C. for the acquisition of Wimsett's Nursery site for the erection of tenements.

*

The Bedfordshire Education Committee is to proceed with the erection of a modern school for girls at LUTON.

*

The WIGAN Education Committee is to erect an elementary school in Leader Street.

Plans passed by the UXBRIDGE U.D.C.: Alterations, 21 Windsor Street, for Messrs. J. Dewhurst & Co.; dental surgery, St. Andrews, for Mr. J. Zenober.

*

Plans passed by the AUDENSHAW U.D.C.: Extensions, works of Messrs. Robert Noblett, Ltd.

*

The Tynemouth and District Electric Traction Co., Ltd., has prepared plans for extending their bus garage at Percy Main, TYNEMOUTH.

*

The TYNEMOUTH Corporation has obtained sanction to grant a further fifty housing subsidies.

*

The TYNEMOUTH Education Committee is obtaining a site in Oswyn Terrace, Balkwell, for the erection of an elementary school.

*

Plans passed by the TYNEMOUTH Corporation: Eighteen houses, St. George's Road, for Messrs. Beautyman and Gray; fourteen houses, Foxton Avenue, for Mr. J. R. Wallace; sixteen houses, Hather Avenue, for Messrs. H. D. Burton, Ltd.; nine garages, Alma Place, for Mr. J. F. Bowman.

*

Messrs. F. R. N. Haswell and Son, who are developing the St. George's estate, TYNEMOUTH, for Messrs. J. and J. Robinson, are to erect thirty-two semi-detached houses in Foxton Avenue and St. George's Road.

*

The STOCKTON Corporation is to have further plans for the proposed new town hall and municipal offices.

*

The WIGAN Corporation has obtained sanction to borrow £12,000 for the provision of additional accommodation at the town hall.

*

The TAUNTON Corporation is to proceed with a scheme for the provision of public baths on a site in St. James's Street.

*

The ST. IVES Corporation has asked a committee to report upon a proposal for the erection of a town hall.

*

The EGHAM U.D.C. is negotiating for a site for a new fire station.

*

The BRIDPORT Education Committee is to provide additional accommodation at the secondary school.

*

The MERIONETH C.C. has appointed a committee to consider the provision of additional accommodation for mental defectives.

*

The East Suffolk County Council has obtained sanction for a loan for the provisions of a headquarters garage and depot at St. Helen's Street, IPSWICH.

RATES OF WAGES

			I	II
			s. d.	s. d.
A	ABERDARE	S. Wales & M.	1 8	1 3½
A₁	Abergavenny	S. Wales & M.	1 7½	1 2½
B	Abingdon ..	S. Counties	1 6	1 1½
A	Accrington	N.W. Counties	1 8	1 3½
A₂	Addlestone	S. Counties	1 6½	1 2
A	Adlington ..	N.W. Counties	1 8	1 3½
A	Airdrie ..	Scotland	*1 8	1 3½
C₁	Aldeburgh	E. Counties	1 4	1 0½
A	Altrincham	N.W. Counties	1 8	1 3½
B₂	Appleby ..	N.W. Counties	1 4½	1 0½
A	Ashton-under-Lyne	N.W. Counties	1 8	1 3½
A₂	Atherstone	Mid. Counties	1 6½	1 2
B₂	Aylesbury ..	S. Counties	1 4½	1 0½
B₂	BANBURY	S. Counties	1 4½	1 0½
B₂	Bangor ..	N.W. Counties	1 5	1 1
A	BarnardCastle	N.E. Coast	1 8	1 3½
A	Barnsley ..	Yorkshire	1 8	1 3½
B₁	Barnstaple	S.W. Counties	1 5½	1 1½
A	Barrow ..	N.W. Counties	1 8	1 3½
A	Barry ..	S. Wales & M.	1 8	1 3½
B₂	Basingstoke	S.W. Counties	1 4½	1 0½
B	Bath ..	S.W. Counties	1 6	1 1½
A	Batley ..	Yorkshire	1 8	1 3½
B	Bedford ..	E. Counties	1 6	1 1½
A₂	Berwick-on-Tweed	N.E. Coast	1 7	1 2½
A₂	Bewdley ..	Mid. Counties	1 7	1 2½
B₂	Bicester ..	Mid. Counties	1 4½	1 0½
A	Birkenhead	N.W. Counties	*1 10	1 4½
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
B₂	Bognor ..	S. Counties	1 4½	1 0½
A	Bolton ..	N.W. Counties	1 8	1 3½
A₂	Boston ..	Mid. Counties	1 6½	1 2
B₁	Bournemouth	S. Counties	1 6	1 1½
B₂	Bovey Tracey	S.W. Counties	1 5	1 1
A	Bradford ..	Yorkshire	1 8	1 3½
A₂	Brentwood	E. Counties	1 7	1 2½
A	Bridgend ..	S. Wales & M.	1 8	1 3½
B₂	Bridgwater	S.W. Counties	1 5	1 1
A₁	Bridlington	Yorkshire	1 7½	1 2½
A	Brighouse	Yorkshire	1 8	1 3½
B₁	Brighton ..	S. Counties	1 6	1 1½
A	Bristol ..	S.W. Counties	1 8	1 3½
B₂	Brixham ..	S.W. Counties	1 4½	1 0½
A₂	Bromsgrove	Mid. Counties	1 7	1 2½
C	Bromyard ..	Mid. Counties	1 4	1 0½
A	Burnley ..	N.W. Counties	1 8	1 3½
A	Burslem ..	Mid. Counties	1 8	1 3½
A₂	Burton-on-Trent	Mid. Counties	1 7	1 2½
A	Bury ..	N.W. Counties	1 8	1 3½
A₁	Buxton ..	N.W. Counties	1 7½	1 2½
B	CAMBRIDGE	E. Counties	1 6	1 1½
B₂	Canterbury	S. Counties	1 4½	1 0½
A	Cardiff ..	S. Wales & M.	1 8	1 3½
A	Carlisle ..	N.W. Counties	1 8	1 3½
B	Carmarthen	S. Wales & M.	1 6	1 1½
B₂	Carnarvon	N.W. Counties	1 5	1 1
A₁	Carnforth ..	N.W. Counties	1 7½	1 2½
A	Castleford	Yorkshire	1 8	1 3½
B₁	Chatham ..	S. Counties	1 5½	1 1½
B₁	Chelmsford	E. Counties	1 5½	1 1½
A₂	Cheltenham	S.W. Counties	1 6½	1 2
A	Chester ..	N.W. Counties	1 8	1 3½
A	Chesterfield	Mid. Counties	*1 8	1 3½
B₂	Chichester	S. Counties	1 4½	1 0½
A	Chorley ..	N.W. Counties	1 8	1 3½
B₂	Cirencester	S. Counties	1 5	1 1
A	Clitheroe ..	N.W. Counties	1 8	1 3½
A	Clydebank	Scotland	1 8	1 3½
A	Coalville ..	Mid. Counties	1 8	1 3½
B₁	Colchester ..	E. Counties	1 5½	1 1½
A	Colne ..	N.W. Counties	1 8	1 3½
B₁	Colwyn Bay	N.W. Counties	1 5½	1 1½
A	Consett ..	N.E. Coast	1 8	1 3½
B₁	Conway ..	N.W. Counties	1 5½	1 1½
A	Coventry ..	Mid. Counties	1 8	1 3½
A₂	Crewe ..	N.W. Counties	1 6½	1 2
A₂	Cumberland	.....	1 6½	1 2
A	DARLINGTON	N.E. Coast	1 8	1 3½
A	Darwen ..	N.W. Counties	1 8	1 3½
B₂	Deal ..	S. Counties	1 4½	1 0½
B₁	Denbigh ..	N.W. Counties	1 5½	1 1½
A	Derby ..	Mid. Counties	1 8	1 3½
A	Dewsbury ..	Yorkshire	1 8	1 3½
B	Didcot ..	S. Counties	1 6	1 1½
A	Doncaster	Yorkshire	1 8	1 3½
C₁	Dorchester	S.W. Counties	1 4	1 0½
A₂	Driffield ..	Yorks	1 6½	1 2
A₂	Droitwich ..	Mid. Counties	1 6½	1 2
A₁	Dudley ..	Mid. Counties	1 7½	1 2½
A	Dundee ..	Scotland	1 8	1 3½
A	Durham ..	N.E. Coast	1 8	1 3½
B₁	EASTBOURNE	S. Counties	1 6	1 1½
A	Ebbw Vale	S. Wales & M.	1 8	1 3½
A	Edinburgh	Scotland	1 8	1 3½
A	E. Glamorganshire & Monmouthshire	S. Wales & M.	1 8	1 3½
B	Exeter ..	S.W. Counties	*1 7	1 2½
B₂	Exmouth ..	S.W. Counties	1 5	1 1
B	FELIXSTOWE	E. Counties	1 6	1 1½
A₂	Filey ..	Yorks	1 6½	1 2
A	Fleetwood ..	N.W. Counties	1 8	1 3½
B₂	Folkestone	S. Counties	1 5	1 1
A	Frodsham ..	N.W. Counties	1 8	1 3½
B₂	Frome ..	S.W. Counties	1 4½	1 0½
A	GATESHEAD	N.E. Coast	1 8	1 3½
B₁	Gillingham	S. Counties	1 5½	1 1½
A₂	Gloucester	S.W. Counties	1 6½	1 2
A₂	Goole ..	Yorkshire	1 7	1 2½
B	Gosport ..	S. Counties	1 6	1 1½
A₂	Grantham	Mid. Counties	1 6½	1 2
A₁	Gravesend	S. Counties	1 7½	1 2½
A	Greenock ..	Scotland	*1 8	1 3½
A	Grimsby ..	Yorkshire	1 8	1 3½
B₁	Guildford ..	S. Counties	1 5½	1 1½
A	HALIFAX ..	Yorkshire	1 8	1 3½
A	Hanley ..	Mid. Counties	1 8	1 3½
A	Harrogate	Yorkshire	1 8	1 3½
A	Hartlepools	N.E. Coast	1 8	1 3½
B₂	Harwich ..	E. Counties	1 5	1 1
B₂	Hastings ..	S. Counties	1 4½	1 0½
B₁	Hatfield ..	S. Counties	1 5½	1 1½
B	Hereford ..	S. W. Counties	1 6	1 1½
B	Hertford ..	E. Counties	1 5½	1 1½
A₁	Heysham ..	N.W. Counties	1 7½	1 2½
A	Howden ..	N.E. Coast	1 8	1 3½
A	Huddersfield	Yorkshire	1 8	1 3½
A	Hull ..	Yorkshire	1 8	1 3½

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

			I	II
			s. d.	s. d.
A	ILKLEY ..	Yorkshire	1 8	1 3½
A	Immingham	Mid. Counties	1 8	1 3½
B	Ipswich ..	E. Counties	1 6	1 1½
C₁	Isle of Wight	S. Counties	1 4	1 0½
A	JARROW ..	N.E. Coast	1 8	1 3½
A	KEIGHLEY	Yorkshire	1 8	1 3½
B₁	Kendal ..	N.W. Counties	1 5½	1 1½
B₁	Keswick ..	N.W. Counties	1 5½	1 1½
B	Kettering ..	Mid. Counties	1 6	1 1½
A₂	Kidderminster	Mid. Counties	1 7	1 2½
B₂	King's Lynn	E. Counties	1 5	1 1
A	LANCASTER	N.W. Counties	1 8	1 3½
A₂	Leamington	Mid. Counties	1 7	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
B₂	Lewes ..	S. Counties	1 4½	1 0½
A₂	Lichfield ..	Mid. Counties	1 6½	1 2
A	Lincoln ..	Mid. Counties	1 8	1 3½
A	Liverpool ..	N.W. Counties	*1 10	1 4½
B	Llandudno	N.W. Counties	1 5½	1 1½
A	Llanelly ..	S. Wales & M.	1 8	1 3½
	London (12 miles radius)		1 9½	1 4½
	Do. (12-15 miles radius)		1 9	1 4
A	Long Eaton	Mid. Counties	1 8	1 3½
A	Loughborough	Mid. Counties	1 8	1 3½
B	Luton ..	E. Counties	1 6	1 1½
A	Lytham ..	N.W. Counties	1 8	1 3½
A₁	MACCLESFIELD	N.W. Counties	1 7½	1 2½
B	Maidstone	S. Counties	1 5½	1 1½
A₂	Malvern ..	Mid. Counties	1 6½	1 2
A	Manchester	N.W. Counties	1 8	1 3½
A	Mansfield ..	Mid. Counties	1 8	1 3½
B₂	Margate ..	S. Counties	1 4½	1 0½
A₂	Matlock ..	Mid. Counties	1 6½	1 2
A	Merthyr ..	S. Wales & M.	1 8	1 3½
A	Middlesbrough	N.E. Coast	1 8	1 3½
A₂	Middlewich	N.W. Counties	1 6½	1 2
B₂	Minehead ..	S.W. Counties	1 5	1 1
A	Monmouth & S. and E. Glamorganshire	S. Wales & M.	1 8	1 3½
A₁	Morecambe	N.W. Counties	1 7½	1 2½
A₂	NANTWICH	N.W. Counties	1 6½	1 2
A	Neath ..	S. Wales & M.	1 8	1 3½
A	Nelson ..	N.W. Counties	1 8	1 3½
A	Newcastle ..	N.E. Coast	1 8	1 3½
A	Newport ..	S. Wales & M.	1 8	1 3½
A	Normanton	Yorkshire	1 8	1 3½
A₂	Northampton	Mid. Counties	1 7	1 2½
A	North Staffs.	Mid. Counties	1 8	1 3½
A	North Shields	N.E. Coast	1 8	1 3½
A₂	Norwich ..	E. Counties	1 6½	1 2
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
A₂	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
A₂	Peterborough	Mid. Counties	1 6½	1 2
A	Plymouth	S.W. Counties	*1 8	1 3½
A	Pontefract	Yorkshire	1 8	1 3½
A	Pontypridd	S. Wales & M.	1 8	1 3½
B	Portsmouth	S. Counties	1 6	1 1½
A	Preston ..	N.W. Counties	1 8	1 3½
A	QUEENSFERRY	N.W. Counties	1 8	1 3½
B	READING ..	S. Counties	1 6	1 1½
B	Reigate ..	S. Counties	1 5½	1 1½
A₂	Retford ..	Mid. Counties	1 6½	1 2
A	Rhondda Valley	S. Wales & M.	1 8	1 3½
A₂	Ripon ..	Yorkshire	1 6½	1 2
A	Rochdale ..	N.W. Counties	1 8	1 3½
B	Rochester ..	S. Counties	1 5½	1 1½
A₁	Ruabon ..	N.W. Counties	1 7½	1 2½
A₂	Rugby ..	Mid. Counties	1 8	1 3½
A₂	Rugeley ..	Mid. Counties	1 6½	1 2
A	Runcorn ..	N.W. Counties	1 8	1 3½
A₂	ST. ALBANS	E. Counties	1 6½	1 2
A	St. Helens	N.W. Counties	1 8	1 3½
B₂	Salisbury	S.W. Counties	1 4½	1 0½
A₁	Scarborough	Yorkshire	1 7½	1 2½
A	Scunthorpe	Mid. Counties	1 8	1 3½
A	Sheffield ..	Yorkshire	1 8	1 3½
A	Shipley ..	Yorkshire	1 8	1 3½
A₂	Shrewsbury	Mid. Counties	1 6½	1 2
A₂	Skipton ..	Yorkshire	1 7	1 2½
B	Slough ..	S. Counties	1 5½	1 1½
A₂	Solihull ..	Mid. Counties	1 7	1 2½
A₂	South'pton	S. Counties	1 6½	1 2
B₁	Southend-on-Sea	E. Counties	1 5½	1 1½
A	Southport ..	N.W. Counties	1 8	1 3½
A	S. Shields ..	N.E. Coast	1 8	1 3½
A₂	Stafford ..	Mid. Counties	1 7	1 2½
A	Stockport ..	N.W. Counties	1 8	1 3½
A	Stockton-on-Tees	N.E. Coast	1 8	1 3½
A	Stoke-on-Trent	Mid. Counties	1 8	1 3½
B	Stroud ..	S.W. Counties	1 5½	1 1½
A	Sunderland	N.E. Coast	1 8	1 3½
A	Swadlincote	Mid. Counties	1 8	1 3½
A	Swansea ..	S. Wales & M.	1 8	1 3½
B	Swindon ..	S.W. Counties	1 6	1 1½
A₁	TAMWORTH	N.W. Counties	1 7½	1 2½
B₁	Taunton ..	S.W. Counties	1 5½	1 1½
A	Teeside Dist.	N.E. Counties	1 8	1 3½
B	Teignmouth	S.W. Coast	1 6	1 1½
A	Todmorden	Yorkshire	1 8	1 3½
A₂	Torquay ..	S.W. Counties	1 7	1 2½
C	Truro ..	S.W. Counties	1 4	1 0½
B₁	Tunbridge Wells	S. Counties	1 5½	1 1½
A	Tunstall ..	Mid. Counties	1 8	1 3½
A	Tyne District	N.E. Coast	1 8	1 3½
A	WAKEFIELD	Yorkshire	1 8	1 3½
A₁	Walsall ..	Mid. Counties	1 7½	1 2½
A	Warrington	N.W. Counties	1 8	1 3½
A₂	Warwick ..	Mid. Counties	1 7	1 2½
B	Wellingborough	Mid. Counties	1 6	1 1½
A	West Bromwich	Mid. Counties	1 8	1 3½
B	Weston-s-Mare	S.W. Counties	1 6	1 1½
A₂	Whitby ..	Yorkshire	1 7	1 2½
A	Widnes ..	N.W. Counties	1 8	1 3½
A	Wigan ..	N.W. Counties	1 8	1 3½
B₂	Winchester	S. Counties	1 5	1 1
B	Windsor ..	S. Counties	1 6	1 1½
A	Wolverhampton	Mid. Counties	1 8	1 3½
A₂	Worcester ..	Mid. Counties	1 6½	1 2
A₂	Worksop ..	Yorkshire	1 6½	1 2
A₁	Wrexham ..	N.W. Counties	1 7½	1 2½
B	Wycombe ..	S. Counties	1 6	1 1½
B₁	YARMOUTH	E. Counties	1 5½	1 1½
B₂	Yeovil ..	S.W. Counties	1 5	1 1
A	York ..	Yorkshire	1 8	1 3

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

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

PRICES CURRENT

EXCAVATOR AND CONCRETOR

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

*

Broken brick or stone, 2 in., per yd.	£0 11 6
Thames ballast, per yd.	0 11 0
Pit gravel, per yd.	0 18 0
Pit sand, per yd.	0 14 6
Washed sand	0 15 0
Screened ballast or gravel, add 10 per cent. per yd.	
Clinker, breeze, etc., prices according to locality.	
Portland cement, per ton	£2 19 0
Lias lime, per ton	2 10 0
Sacks charged extra at 1s. 9d. each and credited when returned at 1s. 6d.	
Transport hire per day:	
Cart and horse £1 3 0 *Trailer*	£0 15 0
3-ton motor lorry 3 15 0 *Steam roller*	4 5 0
Steam lorry, 5-ton 4 0 0 *Water cart*	1 5 0

*

EXCAVATING and throwing out in ordinary earth not exceeding 6 ft. deep, basis price, per yd. cube	0 3 0
Exceeding 6 ft., but under 12 ft., add 30 per cent.	
In stiff clay, add 30 per cent.	
In underpinning, add 100 per cent.	
In rock, including blasting, add 225 per cent.	
If basketed out, add 80 per cent. to 150 per cent.	
Headings, including timbering, add 400 per cent.	
RETURN, fill, and ram, ordinary earth, per yd.	£0 1 6
SPREAD and level, including wheeling, per yd.	0 1 6
FILLING into carts and carting away to a shoot or deposit, per yd. cube	0 10 6
TRIMMING earth to slopes, per yd. sup.	0 0 6
HACKING up old grano. or similar paving, per yd. sup.	0 1 3
PLANKING to excavations, per ft. sup.	0 0 5
DO. over 10 ft. deep, add for each 5 ft. in depth, 30 per cent.	
IF left in, add to above prices, per ft. cube	0 2 0
HARDCORE, 2 in. ring, filled and rammed, 4 in. thick, per yd. sup.	0 2 1
DO. 6 in. thick, per yd. sup.	0 2 10
PUDDLING, per yd. cube	1 10 0
CEMENT CONCRETE, 4-2-1, per yd. cube	2 3 0
DO. 6-2-1, per yd. cube	1 18 0
DO. in upper floors, add 15 per cent.	
DO. in reinforced-concrete work, add 20 per cent.	
DO. in underpinning, add 60 per cent.	
LIAS-LIME CONCRETE, per yd. cube	£1 16 0
BREEZE CONCRETE, per yd. cube	1 7 0
DO. in lintels, etc., per ft. cube	0 1 6
CEMENT concrete 4–2–1 in lintels packed around reinforcement, per ft. cube	0 3 9
FINE concrete benching to bottom of manholes, per ft. cube	0 2 6
FINISHING surface of concrete spade face, per yd. sup.	0 0 9

DRAINER

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

*

Stoneware pipes, ested quality, 4 in., per ft.	£0 0 10
DO. *6 in., per ft.*	0 1 3
DO. *9 in., per ft.*	0 2 3
Cast-iron pipes, coated, 9 ft. lengths, 4 in., per yd.	0 5 6
DO. *6 in., per yd.*	0 8 6
Portland cement and sand, see "Excavator" above.	
Lead for caulking, per cwt.	£2 5 6
Gaskin, per lb.	0 0 4½

*

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 8 0
DO. 6 in., per ft.	0 10 0

Note.—These prices include digging concrete bed and filling for normal depths, and are average prices.

Fittings in Stoneware and Iron according to type. *See* Trade Lists.

BRICKLAYER

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

*

London stocks, per M.	£4 15 0
Flettons, per M.	2 18 0
Staffordshire blue, per M.	9 10 0
Firebricks, 2½ in., per M.	11 3 0
Glazed salt, white, and ivory stretchers, per M.	24 10 0
DO. *headers, per M.*	24 0 0
Colours, extra, per M.	5 10 0
Seconds, less, per M.	1 0 0
Cement and sand, see "Excavator" above.	
Lime, grey stone, per ton	2 17 0
Mixed lime mortar, per yd.	1 6 0
Damp course, in rolls of 4½ in., per roll	0 2 6
DO. *9 in. per roll*	0 4 9
DO. *14 in. per roll*	0 7 6
DO. *18 in. per roll*	0 9 6

BRICKWORK in stone lime mortar, Flettons or equal, per rod	£33 0 0
DO. in cement do., per rod	36 0 0
DO. in stocks, add 25 per cent. per rod.	
DO. in blues, add 100 per cent. per rod.	
DO. circular on plan, add 12½ per cent. per rod.	
DO. in backing to masonry, add 12½ per cent. per rod.	
DO. in raising on old walls, etc., add 12½ per cent. per rod.	
DO. in underpinning, add 20 per cent. per rod.	
HALF-BRICK walls in stocks in cement mortar (1–3), per ft. sup.	£0 1 0
BEDDING plates in cement mortar, per ft. run	0 0 3
BEDDING window or door frames, per ft. run	0 0 3
LEAVING chases 2½ in. deep for edges of concrete floors not exceeding 6 in. thick, per ft. run	0 0 2
CUTTING do. in old walls in cement, per ft. run	0 0 4
CUTTING, toothing and bonding new work to old (labour and materials), per ft. sup.	0 0 7
TERRA-COTTA flue pipes 9 in. diameter, jointed in fireclay, including all cuttings, per ft. run	0 3 6
DO. 14 ft. by 9 in. do., per ft. run	0 6 0
FLAUNCHING chimney pots, each	0 2 0
CUTTING and pinning ends of timbers, etc., in cement	0 1 0
FACINGS fair, per ft. sup. extra	0 0 3
DO. picked stocks, per ft. sup. extra	0 0 7
DO. red rubbers gauged and set in putty, per ft. sup. extra	0 4 9
DO. in salt white or ivory glazed, per ft. sup. extra	0 5 6
TUCK pointing, per ft. sup. extra	0 0 10
WEATHER pointing, do. do.	0 0 3
TILE creasing with cement fillet each side per ft. run	0 0 6
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
If coloured with red oxide, per yd. sup.	0 1 0
If finished with carborundum, per yd. sup.	0 0 6
If in small quantities in finishing to steps, etc., per ft. sup.	0 1 4
Jointing new grano, paving to old, per ft. run	0 0 4
Extra for dishing grano, or cement paving around gullies, each	0 1 6
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 3
DO. DO. 3 in.	0 6 6
BREEZE fixing bricks, extra for each	0 0 3

THE wages are the Union rates current in London at the time of publication. The prices are for good quality material, and are intended to cover delivery at works, wharf, station, or yard as customary, but will vary according to quality and quantity. The measured prices are based upon the foregoing, and include usual builders' profits. Though every care has been taken in its compilation it is impossible to guarantee the accuracy of the list, and readers are advised to have the figures confirmed by trade inquiry.

MASON

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

*

Portland Stone:	
Whitbed, per ft. cube	£0 4 6
Basebed, per ft. cube	0 4 7
Bath stone, per ft. cube	0 3 0
Usual trade extras for large blocks.	
York paving, av. 2½ in., per yd. super	0 6 6
York templates sawn, per ft. cube	0 6 9
Slate shelves, rubbed, 1 in., per ft. sup.	0 2 6
Cement and sand, see "Excavator," etc., above.	

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HOISTING and setting stone, per ft. cube	£0 2 2
DO. for every 10 ft. above 30 ft. add 15 per cent.	
PLAIN face Portland basis, per ft. sup.	£0 2 8
DO. circular, per ft. sup.	0 4 0
SUNK FACE, per ft. sup.	0 3 9
DO. circular, per ft. sup.	0 4 10
JOINTS, arch, per ft. sup.	0 2 6
DO. sunk, per ft. sup.	0 2 7
DO. DO. circular, per ft. sup.	0 4 6
CIRCULAR-CIRCULAR work, per ft. sup.	1 2 0
PLAIN MOULDING, straight, per inch of girth, per ft. run	0 1 1
DO. circular, do., per ft. run	0 1 4
HALF SAWING, per ft. sup.	£0 1 0
Add to the foregoing prices, if in York stone, 35 per cent.	
DO. Mansfield, 12½ per cent.	
Deduct for Bath, 33⅓ per cent.	
DO. for Chilmark, 5 per cent.	
SETTING 1 in. slate shelving in cement, per ft. sup.	£0 0 6
RUBBED round nosing to do., per ft. lin.	0 0 6
YORK STEPS, rubbed T. & R., ft. cub. fixed	1 9 0
YORK SILLS, W. & T., ft. cub. fixed	1 13 0
ARTIFICIAL stone paving, 2 in. thick, per ft. sup.	0 1 6
DO. 2½ in. thick, per ft. sup.	0 1 9

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.

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Slates, 1st quality, per 1,200:				
Portmadoc Ladies			£14	0 0
Countess			27	0 0
Duchess			32	0 0
Old Delabole	*Med.*	*Grey*	*Med.*	*Green*
24 in. × 12 in.	£42	11 3	£45	1 0
20 in. × 10 in.	31	4 3	33	0 6
16 in. × 10 in.	20	18 0	22	4 9
14 in. × 8 in.	12	1 0	12	16 3
Green Randoms, per ton			8	3 9
Grey-green do., per ton			7	3 9
Green peggies, 12 in. to 8 in. long, per ton			6	3 9
In 4-ton truck loads, delivered Nine Elms station.				
Clips, lead, per lb.			£0	0 6
Clips, copper, per lb.			0	2 0
Nails, compo, per cwt.			1	6 0
Nails, copper, per lb.			0	1 10
Cement and sand, see "Excavator," etc., above.				
Hand-made tiles, per M.			£5	18 0
Machine-made tiles, per M.			5	8 0
Westmorland slates, large, per ton			9	0 0
DO. *Peggies, per ton*			7	5 0

*

SLATING, 3 in. lap, 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
SLATING with old Delabole slates to a 3 in. lap with copper nails at per square.	*Med.*	*Grey*	*Med.* *Green*
24 in. × 12 in.	£5	0 0	£5 2 0
20 in. × 10 in.	5	5 0	5 10 0
16 in. × 10 in.	4	15 0	5 1 0
14 in. × 8 in.	4	10 0	4 15 0
Green randoms			6 7 0
Grey-green do.			5 9 0
Green peggies, 12 in. to 8 in. long			4 17 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 18s. 0d. per square.			
FIXING lead soakers, per dozen			£0 0 10
STRIPPING old slates and stacking for re-use, and clearing away surplus and rubbish, per square			0 10 0
LABOUR only in laying slates, but including nails, per square			1 0 0

See "Sundries for Asbestos Tiling."

CARPENTER AND JOINER

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

*

Timber, average prices at Docks, London Standard Scandinavian, etc. (equal to 2nds):	
7 × 3, per std.	£20 0 0
11 × 4, per std.	30 0 0
Memel or Equal. Slightly less than foregoing.	
Flooring, P.E., 1 in., per sq.	£1 5 0
DO. *T. and G., 1 in., per sq.*	1 5 0
Planed boards, 1 in. × 11 in., per std.	30 0 0
Wainscot oak, per ft. sup. of 1 in.	0 1 6
Mahogany, Honduras, per ft. sup. of 1 in.	0 1 4
DO. *Cuba, per ft. sup. of 1 in.*	0 2 6
DO., *African, per ft. sup.*	0 1 3
Teak, per ft. sup. of 1 in.	0 1 6
DO., *ft. cube*	0 15 0

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FIR fixed in wall plates, lintels, sleepers, etc., per ft. cube	0 5 6
DO. framed in floors, roofs, etc., per ft. cube	0 6 6
DO. framed in trusses, etc., including ironwork, per ft. cube	0 7 6
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.	2 10 0
TURNING pieces to flat or segmenta soffits, 4½ in. wide, per ft. run	0 0 4½
DO. 9 in. wide and over per ft. sup.	0 1 2

continued overleaf

CARPENTER AND JOINER: *continued.*

SHUTTERING to face of concrete, per square	£1	10	0
DO. in narrow widths to beams, etc., per ft. sup.	0	0	6
USE and waste of timbers, allow 25 per cent. of above prices.			
SLATE BATTENING, per sq.	£0	12	6
DEAL boarding to flats, 1 in. thick and firrings to falls, per square	2	10	0
STOUT feather-edged tilting fillet to eaves, per ft. run	0	0	6
FEATHER-edged springer to trimmer arches, per ft. run	0	0	4
STOUT herringbone strutting (joists measured in), per ft. run	0	0	6
SOUND boarding, ⅞ in. thick and fillets nailed to sides of joists (joists measured over), per square	2	0	0
RUBEROID or similar quality roofing, one-ply, per yd. sup.	0	2	3
DO., two-ply, per yd. sup.	0	2	6
DO., three-ply, per yd. sup.	0	3	0
TONGUED and grooved flooring, 1¼ in. thick, laid complete with splayed headings, per square	2	5	0
DEAL skirting torus, moulded 1¼ in. thick, including grounds and backings, per ft. sup.	0	1	0
TONGUED and mitred angles to do.	0	0	6
WOOD block flooring standard blocks laid herringbone in mastic :			
Deal 1 in. thick, per yd. sup.	0	10	0
DO. 1¼ in. thick, per yd. sup.	0	12	0
Maple 1¼ in. thick, per yd. sup.	0	15	0
DEAL moulded sashes, 1¾ in. with moulded bars in small squares, per ft. sup.	0	2	6
DO. 2 in. do., per ft. sup.	0	2	9
DEAL cased frames, oak sills and 2 in. moulded sashes, brass-faced pulleys and iron weights, per ft. sup.	0	4	6
MOULDED horns, extra each	0	0	3
DOORS, 4-panel square both sides, 1¼ in. thick, per ft. sup.	0	2	6
DO. moulded both sides, per ft. sup.	0	2	9
DO. 2 in. thick, square both sides, per ft. sup.	0	2	9
DO. moulded both sides, per ft. sup.	0	3	0
DO. in 3 panels, moulded both sides, upper panel with diminished stiles with moulded bars for glass, per ft. sup.	0	3	6
If in oak, mahogany or teak, multiply 3 times.			
DEAL frames, 4 in. × 3 in., rebated and beaded, per ft. cube	£0	15	0
Add for extra labours, per ft. run	0	0	1
STAIRCASE work :			
DEAL treads 1¼ in. and risers 1 in., tongued and grooved including fir carriages, per ft. sup.	0	2	6
DEAL wall strings, 1¼ in. thick, moulded, per ft. run	0	2	6
If ramped, per ft. run	0	5	0
SHORT ramps, extra each	0	7	6
ENDS of treads and risers housed to strings, each	0	1	0
2 in. deal mopstick handrail fixed to brackets, per ft. run	0	1	6
4½ in. × 3 in. oak fully moulded handrail, per ft. run	0	5	6
1¼ in. square deal bar balusters, framed in, per ft. run	0	0	6
FITTINGS :			
SHELVES and bearers, 1 in., cross-tongued, per ft. sup.	0	1	6
1¼ in. beaded cupboard fronts, moulded and square, per ft. sup.	0	2	9
TEAK grooved draining boards, 1¼ in. thick and bedding, per ft. sup.	0	4	6
IRONMONGERY :			
Fixing only (including providing screws) :			
TO DEAL—			
Hinges to sashes, per pair	0	1	2
Do. to doors, per pair	0	1	7
Barrel bolts, 9 in., iron, each	0	1	0
Sash fasteners, each	0	1	0
Rim locks, each	0	1	9
Mortice locks, each	0	4	0

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	£12	10	0
Sheet Steel :			
Flat sheets, black, per ton	19	0	0
DO., *galvd., per ton*	20	0	0
Corrugated sheets, galvd., per ton	20	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

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MILD STEEL in trusses, etc., erected, per ton	25	10	0
DO., in small sections as reinforcement, per ton	16	10	0
DO., in compounds, per ton	17	0	0
DO., in bar or rod reinforcement, per ton	20	0	0
WROT-IRON in chimney bars, etc., including building in, per cwt.	2	0	0
DO., in light railings and balusters, per cwt.	2	5	0
FIXING only corrugated sheeting, including washers and driving screws, per yd.	0	2	0

PLUMBER

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

*

Lead, milled sheet, per cwt.	£1	13	6
DO. *drawn pipes, per cwt.*	1	14	0
DO. *soil pipe, per cwt.*	1	17	0
DO. *scrap, per cwt.*	1	5	6
Copper, sheet, per lb.	0	1	9
Solder, plumber's, per lb.	0	1	3
DO. *fine, per lb.*	0	1	9
Cast-iron pipes, etc. :			
L.C.C. soil, 3 in., per yd.	0	4	0
DO. *4 in. per yd.*	0	4	9½
R.W.P., 2½ in., per yd.	0	2	2
DO. *3 in., per yd.*	0	2	7
DO. *4 in., per yd.*	0	3	6½
Gutter, 4 in. H.R., per yd.	0	1	6½
DO. *4 in. O.G., per yd.*	0	1	10½

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MILLED LEAD and labour in gutters, flashings, etc.	3	2	6
LEAD PIPE, fixed, including running joints, bends, and tacks, ½ in., per ft.	0	2	0
DO. ¾ in., per ft.	0	2	3
DO. 1 in., per ft.	0	3	0
DO. 1¼ in., per ft.	0	4	0
LEAD WASTE or soil, fixed as above, complete, 2½ in., per ft.	0	6	0
DO. 3 in., per ft.	0	7	0
DO. 4 in., per ft.	0	9	9
WIPED soldered joint, ½ in., each	0	2	6
DO. ¾ in., each	0	3	2
DO. 1 in., each	0	3	8
BRASS screw-down stop cock and two soldered joints, ½ in., each	0	11	0
DO. ¾ in., each	0	13	6
CAST-IRON rainwater pipe, jointed in red lead, 2½ in., per ft. run.	0	1	7
DO. 3 in., per ft. run	0	2	0
DO. 4 in., per ft. run	0	2	10
CAST-IRON H.R. GUTTER, fixed, with all clips, etc., 4 in., per ft.	0	2	0
DO. O.G., 4 in., per ft.	0	2	3
CAST-IRON SOIL PIPE, fixed with caulked joints and all ears, etc., 4 in., per ft.	0	4	6
DO. 3 in., per ft.	0	3	6
Fixing only :			
W.C. PANS and all joints, P. or S., and including joints to water waste preventers, each	2	5	0
BATHS, with all joints	1	3	6
LAVATORY BASINS only, with all joints, on brackets, each	1	10	0

PLASTERER

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

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Chalk lime, per ton	£2	17	0
Hair, per cwt.	1	15	0
Sand and cement see "Excavator," etc., above.			
Lime putty, per cwt.	£0	2	9
Hair mortar, per yd.	1	7	0
Fine stuff, per yd.	1	14	0
Sawn laths, per bdl.	0	2	9
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

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LATHING with sawn laths, per yd.	0	1	7
METAL LATHING, per yd.	0	2	3
FLOATING in Cement and Sand, 1 to 3, for tiling or woodblock, ⅛ 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	3
WHITE glazed tiling set in Portland and jointed in Parian, per yd., from	1	11	6
FIBROUS PLASTER SLABS, per yd.	0	1	10

GLAZIER

GLAZIER, 1*s.* 8½*d. per hour.*

*

Glass : 4ths in crates :			
Clear, 21 oz.	£0	0	4½
DO. 26 oz.	0	0	5
Cathedral white, per ft.	0	0	7
Polished plate, British ¼ in., up to 2 ft. sup. per ft.	0	1	6
DO. *4 ft. sup.* ,,	0	2	9
DO. *6 ft. sup.* ,,	0	3	0
DO. *20 ft. sup.* ,,	0	3	7
DO. *45 ft. sup.* ,,	0	3	9
DO. *65 ft. sup.* ,,	0	3	11
DO. *100 ft. sup.* ,,	0	4	4
Rough plate, ⅛ in., per ft.	0	0	6⅞
DO. *¼ in., per ft.*	0	0	6⅞
Linseed oil putty, per cwt.	0	15	0

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GLAZING in putty, clear sheet, 21 oz.	0	0	11
DO. 26 oz.	0	1	0
GLAZING in beads, 21 oz., per ft.	£0	1	1
DO. 26 oz., per ft.	0	1	4

Small sizes slightly less (under 3 ft. sup.).

Patent glazing in rough plate, normal span, 1*s.* 6*d.* to 2*s.* per ft.

LEAD LIGHTS, plain, med. sqs. 21 oz., usual domestic sizes, fixed, per ft. sup. and up	£0	3	6

Glazing only, polished plate, 6½*d.* to 8*d.* per ft. according to size.

PAINTER AND PAPERHANGER

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.	£2	7	6
Linseed oil, raw, per gall.	0	3	6
DO., *boiled, per gall.*	0	3	8
Turpentine, per gall.	0	4	0
Liquid driers, per gall.	0	8	6
Knotting, per gall.	0	18	0
Distemper, washable, in ordinary colours, per cwt., and up	2	5	0
Double size, per firkin	0	3	6
Pumice stone, per lb.	0	0	4½
Single gold leaf (transferable), per book	0	2	0
Varnish, copal, per gall. and up	0	14	0
DO., *flat, per gall.*	1	2	0
DO., *paper, per gall.*	0	16	0
French polish, per gall.	0	17	6
Ready mixed paints, per gall. and up	0	15	0

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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
WAX POLISHING, per ft. sup.	0	0	6
STRIPPING old paper and preparing, per piece	0	1	7
HANGING PAPER, ordinary, per piece	0	1	10
DO., fine, per piece, and upwards	0	2	4
VARNISHING PAPER, 1 coat, per piece	0	9	0
CANVAS, strained and fixed, per yd. sup.	0	3	0
VARNISHING, hard oak, 1st coat, yd. sup.	0	1	2
DO., each subsequent coat, per yd. sup.	0	0	11

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, including cutting and waste, fixed on, but not including studs or grounds, per ft. sup. . . . from 3d. to	0	0	6
Plaster board, per yd. sup. . from	0	1	7
PLASTER BOARD, fixed as last, per yd. sup. . . . . from	0	2	8
Asbestos sheeting, 5/32 in., grey flat, per yd. sup.	0	2	3
DO., *corrugated, per yd. sup.*	0	3	3
ASBESTOS SHEETING, fixed as last, flat, per yd. sup.	0	4	0
DO., corrugated, per yd. sup.	0	5	0
ASBESTOS slating or tiling on, but not including battens, or boards, plain "diamond" per square, grey	2	15	0
DO., red	3	0	0
Asbestos cement slates or tiles, 5/32 in. punched per M. grey	16	0	0
DO., *red*	18	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, per ft. sup.

Thickness	3/16 in.			¼ in.			3/8 in.			½ in.		
Qualities ..	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.	AA.	A.	B.
	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.	d.
Birch	4	3	2	5	4	3	7½	6	4½	8½	7	6
Alder	7½	5	4	5	4	3	9½	8½	4½	8	7	6
Gaboon Mahogany	4	3	3	6½	5½	4	9½	7½	—	1 0½	10	—
Figured Oak 1 side	8½	7	—	10	8	—	11½	—	—	1 6	—	—
Plain Oak 1 side	6½	6	—	7½	7	—	9½	—	—	1 0	—	—
Oregon Pine	5	4	—	7½	5	—	9	—	—	—	—	—